

Oracle® Enterprise Asset Management

User's Guide

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Oracle Enterprise Asset Management User's Guide, Release 12.2

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Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle Enterprise Asset Management User's Guide*.

This guide is designed for users and administrators of the Oracle Enterprise Asset Management application. It assumes that you have a working knowledge of the principles and customary practices of your business area, along with specific application knowledge of the Oracle Enterprise Asset Management product.

See Related Information Sources on page xx for more Oracle E-Business Suite product information.

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Related Information Sources

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle **STRONGLY RECOMMENDS** that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Part 1

Welcome to Enterprise Asset Management

Oracle Enterprise Asset Management Overview

This chapter covers the following topics:

- Introduction
- Overview of Oracle Enterprise Asset Management
- Asset Management
- eAM Work Management
- Integration with Other Oracle Application Products

Introduction

Oracle Enterprise Asset Management (eAM) is part of Oracle E-Business Suite and addresses the comprehensive and routine asset maintenance requirements of asset intensive organizations. Using eAM, organizations can efficiently maintain both assets, such as vehicles, cranes and HVAC systems, as well as rotatable inventory items, such as motors and engines. To measure performance and optimize maintenance operations, all maintenance costs and work history are tracked at the asset level.

This chapter contains the following topics:

- Overview of Oracle Enterprise Asset Management, page 1-2
- Asset Management, page 1-2
- eAM Work Management, page 1-4
- Integration with Other Oracle Application Products, page 1-5
- Required Products, page 1-5
- Optional Products, page 1-5

Overview of Oracle Enterprise Asset Management

Oracle Enterprise Asset Management (eAM) is a part of Oracle's E-Business Suite, providing organizations with the tools to create and implement maintenance procedures for both assets and rebuildable inventory items. Maintenance procedures are an integral part of an organization's complete asset lifecycle management strategy, enabling an organization to optimize asset utilization. eAM enables users to optimally plan and schedule maintenance activities with minimal disruption to an organization's operations or production. Importantly, it improves resource efficiency, enhances maintenance quality, tracks work history, and records all maintenance costs.

Oracle eAM tracks the performance of assets (including rebuildable, inventory items) using meters, quality plans, and condition monitoring systems. By effectively monitoring an asset's operating condition, effective preventive maintenance strategies can be implemented. In addition to creating preventive maintenance schedules, users can create alternative maintenance strategies for seasonal or production capacity changes.

eAM's comprehensive maintenance functionality supports asset lifecycle strategies for asset intensive industries, including metals and mining, manufacturing, pulp and paper, petrochemicals, facilities, and education. eAM eliminates the need for spreadsheets and disparate data repositories, by enabling companies to manage reactive, planned, preventive maintenance, and adopt a centralized, proactive strategy for managing asset maintenance across an enterprise.

eAM enables an organization to:

- Create a preventive maintenance strategy.
- Maximize resource availability, including both equipment and labor.
- Optimize scheduling and resource efficiency.
- Integrate with Oracle's E-Business Suite for enterprise-wide solutions.

The following topics are included in this section:

- Asset Management, page 1-2
- eAM Work Management, page 1-4

Asset Management

eAM eliminates the need for point solutions that offer a limited, flat view of an asset by expanding the visibility and ownership of an asset throughout an entire organization. Different entities may describe an asset in several ways:

- Fixed asset to an accounting department

- Leased asset to facilities management
- Piece of production equipment to operations
- Inventory item to materials management
- Maintainable asset to mechanical engineers

Oracle eAM incorporates the above views of an asset through a single entity. An asset is an entity for which users can report problems. Assets can be cooling towers, cranes, buses, buildings, conveyors, or anything that needs work. eAM provides the flexibility to address the many types of assets through the definition of the following:

- Asset groups and attributes
- Asset links to an enterprise
- Asset costs and work history
- Asset activities and meters

By first establishing asset groups, you can define assets and asset characteristics that can be inherited by the assets belonging to that group. Detailed information, such as nameplate data, engineering specifications, property detail, and other searchable characteristics are defined with asset attribute elements and values. Asset groups also define a default master bill of materials (BOM) for assets. This BOM can be edited for specific assets. Virtual assets can be designed to create a network of assets or routings. This combines several assets to a single work activity.

Oracle eAM enables you to quickly identify plants and facilities using an Asset Navigator (See: Defining Asset Numbers, page 3-85). You can view details of an asset, such as cost, hierarchical (parent/child) information, and launch transactions. You can also view current or historical configurations, and work details of an asset. As rotatable, inventory items of an asset are removed from and reinstalled into an asset, the asset genealogy and parent/child meter readings are recorded automatically. Attributes, such as cost history, bills of material, and document attachments can be associated with a specific asset.

You can view the locations of assets by using the built-in integration of web-based source map viewers of Google Maps or ESRI. The system also provides the provision to integrate with a third-party HTML based map viewer. Assets can be geocoded and then assets and work can be displayed in the map viewer based on user-entered search criteria. See *Google Maps Integration, Oracle Enterprise Asset Management User's Guide* and *ESRI Integration, Oracle Enterprise Asset Management User's Guide*.

Asset Hierarchies

You can focus on an asset hierarchy, or a set of parent/child relationships of an asset. You can view all associated asset information such as asset details, bill of material, work

orders, maintenance activities, quality plans, maintenance costs, contract services, and work order history. You can view cost information for one asset, or view rolled-up costs of its children assets.

Related Topics

Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*

Obtaining Asset Number Information, *Oracle Enterprise Asset Management User's Guide*

Viewing Asset Number Information, *Oracle Enterprise Asset Management User's Guide*

Viewing Capital Asset and Rebuildable Inventory Work Orders, *Oracle Enterprise Asset Management User's Guide*

Google Maps Integration, page 24-1

ESRI Integration, *Oracle Enterprise Asset Management User's Guide*

eAM Work Management

Preventive and predictive maintenance strategies are supported by eAM. Preventive maintenance can be based on Day or Runtime intervals, as well as a specific list of dates, for both assets and inventory items. Organizations that practice predictive maintenance can monitor and scrutinize maintenance work history and performance trends with quality plans. They can also study asset conditions by monitoring systems. By combining these strategies, an organization can establish a maintenance strategy that ensures minimal downtime. Oracle Enterprise Asset Management enables you to monitor reliability and predict the need for maintenance in the future. You can identify any breach of performance defined by engineering and immediately alert maintenance, monitor conditions of an asset, collect meter readings, forecast the frequency at which preventive maintenance should be performed, and establish Run to Failure schedules and forecasts, based on predicted failures.

Oracle eAM enables operations and maintenance staff to create work requests to report any problems with an asset. To avoid duplicate work orders for the same issue, you can review any outstanding work requests that are currently assigned to an asset.

A supervisor can approve, place on hold, or reject a work request. An approved work request can be linked to a work order. The status of a work request is then updated when it is linked to a work order.

Related Topics

Obtaining Work Request Information, *Oracle Enterprise Asset Management User's Guide*

Creating and Updating Work Requests, *Oracle Enterprise Asset Management User's Guide*

Work Orders, *Oracle Enterprise Asset Management User's Guide*

Integration with Other Oracle Application Products

Oracle Enterprise Asset Management is part of the Oracle E-Business suite, and directly integrates with Oracle Manufacturing, Oracle Purchasing, Oracle Property Management, Oracle Quality, Oracle Inventory, Oracle Human Resources, Oracle Financials, Oracle Fixed Assets, and Oracle Projects. This enables you to strategically monitor resource and cost planning throughout the enterprise. Improvement programs can be enforced and reviewed to ensure compliance with industry standards by tracking problems through to resolution.

A well-planned maintenance environment depends on the ability of key personnel to view available inventory items, equipment, and skilled personnel. Because eAM is an enterprise solution, you can view the resource availability for assets that are used by operations and coordinate maintenance work to minimize operation disruption. Most importantly, Oracle eAM is designed for the maintenance user who performs the work. Using Oracle's Maintenance User, trades people and supervisors with minimum training can easily perform their work.

Required Products

To implement Enterprise Asset Management, you must have the following required products installed:

- Oracle Inventory
- Oracle Bills of Material
- Oracle Human Resources
- Oracle Cost Management
- Oracle Production Scheduling
- Oracle Quality
- Oracle Work In Process

Optional Products

To implement Enterprise Asset Management, the following products are not required; however, they are useful in the overall robust eAM solution:

- Oracle Master Scheduling/MRP
- Oracle Property Management
- Oracle Financials

- Oracle Fixed Assets
- Oracle iProcurement
- Oracle Projects
- Oracle Project Manufacturing
- Oracle Purchasing
- Oracle Order Management
- Oracle Time and Labor

Oracle Enterprise Asset Management Command Center

This chapter covers the following topics:

- Overview
- Assets Dashboard
- Open Work Orders Dashboard
- Materials Dashboard

Enterprise Asset Management Command Center User Interface

Overview

The **Enterprise Asset Management Command Center** enables increased asset reliability while reducing operational costs, and improves the visibility of key focus areas that enable Enterprise Asset Management supervisors to take quick actions in asset maintenance. You can use the **Enterprise Asset Command Center** to:

- Maximize asset availability:
 - Analyze asset performance metrics.
 - Identify recurring failures and expedite resolution.
- Prioritize work order exceptions:
 - Adjust resource scheduling to avoid schedule delays and cost overruns.
- Respond quickly to material shortages:
 - View spare part requirements and usage trends.
 - Prioritize critical work orders and update material allocations to resolve out-of-stock conditions.

The Enterprise Asset Management Command Center improves the visibility of key focus areas, enabling Enterprise Asset Management supervisors to take quick actions in asset maintenance.

Note: You can use the Enterprise Asset Management Command Center only after the installation and common configurations are completed as described in My Oracle Support Knowledge Document 2495053.1, *Installing Oracle Enterprise Command Center Framework, Release 12.2*. For additional ECC Overview information, see *Overview of Oracle Enterprise Command Center Framework, Oracle E-Business Suite User's Guide*.

Searching Enterprise Command Center Dashboards

Use the dashboard sidebar to refine (filter) the data on each dashboard. You can also Search using a keyword, value, or a specific record. You can also search using Descriptive Flexfield (DFF) attributes for the following dashboards:

- **Assets Dashboard** - Available Refinements: Asset Attributes, Item Instance Flexfield Details
- **Open Work Orders Dashboard** - Available Refinement: Work Order Flexfields
- **Materials Dashboard** - Available Refinement: Component Information Flexfields

For a list of Enterprise Asset Management flexfields, refer to *Configuring Descriptive Flexfields for Search*, page 3-269.

In certain dashboards, you can further refine information by searching multiple data sets at once. From the **Available Refinements** component, click the **Options** icon and select data sets for the following dashboards:

- **Assets Dashboard** - Assets, Asset Attributes, Work Order Assets, Asset Attributes, Collection Results
- **Open Work Orders Dashboard** - Work Orders, Work Requests, Collection Results
- **Materials Dashboard** - Stores Materials, Stores Work Order, Inventory On-Hand

The type-ahead feature suggests matches for your entry that correspond to the selected data set. When you submit a search, the search term is added to the Selected Refinements list, and the dashboard data is refined to include only records that match the search. You can add multiple refinements and remove any of them at any time. Using Saved Searches, you can create and save your searches and refer to them later. You can also edit and delete saved searches.

Use an asterisk (*) or percent sign (%) to perform a partial keyword or record search that matches any string of zero or more characters. You can also use a question mark (?) to perform a partial search that matches any single character.

Additional Information: For more information about searching for and refining data in enterprise command centers, see *Search in Highlights of an Enterprise Command Center, Oracle E-Business Suite User's Guide*.

Assets Dashboard

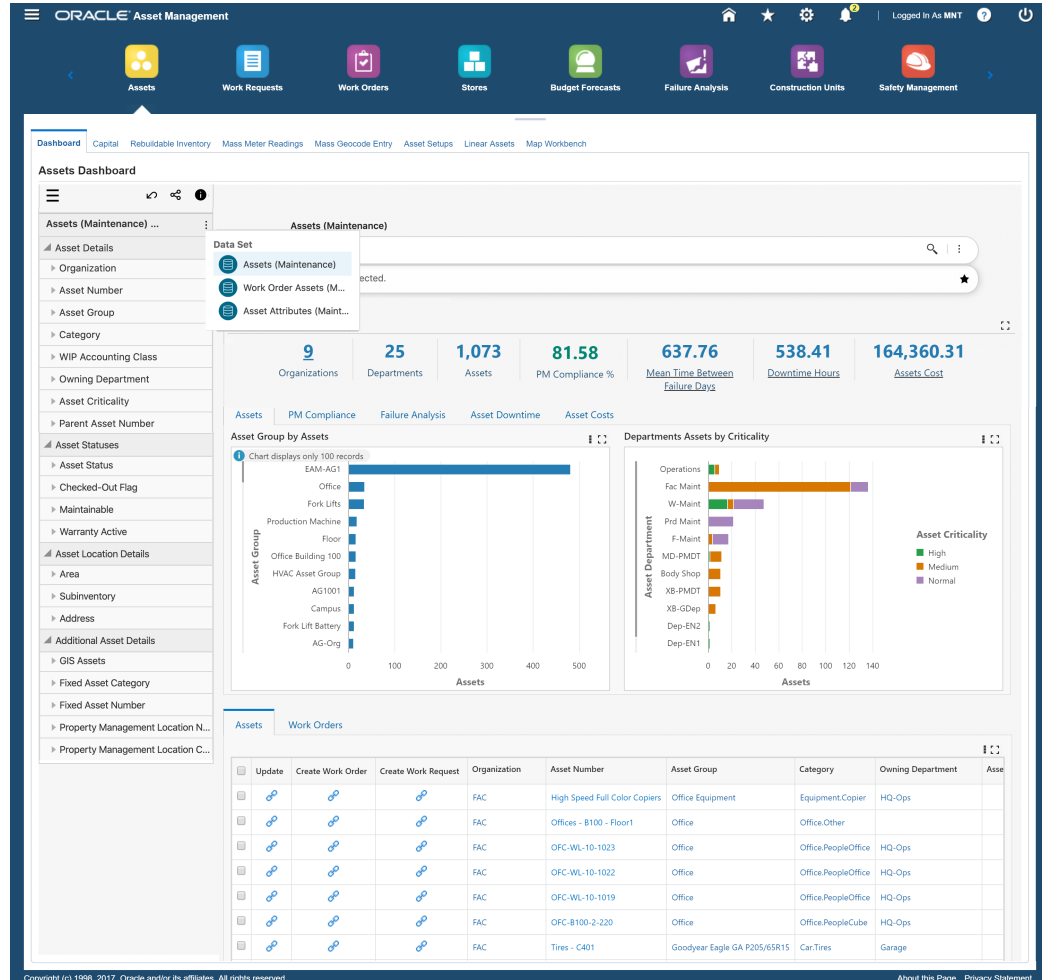
Use the **Assets Dashboard** to analyze metrics and refine asset performance. Using the **Assets Dashboard**, you can:

- Review and update asset activity routing for schedule optimization.
- Identify recurring failures and define them as activity templates.
- Track reliability metrics including MTBF and MTTR for assets.
- Analyze asset life cycle costing and performance trends.

You can view asset metrics, asset charts, and an assets results table. The following is a partial display of the **Assets Dashboard**.

From the Maintenance Super User responsibility, navigate to the eAM Assets page:

(N) Maintenance Super User > Home > Assets (tab) > Dashboard (sub tab)



The following table describes the **Assets Dashboard** components:

Component	Description
Assets (summary bar)	<p data-bbox="971 304 1369 367">The Assets summary bar displays the following metrics:</p> <ul style="list-style-type: none"> <li data-bbox="971 388 1458 577"> <p data-bbox="1016 388 1174 420">Organizations</p> <p data-bbox="1016 441 1458 577">This metric displays the number of organizations assigned to the current user. Select this metric to view a list of values (LOV) for further refinement.</p> <li data-bbox="971 598 1458 766"> <p data-bbox="1016 598 1161 630">Departments</p> <p data-bbox="1016 651 1458 766">This metric displays the number of owning departments for the assets listed in the dashboard.</p> <li data-bbox="971 787 1458 955"> <p data-bbox="1016 787 1089 819">Assets</p> <p data-bbox="1016 840 1458 955">This metric displays the number of all active assets within the eAM application to which the current user has access.</p> <li data-bbox="971 976 1458 1753"> <p data-bbox="1016 976 1317 1008">PM Compliance Percentage</p> <p data-bbox="1016 1029 1458 1207">This metric displays the percentage of Preventive Maintenance (PM) work orders completed on time. This metric is displayed in different colors with the following conditions:</p> <ul style="list-style-type: none"> <li data-bbox="1016 1218 1458 1291">PM Compliance percentage less than 50 percent displays red. <li data-bbox="1016 1312 1458 1386">PM Compliance percentage less than 75 percent displays amber. <li data-bbox="1016 1407 1458 1522">PM Compliance percentage greater than or equal to 75 percent displays green. <p data-bbox="1016 1543 1458 1617">Statuses considered for PM Compliance include:</p> <ul style="list-style-type: none"> <li data-bbox="1016 1627 1182 1659">Completed <li data-bbox="1016 1680 1161 1711">Released

Component	Description
	<ul style="list-style-type: none"> <div data-bbox="971 310 1206 338">Complete No Charges</div> <div data-bbox="922 380 1359 596"> <p>Closed PM work orders that are completed on time are derived from completion dates that are earlier than or equal to scheduled completion dates. PM Compliance is derived from: (Work Orders Completed on time / work orders scheduled) * 100.</p> <p>Select this metric to navigate to the PM Compliance tab.</p> </div> <div data-bbox="922 730 1292 758">Mean Time Between Failure Days</div> <div data-bbox="922 785 1365 936"> <p>This metric displays the Mean Time Between Failure in days, which is the average of all the assets in the dashboard. Click this metric to navigate to the Failure Analysis tab.</p> </div> <div data-bbox="922 982 1110 1010">Downtime Hours</div> <div data-bbox="922 1037 1359 1253"> <p>This metric displays the asset downtime hours from work orders with shutdown duration (Shutdown Required = Yes) and includes work orders with the system statuses of Complete, Complete - No Charges, and Closed. Click on this metric to navigate to the Asset Downtime tab.</p> </div> <div data-bbox="922 1299 1049 1327">Assets Cost</div> <div data-bbox="922 1354 1354 1505"> <p>This metric displays the actual maintenance cost of assets aggregated from the work orders created for the assets in the dashboard. Click this metric to navigate to the Asset Costs tab.</p> </div>

Component	Description
Assets (tab layout)	<p>The Asset Group by Assets chart displays the number of active assets for which the organization's current user has access. You can select dimensions to view assets by asset group or asset category.</p> <p>Note: Unassigned values for the Asset Category attribute are displayed with the value "Blank". You can refine the dashboard data with the blank values.</p> <p>The Departments Assets by Criticality chart displays the number of active assets assigned to the organization's current user and the owning asset department.</p> <p>Note: Unassigned values for the Asset Criticality and Owning Department attributes are displayed with the value "Blank". You can refine the dashboard data with the blank values.</p>
PM Compliance (tab layout)	<p>The PM Compliance by Asset Group chart displays the percentage of Preventive Maintenance (PM) work orders in compliance by asset group, calculated from the percentage of total PM work orders completed in time from the total number of work orders with a status of released, complete, complete no-charges, and closed.</p> <p>The Schedule Delay by Activity chart displays the number of Preventive work orders by the number of hours of delay for each activity. It includes work orders associated with a scheduled activity and with a status of released, complete, complete no-charges, and closed.</p>

Component	Description
Failure Analysis (tab layout)	<p>The Mean Time Failure Analysis chart displays work orders that have failures. The bars indicate Mean Time Between Failure days (MTBF) by asset group. The lines indicate Mean Time To Repair (MTTR) by asset group.</p> <p>The Failures chart displays failures by MTBF in days, and MTTR in hours. The number of work orders for each asset failure type is reflected by the size of the corresponding bubble.</p>
Asset Downtime (tab layout)	<p>The Actual Downtime by Asset Group chart displays actual downtime in hours by asset group. Data is taken from Preventive maintenance work orders with statuses of complete, complete no-charges, and closed. The Others downtime category represents non-PM work orders.</p>
Asset Costs (tab layout)	<p>The Actual Cost by Asset Group chart displays the total asset cost by asset group.</p> <p>The Assets Cost by Period chart displays total asset costs by period for all work orders and preventive maintenance work orders. You can select dimensions to view work order cost by year, or work order cost by month.</p>

Component	Description
Assets (results table)	<p data-bbox="971 306 1422 401">The Assets results table displays attributes pertaining to active assets. You can select column values to filter and refine the data.</p> <p data-bbox="987 428 1422 590">Note: Unassigned values for the Asset Criticality, Asset Category, and Owning Department attributes are displayed with the value "Blank". You can refine the dashboard data with the blank values.</p> <p data-bbox="971 659 1430 722">Click the Options icon to Compare selected asset records and Export the data set.</p> <p data-bbox="971 743 1378 774">Click the Actions icon within a row to:</p> <ul data-bbox="971 800 1455 1268" style="list-style-type: none"> • Update - update the selected asset. • Asset Operational Log - view important events in the Asset Operational Log page for the selected asset. • Create Work Order - create a work order for the selected asset. • Create Work Request - create a work request for the selected asset. • Quality Plans - navigate to the Quality dashboard for the selected asset.

Component	Description
Work Orders (results table)	<p>The Work Orders results table displays attributes pertaining to work orders.</p> <p>Note: Unassigned values for the Work Order Type attribute displays with the value "Blank". You can refine the dashboard data with the blank values.</p> <p>Click the Options icon to Compare selected work orders, Export work orders, Print Work Order Report, and Export Schedule from the Export Work Orders page.</p> <p>Click the Actions icon within a row to:</p> <ul style="list-style-type: none"> • Update - navigate to the Update Work Order page to update the selected work order. • Update Maintenance Routing - update the routing for the selected work order. • Create Activity - create a work order activity.

Open Work Orders Dashboard

The **Open Work Orders Dashboard** displays open work order content for Oracle Maintenance.

Note: The default refinement value (deep linking) feature displays limited data for the prior 21 days and the following 21 days. You can override this default value and view all open work orders by removing this refinement.

You can use this dashboard to resolve work order planning and execution alerts, and perform the following tasks:

- Review and act on work order exceptions such as cost overrun and scheduling delays.
- Expedite the completion of asset failure and downtime work orders.

- Resolve material shortage conditions.
- Analyze and update material and resource requirements for costly work orders.

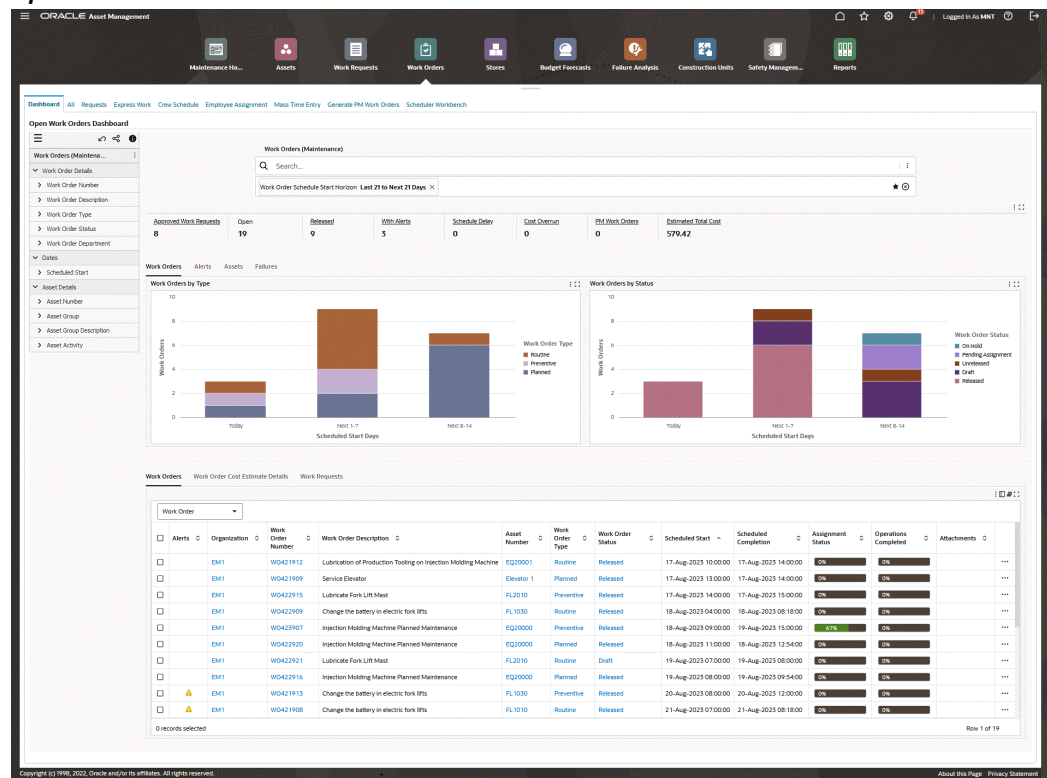
You can also review and analyze data using Key Performance Indicators (KPIs), performance evaluation metrics, charts, graphs, and tables.

From the Maintenance Super User responsibility, navigate to the **Open Work Orders Dashboard**:

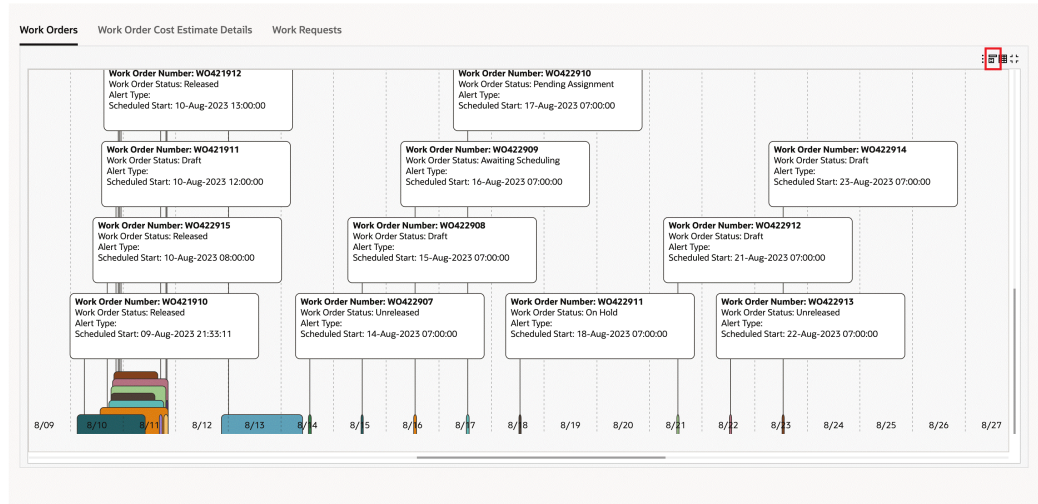
(N) Maintenance Super User > Work Orders [Tab] > Dashboard (subtab)

Within the **Open Work Orders Dashboard**, you can search for work orders, work order types, and work order activity. You can analyze data and review work order metrics, alerts, charts, graphs, and tables.

Open Work Orders Dashboard



Work Orders Timeline View



The following table describes the **Open Work Orders Dashboard** components:

Note: The default refinement value (deep linking) feature displays limited data for the prior 21 days and the following 21 days. You can override this default value and view all open work orders by removing this refinement.

Component	Description
Open Work Orders (summary bar)	<p>The Open Work Orders summary bar displays the following metrics:</p> <ul style="list-style-type: none"> Approved Work Requests <p>This metric displays the number of work requests awaiting work orders. Select this metric to refine the work request results table with the status Awaiting Work Order, and navigate to the Work Requests results table.</p> Open <p>This metric displays the number of work orders that have a status of Draft, Unreleased, Released, and On Hold.</p> Released <p>This metric displays the number of work orders that have been released. Click this metric to refine the dashboard data.</p> With Alerts <p>This metric displays the number of work orders with alert conditions Schedule Delay, Cost Overrun, Failure Codes, Shutdown Required, and Material Shortage Required. Click this metric to refine the dashboard data.</p> Schedule Delay <p>This metric displays the number of delayed work orders. Click this metric to refine the dashboard data.</p> <p>Note: You must set up the Profile Option: EAM: ECC WO Schedule Delay Alert. Refer to <i>Enterprise Asset Management Profile Options</i>, page 3-268.</p> Cost Overrun

Component	Description
	<p>This metric displays the number of work orders with actual cost exceeding estimated cost. Click this metric to refine the dashboard data.</p> <ul style="list-style-type: none"> PM Work Orders <p>This metric displays the number of Preventive Maintenance (PM) work orders. Click this metric to refine the dashboard data.</p> Estimated Total Cost <p>This metric displays the total estimated costs for selected work orders. Click this metric to refine the dashboard data.</p>

Component	Description
Work Orders (tab layout)	<p data-bbox="971 304 1442 399">The Work Orders by Type chart displays all open work orders grouped by work order type.</p> <p data-bbox="987 430 1442 583">Note: Unassigned values for the Work Order by Type and Work Order Type attributes are displayed with the value "Blank". You can refine the dashboard data with the blank values.</p> <p data-bbox="971 661 1453 850">The Work Orders by Status chart displays all work orders grouped by work order status. The chart defaults to the dimension Work Order Status. Click the Options icon and select dimensions to view and sort this chart by:</p> <ul data-bbox="971 871 1234 1039" style="list-style-type: none"> • Work Order Status • Work Order Priority • Alerts <p data-bbox="987 1087 1442 1402">Note: The work order status is based on system work order statuses of Draft, Unreleased, On Hold, and Released. Your environment may have different or additional statuses. Each status serves as a metric by which you can filter results. For example, if you click the Released metric, then the application adds the metric to the Selected Refinements component and filters the results by released orders.</p> <p data-bbox="987 1480 1442 1606">Note: Unassigned values for the Work Order by Priority attribute displays with the value 'Blank'. You can refine the dashboard data with the blank values.</p> <p data-bbox="971 1680 1464 1774">Click the Options icon to export both charts as an image, or in a Comma-Separated Values (CSV) file format.</p>

Component	Description
Alerts (tab layout)	<p data-bbox="873 310 1365 657">The Alert Type Distribution chart displays the number of work orders that have alerts and the associated alert types. For the total alert count, this chart shows the percentage contributed by each alert type with statuses Draft, Un-Released, On Hold, and Released. Move your cursor over each type of work order in the chart to view the number of work orders associated with each type. This chart displays work orders with the following predefined alerts:</p> <ul data-bbox="878 688 1365 1283" style="list-style-type: none"> • Material Shortage - Work orders with material shortage • Schedule Delay - Work order scheduled completion date is prior to the current system date • Cost Overrun - Work order count with actual cost greater than the estimated cost • Failure - Work order count with failure code information • Shutdown Required - Work order count containing shutdown required Yes at the work order level, or work orders containing at least one operation shutdown required as Yes <p data-bbox="873 1325 1365 1577">The Alerts tag cloud displays alert values for the alert type. For example, Material Shortage is an alert type. In the tag cloud, it displays the item and material name that have shortages. Tag clouds visually represent the number of occurrences of an item or action. The larger the number of occurrences or actions, the larger the alert text and impact.</p> <p data-bbox="873 1602 1365 1692">Click the Options icon to export both the chart and tag cloud as an image, or in a Comma-Separated Values (CSV) file format.</p>

Component	Description
Assets (tab layout)	<p>The Work Order (Count Distinct) by Asset Group, Work Order Status chart displays the open work orders data by Asset Group and Category combined. This bar chart includes open work orders with conditions and work order status. Click the Options icon and select group dimensions to view and sort this chart by:</p> <ul style="list-style-type: none"> • Asset Group • Asset Area • Asset Category <p>Note: Unassigned values for the Asset Area and Asset Category attributes are displayed with the value "Blank". You can refine the dashboard data with the blank values.</p> <p>You can also click the Options icon to export the chart as an image, or in a Comma-Separated Values (CSV) file format.</p>
Failures (tab layout)	<p>The Work Order (Count Distinct) by Failure Code, Work Order Status chart displays open work orders data by Failure Code and Cause Code combined. This bar chart includes open work orders and work order status. Click the Options icon to export the chart as an image, or in a Comma-Separated Values (CSV) file format.</p>

Component	Description
Work Orders (results table)	<p data-bbox="873 310 1365 495">The Work Orders results table displays all work orders that are in an open status. The open statuses include Draft, Unreleased, On Hold, and Released. Sort order of the table is based on the scheduled start date in ascending order.</p> <p data-bbox="873 525 1354 648">The Work Orders results table also displays the top ten records for material shortage (materials with top 10 shortage quantities are displayed in this results table).</p> <p data-bbox="873 678 1317 802">The results table displays data based on attribute grouping. You can select the following attribute groups from the drop-down menu:</p> <ul data-bbox="873 831 1357 955" style="list-style-type: none"> • Work Order (default) - displays work order information. • Alerts - displays work order alerts detail. <p data-bbox="873 993 1365 1377">In the Work Orders results table header, click the Options icon to Export work orders, Compare work orders, Print a Work Order Report, Export Schedule from the Export Work Orders page, perform a Mass Status Update, and navigate to the Scheduler Workbench. Navigation to the eAM Oracle Application Framework (OAF) Scheduler Workbench enables you to quickly and easily update the schedule dates for the selected work order and operations, and navigate back to the Open Work Orders dashboard.</p> <p data-bbox="873 1402 1354 1526">Click the Record Details icon within a row to select that row and open the Record Details dialog box. You can view work order details for the selected row.</p> <p data-bbox="889 1556 1349 1749">Note: To mass update the work order status, select multiple work orders with the same status and within the same organization, and then click Mass Status Update. The Work Order Mass Status Update dialog box appears. Select a status</p>

Component	Description
	<p>from the To Status drop-down menu and then click Submit. The application updates the work order status in Oracle E-Business Suite (EBS) and immediately updates the Command Center values.</p> <p>Click the Actions ellipsis icon (...) within a selected row and click:</p> <ul style="list-style-type: none"> • Update - opens the Work Order Details page to view additional information and update work orders. • Quick Update - opens the Work Order Update dialog box for minimal updates for the selected work order. The Quick Update action link updates the following key attributes in real time: <ul style="list-style-type: none"> • Work Order Type • Work Order Status • Work Order Priority • Work Order Scheduled Start Date • Work Order Scheduled Completion Date • Employee Assignment - opens the employee assignment page for assigning the operations not having employee assignment. • Quality Plans - navigate to the Quality dashboard for the selected asset. • Attachments - opens the Attachments dialog box to view and download attachments. <p>In the Work Orders results table header, you can also click the Timeline View icon to view</p>

Component	Description
	<p>work orders by date. Each event node displays the Work Order Number in the title. The Work Order Status, Alert Type, and Scheduled Start Date display in the description. You can hover over each work order in the Timeline View to view additional work order details. The Timeline View is useful as a chronological representation of work orders.</p> <p>You can also right click on each work order in the Timeline View and then click:</p> <ul style="list-style-type: none"> • Show Details - opens the Details dialog box where you can view work order details for the selected event. • Update - opens the Work Order Details page to view additional information and update work orders. • Quick Update - opens the Work Order Update dialog box for minimal updates for the selected work order. The Quick Update action link updates the following key attributes in real time: <ul style="list-style-type: none"> • Work Order Type • Work Order Status • Work Order Priority • Work Order Scheduled Start Date • Work Order Scheduled Completion Date • Employee Assignment - opens the employee assignment page for assigning the operations not having employee assignment. • Quality Plans - navigate to the Quality dashboard for the selected asset.

Component	Description
Work Order Cost Estimate Details (results table)	<ul style="list-style-type: none"> • Attachments - opens the Attachments dialog box to view and download attachments. <p>The Work Order Cost Estimate Details results table displays open work orders that have estimated costs. The Open statuses include Draft, Unreleased, On Hold, and Released. Sort order of the table is based on the estimated total cost in descending order.</p> <p>Click the ellipsis (...) action link within a selected row and then click the Update action to navigate to the Work Order page to view information and update the selected work order. In the Update Work Order page, you can review the alert condition and implement the necessary details to fix the alert condition.</p> <p>This results table also displays the top ten most expensive materials and resources from a selected work order. Click the ellipsis (...) action link within a selected row and then click the Requirements action to navigate to the Top 10 Requirements by Estimated Costs window to view the top ten materials by Material Name, Quantity, and Amount in descending order, followed by the top ten Resource Names, Usage, and Amount in descending order from the selected work order.</p> <p>Click the Options icon to Compare work orders, Export work orders, Print Work Order Report, and Export Schedule from the Export Work Orders page.</p>

Component	Description
Work Requests (results table)	<p>The Work Requests results table displays work requests with statuses that include Awaiting Work Order and On Work Order.</p> <p>Note: Unassigned values for the Asset Criticality attribute displays with the value 'Blank'. You can refine the dashboard data with the blank values.</p> <p>Click the Options icon to Compare work orders and Export a schedule from the Export Work Orders page.</p> <p>Click the Actions ellipsis (...) icon within a selected row to:</p> <ul style="list-style-type: none"> • Create Work Order • Assign Work Order

Materials Dashboard

Use the **Materials Dashboard** from the Stores tab to search for items, item details, and activity. This dashboard provides improved and responsive material management by considering maintenance criticality and usage patterns. You can use the **Materials Dashboard** to:

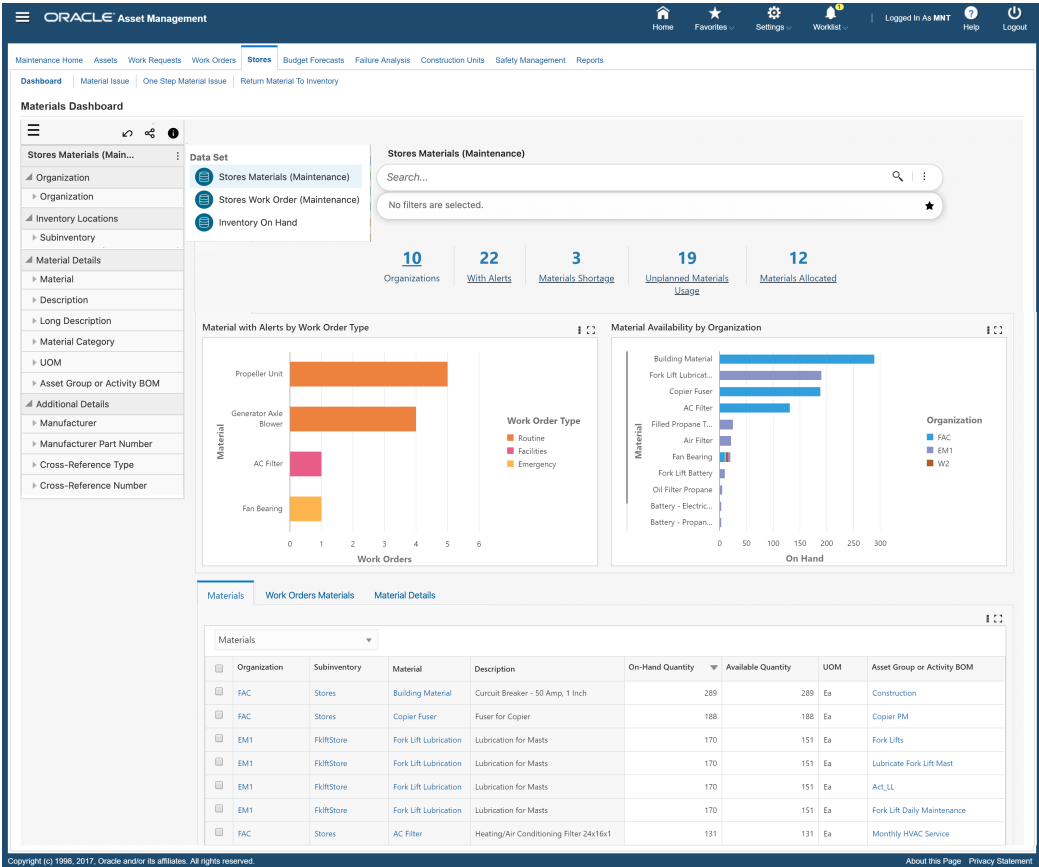
- Perform material allocation updates based on work order priority.
- Manage shortage conditions through inventory from other stock sources.
- Review unplanned material usage and update bills of material.

You can also view item metrics, subinventories, and an item results table. The following is a partial display of the **Materials Dashboard**.

From the Maintenance Super User responsibility, navigate to the **Materials Dashboard**:

(N) Maintenance Super User > Home > Stores (Tab) > Dashboard [Tab]

Materials Dashboard



The following describes the **Materials Dashboard** components:

Component	Description
Materials (summary bar)	<p data-bbox="873 308 1305 369">The Materials summary bar displays the following metrics:</p> <ul style="list-style-type: none"> <li data-bbox="873 396 1364 541"> <p data-bbox="922 396 1078 424">Organizations</p> <p data-bbox="922 451 1364 541">This metric displays the number of inventory organizations. Click this metric to refine the dashboard data.</p> <li data-bbox="873 583 1364 728"> <p data-bbox="922 583 1049 611">With Alerts</p> <p data-bbox="922 638 1364 728">This metric displays the number of materials with alerts for material shortage and unplanned material usage.</p> <li data-bbox="873 770 1364 1010"> <p data-bbox="922 770 1130 798">Materials Shortage</p> <p data-bbox="922 825 1364 1010">This metric displays the number of materials and items with open quantity from work orders with statuses that include Draft, Unreleased, On Hold, and Released. Click this metric to refine the dashboard data.</p> <li data-bbox="873 1052 1352 1230"> <p data-bbox="922 1052 1227 1079">Unplanned Materials Usage</p> <p data-bbox="922 1106 1352 1230">This metric displays the number of work orders with materials issued quantity greater than the required quantity. Click this metric to refine the dashboard data.</p> <li data-bbox="873 1272 1352 1417"> <p data-bbox="922 1272 1136 1299">Materials Allocated</p> <p data-bbox="922 1327 1352 1417">This metric displays the number of materials allocated to work orders. Click this metric to refine the dashboard data.</p>

Component	Description
Charts	<p>The Material with Alerts by Work Order Type chart displays the number of work orders with material shortage and excess material used.</p> <p>Click the Options icon and select group dimensions to view and sort this chart by:</p> <ul style="list-style-type: none"> • Work Order Type • Work Order Priority <p>Note: Unassigned values for the Work Order by Type and Work Order by Priority attributes are displayed with the value "Blank". You can refine the dashboard data with the blank values.</p> <p>The Material Availability by Organization chart displays material on-hand quantity and material names, sorted by organizations owning the materials. This chart displays on-hand material by subinventory when you click on an organization that displays on the chart.</p> <p>Click the Options icon and select group dimensions to view and sort this chart by:</p> <ul style="list-style-type: none"> • Organization • Subinventory <p>You can also click the Options icon to export both charts as an image, or in a Comma-Separated Values (CSV) file format.</p>

Component	Description
Materials (results table)	<p>The Materials results table displays attributes pertaining to item details. From the drop-down menu, you can select Miscellaneous to view materials grouped by miscellaneous attributes.</p> <p>Click the Options icon to:</p> <ul style="list-style-type: none"> • Compare and Export work orders • Process the Work Order Component Pick Release concurrent program. After completing the EAM Work Orders Component Pick Release concurrent program, Incremental or full load refresh updates the material level allocations.

Component	Description
Work Orders Materials (results table)	<p>The Work Orders Materials results table displays attributes pertaining to work order details. This results table displays materials, materials allocation, and material shortage. From the drop-down menu, you can select Materials Details and Actions to view orders grouped by material detail and action attributes. Navigate to Work Order Details and Actions from the drop-down menu to view additional information.</p> <p>Note: Material shortage in ECC displays based on the availability of material in subinventory entered in the work order.</p> <p>Note: Unassigned values for the Work Order Type attribute displays with the value 'Blank'. You can refine the dashboard data with the blank values.</p> <p>Click the Options icon to Compare work orders, Export work orders, Print Work Order Report, and Export Schedule.</p> <p>Note: This results table includes the following action-enabled attributes:</p> <ul style="list-style-type: none"> • Organization - Click this value to refine the dashboard data with the selected organization ID. • Work Order Number - Click this value to navigate to the E-Business Suite Work Order details page. <p>Note: From the Work Order Details and Actions view, you can perform the following additional actions:</p> <ul style="list-style-type: none"> • Update - Click this action link to navigate to the E-Business Suite

Component	Description
	<p data-bbox="938 317 1219 344">Update Work Order page.</p> <ul data-bbox="894 386 1349 842" style="list-style-type: none"> <li data-bbox="894 386 1349 485">• Delete Material Allocation - Click this icon to navigate to the Material Issue page. <li data-bbox="894 520 1349 646">• Copy to Asset BOM - Click this icon to navigate to the Work Order page and Materials tab for the selected record to copy to asset BOM. <li data-bbox="894 682 1349 842">• Update Activity BOM - Click this icon to navigate to the Bills of Material form with the data from the selected work order to update the BOM activity.
Material Details (results table)	<p data-bbox="873 953 1349 1136">The Material Details results table displays attributes pertaining to on-hand quantity information at the locator and lot levels. You can also search by locator or lot number. Click the column attributes to refine the dashboard data for the selected materials.</p> <p data-bbox="873 1167 1292 1226">Click the Options icon to Compare and Export selected materials.</p> <p data-bbox="889 1257 1341 1478">Note: The Materials Details results table and refinements are available only when Inventory Management Command Center is implemented. Material Details results table displays details for all EAM enabled organizations irrespective of responsibility access.</p>

Part 2

Enterprise Asset Management Administration

The Enterprise Asset Management Administration role contains people who are generally responsible for entering information, often for other maintenance personnel. Information entered may include work order resource transactions, work order completion details, and time and labor hours. This person may have limited maintenance knowledge and is generally responsible for supporting the maintenance department by handling data entry.

This part contains the following chapter:

- Setting Up, page 3-3

Setting Up

This chapter covers the following topics:

- Before You Begin
- Oracle Enterprise Asset Management Setup Overview
- Organization Setup
- Setting Up Organizations
- Enabling Organizations for Enterprise Asset Management
- Setting Up Installed Base Parameters
- Setting Up Services Fulfillment Manager Parameters
- Defining eAM Parameters
- General eAM Setup
- Setting Up Areas
- Defining Work Order Statuses at the Organization Level
- Defining Departments and Resources
- Defining Department Approvers
- Defining Miscellaneous Documents
- Setting Up Electronic Records and Signatures
- Creating XML Elements for EAM Work Order Completions
- Defining Lookups
- Asset Setup
- GIS Asset Setup
- GIS Assets Map Visualization Setup: Integration Options
- Enabling the Indoor Map Workbench Menu
- Using the Activity Workbench

- Rebuildable Item Setup
- Non-Stock Direct Item Setup
- Preventive Maintenance Setup
- eAM Planning and Scheduling
- Defining a Master Demand Schedule Name
- Defining a Material Requirements Plan Name
- Defining Plan Options
- Quality Integration Setup
- Creating Collection Elements
- Creating eAM Quality Collection Plans
- Creating eAM Quality Collection Plans for a Supplier
- Outside Processing Integration Setup
- Setting Up Outside Service Processing
- Setting Up Direct Items
- Cost Management Integration Setup
- Setting Up Cost Categories
- Setting Up Purchase Order Category Associations for Direct Items
- Setting Up eAM Cost Management
- Setting Up Zero Cost Rebuild Item Issue
- Process and Discrete Manufacturing Integration Setup
- Process or Discrete Organization Setup
- Associating Assets with Production Equipment
- Encumbrance Accounting
- Project Manufacturing Integration Setup
- Project Definition
- Property Manager Integration Setup
- Setting Up eAM Prerequisites
- Executing the Export Process
- Executing the Asset Number Interface
- Service Integration Setup
- Creating Maintenance Service Request Types
- Enabling Service Requests for Assets and Rebuildables

- Enabling eAM Specific Fields
- Oracle Time and Labor Integration Setup
- Defining Persons as Users
- Creating Eligibility Criteria
- Work Order Billing Setup
- Setting Up Parameters
- Setting Up Costs for the Cost Plus Billing Basis
- Setting Up Prices for the Price List Billing Basis
- Service Attribute Setup
- Setting Up Billable Material
- Setting Up a Billable Resource
- Setting Up a Billable Activity
- Setting Up Enterprise Asset Management Command Center
- Setup and Configuration Steps
- Enterprise Asset Management Profile Options
- Configuring Descriptive Flexfields for Search
- Loading Enterprise Asset Management Data
- Publishing Quality Collection Metadata to Enterprise Command Center
- Loading Inventory Management Data - Inventory On-Hand
- Loading Oracle Quality Data
- Concurrent Program Scheduling
- Results Tables Actions

Before You Begin

As you plan your implementation of Oracle Enterprise Asset Management (eAM), Oracle recommends that you consider the implementation issues discussed in this section. By carefully planning your implementation, you can save time and reduce errors.

Overview of Setting Up

This section lists the steps required to implement Oracle Enterprise Asset Management, along with advanced implementation topics for you to consider.

When installing Oracle Enterprise Asset Management, the installation process automatically creates five responsibilities: Oracle Enterprise Asset Management,

Maintenance User Workbench, Maintenance Super User, Self-Service Work Requests, and Self Service Time and Expenses. The Oracle Enterprise Asset Management is a super user responsibility. It includes the necessary functions to set up and implement Oracle Enterprise Asset Management.

Before setting up Oracle Enterprise Asset Management, set up the users and assign their appropriate responsibilities for the implementation.

Related Product Setup Steps

Oracle Enterprise Asset Management setup includes various setup steps within Oracle Applications products. These steps are discussed in detail in the Overview of Setting Up sections of the respective Oracle Product users guides.

Setting Up Underlying Oracle Applications Technology

Ensure that you complete the following setup steps, including:

- Performing system-wide setup tasks, such as configuring concurrent managers and printers.
- Managing data security, which includes setting up responsibilities to enable access to a specific set of business data and complete a specific set of transactions, and assigning individual users to one or more of these responsibilities.
- Setting up Oracle Workflow if you plan to use work requests for reporting maintenance problems in Oracle Enterprise Asset Management, and those work requests need approval by a maintenance department user, then you should set up Oracle Workflow.

Oracle Enterprise Asset Management Setup Overview

Oracle Enterprise Asset Management (eAM) may have unique setups for each organization, including parameters, user defined lookups, and attributes. During the implementation process, the implementation team should discuss system and user options for Enterprise Asset Management. Users implementing Enterprise Asset Management should also have determined the structure of their organizations and user access through the Oracle System Administrator responsibility.

This chapter covers the following topics:

- Organization Setup, *Oracle Enterprise Asset Management Implementation Guide*
- General Enterprise Asset Management Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Defining Lookups, *Oracle Enterprise Asset Management Implementation Guide*

- Setting Up the AutoVue Integration to Print Work Order Packets, *Oracle Enterprise Asset Management Implementation Guide*
- Asset Setup, *Oracle Enterprise Asset Management Implementation Guide*
- GIS Asset Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Enabling the Indoor Map Workbench Menu, page 3-121
- Using the Activity Workbench, *Oracle Enterprise Asset Management Implementation Guide*
- Rebuildable Item Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Non-Stock Direct Item Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Preventive Maintenance Setup, *Oracle Enterprise Asset Management Implementation Guide*
- eAM Planning and Scheduling, *Oracle Enterprise Asset Management Implementation Guide*
- Quality Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Outside Processing Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Cost Management Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Process and Discrete Manufacturing Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Project Manufacturing Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Property Manager Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Service Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Oracle Time and Labor Integration Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Work Order Billing Setup, *Oracle Enterprise Asset Management Implementation Guide*

Organization Setup

Organization setup is required before you can set up any additional Enterprise Asset Management information. Tasks include:

- Setting Up Organizations, page 3-6
- Enabling Organizations for Enterprise Asset Management, page 3-8
- Defining eAM Parameters, page 3-13

Setting Up Organizations

A valid organization is a requirement for Enterprise Asset Management setup. Decisions are made during implementation as to which organizations are enabled for Enterprise Asset Management. If the organizations already exist, you can skip this section and proceed to Enabling Organizations for Enterprise Asset Management, page 3-8.

To set up organizations:

1. Navigate to the Organization window.

Organization

Name		Type
Seattle Maintenance		Plant
Dates		
From	01-JAN-1990	To
Location		Internal or External
EM1 - Seattle Maintenan...		Internal
Location Address		
3455 108th Ave...Seattle, WA, 98101, King, United States.....		
Internal Address		[...]
Organization Classifications		
Name	Enabled	
HR Organization	<input checked="" type="checkbox"/>	
Inventory Organization	<input checked="" type="checkbox"/>	
WIP Organization	<input checked="" type="checkbox"/>	
		Others

2. Enter an organization Name, for example, Seattle Maintenance.
3. Select an organization Type. For information on Type, Dates region fields, Location, Internal or External, Location Address, and Internal Address fields, see the *Oracle Human Resources User's Guide*.
4. Save your work. A valid location must be set up before you can save.
5. In the Organization Classifications region, establish this organization as an Inventory Organization.

Select Inventory Organization from the Name list of values.

Additional Information: An eAM organization must be classified as an Inventory Organization. You can also classify an eAM as other product organizations.

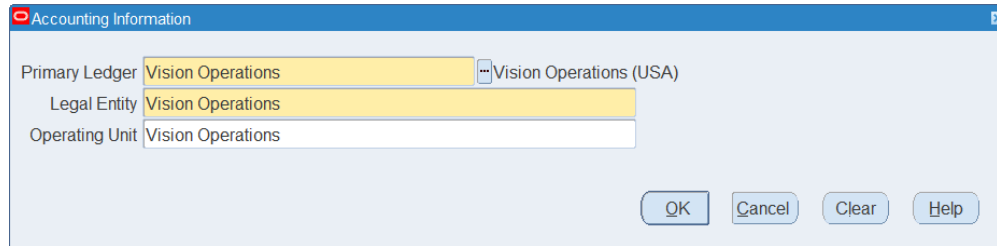
6. Save your work.

Setting Up the Oracle Purchasing AutoCreate Process:

Use the AutoCreate process to automatically create purchase orders from requisitions based on a specific operating unit. Follow these steps to set up the feature:

1. Navigate to the Organizations window to search for the organization, such as Seattle Maintenance.

2. In the Organization Classifications region, highlight the Inventory Organization value.
3. Click the Others button, and the Additional Organization information window appears.
4. Select Accounting Information.
5. Click in the Accounting Information field, and the Accounting Information window appears.



6. Select a value for the Operating Unit field, and then click OK.
7. Click OK.
8. Save your work.

Enabling Organizations for Enterprise Asset Management

Before you begin implementing Enterprise Asset Management (eAM), decide which organizations are eAM enabled. A valid organization must exist before you can enable the organization for Enterprise Asset Management (See: Setting Up Organizations, page 3-6).

To define an Enterprise Asset Management enabled organization:

You can create a new Enterprise Asset Management enabled organization, or convert an existing organization to an Enterprise Asset Management enabled organization. Oracle recommends that you keep Enterprise Asset Management organizations separate from production organizations. Enterprise Asset Management parameters are on the Inventory Parameters tab, within the Organization Parameters window.

1. Navigate to the Organization Parameters window.

Organization Parameters

Organization Parameters (EM1)

Inventory Parameters | Costing Information | Revision, Lot, Serial And LPN | ATP, Pick, Item-Sourcing

Organization Code: EM1

Item Master Organization: Vision Operations

Calendar: Vision01

Demand Class:

Move Order Timeout Period:

Move Order Timeout Action: Approve automatically

Locator Control: Determined at Subinventory level

Default On-Hand Material Status:

☐ Enforce Locator Alias Uniqueness

☒ Quality Skipping Inspection Control

☒ Allow Negative Balances

☐ Auto Delete Allocations at Move Order Cancel

Enabled Products & Features

☐ Manufacturing Partner Organization

Type:

☐ Process Manufacturing Enabled

☒ EAM Enabled

☐ WMS Enabled

☐ WCS Enabled

☐ LCM Enabled

EAM Organization: EM1 | Seattle Maintenance

Capacity

Load Weight:

Volume:

UOM:

UOM:

2. Enter a valid organization code. For information on how to create an organization, See: Setting Up Organizations, page 3-6.

3. Select the Approve automatically value in the Move Order Time Out Action field.
Move orders are created with a status of Incomplete if the planner is defined in the Organization Items - General Planning tab.

Set up the Move Order parameters for Move Order Time Out and Move Order Time Out Action as required. See Overview of Move Orders, *Oracle Inventory User's Guide*.

If the planner is not defined, move orders are created with a status of Pre-approved.

Approval action is required to change the status of the move order to Approved. After approval, the material allocation will occur.

For more information regarding planner definition, see Defining Planners, Setting Up, *Oracle MRP User's Guide*.

4. Select the EAM Enabled check box to enable Enterprise Asset Management for this

organization.

You cannot clear this check box after Enterprise Asset Management items or Enterprise Asset Management parameters are defined in the current organization.

5. If Enterprise Asset Management is enabled for the current organization, the EAM Organization value defaults and is disabled; the current organization code defaults.

For organizations that are not Enterprise Asset Management enabled, you can populate the EAM Organization field with an Enterprise Asset Management enabled organization code. The designated eAM organization maintains equipment items for the designated production organization. For example, if the current organization is a production organization, this is how you would identify a maintenance organization that is associated with the production organization (See: Overview of the Process and Discrete Manufacturing Integration, page 11-1). You can update this field, if asset equipment association does not exist in this organization.

6. Select the LCM Enabled check box to enable the ability to capture landed costs during asset capitalization.

For more information regarding landed costs, see Including Landed Cost for Asset Capitalization Value, Understanding the Fixed Asset Architecture in *Oracle Asset Tracking User's Guide*.

7. If you are using encumbrance accounting, you must enable this feature.
Navigate to the Costing Information page.

Costing Information

Valuation Accounts	
Material	01-000-1410-0000-000
Outside Processing	01-000-1450-0000-000
Material Overhead	01-000-1420-0000-000
Overhead	01-000-1430-0000-000
Resource	01-000-1440-0000-000
Expense	01-510-7530-0000-000

8. Select the **Reverse Encumbrance** option.
9. Save your work.

Related Topics

Oracle Inventory User's Guide

Setting Up Installed Base Parameters

Oracle Enterprise Asset Management is integrated with Oracle Installed Base. Therefore, the Installed Base parameters must be set up to ensure that assets are created correctly in eAM.

Creating an Internal Party

- ☐ Before you set up the parameters for Oracle Installed Base, you must first create an

internal party. The internal party will be used to complete the Installed Base setup. Follow these steps to create an internal party:

1. Navigate to the Customer Support - Asset Maintenance responsibility.
2. Click the Contact Center link.
3. Enter contact or customer details in the header section of the page.
4. Click the Party Information tab.
5. Press the F11 key. This action enables you to access fields in the page.
6. Enter all applicable information for the internal party.
7. Save your work.

You must perform the following steps in Oracle Installed Base:

1. Navigate to the Installed Base Administrator responsibility.
2. Under the Setups menu, click the Install Parameters link.
3. Set up the Install Parameters for Installed Base.
See Set Up Installation Parameters, Setup Steps within Oracle Installed Base, *Oracle Installed Base Implementation Guide*.
4. Verify that the Freeze check box has been selected.
If it is unchecked, then select the check box.
5. Save your work.

Setting Up Services Fulfillment Manager Parameters

Several transactions originating from Inventory and Order Management are processed in Installed Base, and these transactions must be serialized.

To guarantee the serialization of the transactions, you must perform the following steps to ensure that asset transfers are performed correctly in eAM:

1. Navigate to the SFM System Administrator responsibility.
2. Navigate to Administration, and then click the Queue Console link.
3. Click the Services button.
4. Select the SFM Event Manager Queue Service value.

5. Enter a value of 1 for both the Actual and Target to ensure that the Services Fulfillment Manager is up and running.
6. Save your work.

Related Topics

See Ensure the Serializability of Transactions Processed in Oracle Installed Base, Implementation and Setup for New Users, *Oracle Installed Base Implementation Guide*.

Defining eAM Parameters

After you have established an eAM-enabled organization, set up specific eAM parameters that determine the organization level defaults for individual transactions. Set up information such as asset number defaults, cost defaults, work request information, and work order defaults.

Important: Before creating eAM parameters, first create an asset subinventory in the current eAM-enabled organization (Inventory > Setup > Organizations > Subinventories). See: Creating Subinventories, *Oracle Inventory User's Guide*.

To define Enterprise Asset Management parameters:

1. Navigate to the Enterprise Asset Management Parameters window.

Enterprise Asset Management Parameters

Enterprise Asset Management Parameters (EM1)

Asset Number Defaults
☒ Asset Serial Number Auto Generation Event Log Controls

Cost Defaults
 Cost Element Cost Category

Preventive Maintenance
☐ Implement From Horizon Start Date

Work Request
☒ Auto Approve ☒ Extended Log ☒ Asset Number Mandatory
☐ Enable AME Approval Workflow Request By Dates Setup
☐ Default Asset from Employee Location Request Types Mapping
 Work Request Prefix
 Work Request Sequence

Work Order Defaults
 WIP Accounting Class Maintenance Wip Accounting Class
 Work Order Prefix
 PM Work Order Prefix
 Default Department
☐ Enable Workflow for Workorders ☒ Invoice Billable Items Only
☐ Enable Workflow for Safety ☒ Auto Firm on Release
☒ Enable Material Issue Requests ☐ Auto Firm On Create
☒ Value Rebuildables At Zero Cost ☒ Enable Target Dates for Work Orders

Account Defaults
 Maintenance Offset

Asset Move Defaults
 Intermediate Subinventory Intermediate Locator

2. Optionally indicate whether this organization has system generated asset numbers within individual asset groups. See: Defining Asset Groups, page 3-66.

You can specify the starting serial number within the Organization Parameters window or the Master Item window, when defining asset groups. If the starting serial number is defined for the asset group, this definition overwrites the starting serial number within the Organization Parameters.

3. Optionally choose Event Log Controls to enable system events that are logged within the current organization.

You can select the Log Enabled check box next to the events that you want logged for your assets. See: Asset Operational Logging, page 21-27.

4. The Cost Defaults region represents default cost information for future work orders, without defined cost elements within the work order.

Select an Enterprise Asset Management Cost Element to indicate how to capture cost overheads and any miscellaneous resource costs. Valid values are Equipment, Labor, and Material. See: Overview of eAM Cost Management, page 7-1.

5. Select a Cost Category to use as the default for departments that do not have a cost category defined.

Department costs are then posted to the appropriate cost elements. Values are Maintenance, Operations, Contract, and any other values that you may have added within the extensible lookup table.

6. In the Preventive Maintenance region, optionally select the Implement From Horizon Start Date check box to bypass past due work order suggestions when executing the Preventive Maintenance process.

If this check box is selected, suggested work orders from the Horizon Start Date forward are executed.

7. Indicate whether work requests are automatically approved upon creation, or if every user, with the responsibility assigned to the asset's current owning department, receives a notification through workflow (See: *Oracle Applications Workflow* and *Defining Department Approvers*, page 3-28).

This notification appears within self service, within the responsibility you use to log in.

If the Auto Approve check box is selected, work requests are created with an Awaiting Work Order status. If the check box is not selected, work requests are created with an Open status.

Note: A work request status must be Awaiting Work Order before you can associate it with a work order. The Awaiting Work Order status indicates that the work request is approved.

8. Optionally select the Enable AME Approval Workflow to trigger the work request approval process to follow the AME Rules.

Important: The Enable AME Approval Workflow check box can be selected as Yes only if the Auto Approve parameter is set as No.

9. Optionally select the Default Asset from Employee Location check box to indicate the default asset information when creating a work request.

If this check box is selected, the Asset Number information defaults as the Location number exported from Oracle Property Manager. Oracle Property Manager is a separate product.
10. Optionally enter values in the Work Request Prefix field (up to 3 characters) and the Work Request Sequence field (up to 6 characters). A prefix enables your organization to identify work requests.
11. If you choose the Extended Log check box, the system keeps an audit trail of records when defining or updating work requests.
12. Optionally select the Asset Number Mandatory check box to indicate that the Asset Number field is mandatory when creating a work request.
13. Click the **Request by Dates Setup** button to manage the setup for work requests by Request by Start and Request by Completion date tolerances. These dates appear in the Work Request UI (Maintenance Super User > Home > Work Requests).

This information provides the ability to prioritize and complete work more efficiently.
14. Select Yes or No in the Include Inactive Setups drop-down. If you select No, only the Active setups will appear.

The Request by Dates Setup page appears.

Request By Date Setup

Simple Search

Note that the search is case insensitive

Work Request Priority

Work Request Type

Go

Clear

Include Inactive Setups

Yes

Cancel

Apply

Work Request Priority	Work Request Type	Request By Start Date From System Date (Hrs)	Request By Completion Date Tolerance (Hrs)	Effective Start Date	Effective End Date	Delete
Emergency	Internal Construction	1	3	23-Sep-2019 07:29:15		
Emergency		1	2	16-Sep-2019 03:20:11		
High		3	5	17-Sep-2019 03:20:35		
Medium		4	10	01-Oct-2018 07:16:21	01-Sep-2019 07:16:35	

Cancel

Apply

15. Use this page to create, update, and delete work request information based on Work Request Priority and Work Request Type.
 1. Click the **Add Row** button.

2. Enter values for the following fields:
 - Work Request Priority (required)
 - Work Request Type
 - Request by Start Date from System Date (Hrs): Enter a positive numeric value or decimal; negative values are not allowed.
 - Request by Completion Days Tolerance (Hrs): Enter a positive numeric value or decimal; negative values are not allowed.
 - Effective Start Date
 - Effective End Date


Note: Oracle Quality will make changes to the default request by date based on existing rules for Quality triggered work requests. This feature works with WR Priority based rules only.

3. Save your work.
16. Click the **Request Types Mapping** button to create associations between work requests and work orders. If you create the mapping association, the default value for the work order type is automatically linked for the work request type.













Work Request to Work Order Types Mapping

Work Request to Work Order Types Mapping

Cancel
Save

 **TIP** Mappings can be defined only between currently active work request types and work order types.

...

Work Request Type	Work Order Type	End Date
Breakdown	Emergency 	
Electrical		
Emergency		
Equipment Order Emergency		
Equipment Order Normal		
Grounds	Preventive 	

1. Enter values for one of the work request types:
 1. Work Order Type

2. End Date

2. Click **Save**.

17. Select the WIP Accounting Class default to ensure that work orders generated within Enterprise Asset Management have an established account code structure assigned to accept charges incurred by that work order.

The WIP accounting class codes available are of type, Maintenance. If a Maintenance type WIP accounting class does not exist, you can define a new one. If you are using encumbrance accounting, you must include a budget account to capture encumbrance amounts. (See: Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*).

Note: Cost Management handles maintenance work orders as nonstandard expense jobs.

18. Optionally enter a Work Order Prefix.

A prefix enables your organization to identify routine work orders.

Important: Do not use 'BFWO' (Budget Forecast Work Order) as a work order prefix as the system uses this prefix for work order numbers that are generated in a budget forecast.

19. Optionally select a Default Department.

Oracle recommends that you select a default department. This department defaults to maintenance work orders as they are entered. If a department does not exist on a work order, you cannot release it.

20. Optionally enter a PM Work Order Prefix.

This prefix enables your organization to identify Preventive Maintenance work orders. There is a limit of 30 characters.

21. Select the Enable Workflow for Work Orders check box to initiate approval processes for work orders and work permits.

Work orders and work permits might require approvals or notifications at different stages in their lifecycles. Workflow automates this process. You can set up business events and event subscriptions (or use seeded events and subscriptions) within Oracle Workflow to indicate what events trigger Workflow. Seeded events that you can enable to trigger workflow are: Work Order creation, Work Order release approval, Work Order completion, Work Order status change, Operation completion, Work Permit release approval, Work Permit status update. See: Setting

Up Oracle Workflow, *Oracle Workflow User's Guide* and Setting Up the Business Event System, *Oracle Workflow User's Guide*.

22. Optionally select the Enable Workflow for Safety check box to initiate the workflow processes for isolations, work clearances, and work permits used in safety management.

See Safety Management, page 30-2.

23. Indicate whether Material Issue Requests are enabled.

If this check box is selected, the Enable Material Issue Requests check box on eAM Work Orders defaults as selected.

24. Within the Work Order Defaults region, select the Value Rebuildables at Zero Cost to indicate that rebuildable components charge at zero cost.

If this check box is selected, rebuildable items issued out of the subinventory expense account are issued at zero cost. See Setting Up Zero Cost Rebuild Item Issue, page 3-233).

25. Indicate whether only billable items are invoiceable.

If the Invoice Billable Items Only check box is selected, only billable items can invoice; however, the item needs to be invoiceable (Invoiceable Item and Invoice Enabled check boxes selected within the Master Item window. For more information regarding invoicing attribute groups, see the *Oracle Inventory User's Guide*. In addition, the Billing Type check box should be selected (See: Work Order Billing Setup, page 3-257).

If the Invoice Billable Items Only check box is not selected, any item can be invoiced if it is invoiceable within the Master Item window (Invoiceable Item and Invoice Enabled check boxes selected within the Master Item window). See *Oracle Inventory User's Guide* for additional information.

26. If you select the Auto Firm on Release check box, the dates on the work order cannot automatically reschedule, after the work order is at Released or On Hold statuses.

You can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

27. If you select the Auto Firm on Create check box, the dates on the work order cannot automatically reschedule, even in Draft and Unreleased statuses.

You can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

28. Select the Enable Target Dates for Work Orders check box if you want users to enter target dates for work orders.

The default value is cleared. If enabled, the target date fields appear on the Work Order pages.

If the work order is created manually or through PM forecasting, the **default** date values are the same as the Scheduled Start and Completion Dates. The target dates can be changed if the status of the work order is not Cancelled or Closed.

Note: Target dates are not mandatory.

Considerations

- The target start date can be later or earlier than the schedule start date.
- The target completion date can be later or earlier than the scheduled completion date.
- Target Completion Date should be greater than Target Start Date.

For more information, see Work Orders, page 21-45.

29. Within the Account Defaults region, select a Maintenance Offset account.

You can create or break a parent and child (hierarchy) relationship that exists between an asset number and a rebuildable serial number, manually using the Configuration History page. This account records what is sent to Inventory when a Rebuildable is removed from an Asset, and then transferred into inventory.

For example, if the relationship is broken, the Asset or Rebuildable is sent to either Scrap or Inventory. If the Rebuildable is sent to Inventory, the accounting is as follows:

- Debit Inventory
- Credit Maintenance Offset

30. Within the Asset Move Defaults region, select a default Intermediate Subinventory and Intermediate Locator value.

Only the expense subinventories associated with your organization are available for selection.

This intermediate subinventory is the default subinventory to which all the assets undergoing miscellaneous receipt transactions are received while performing the Asset Move transfer. The Intermediate Locator value indicates the number assigned to the expense intermediate inventory.

See Using the Asset Move Workbench, page 21-43.

31. Save your work.

General eAM Setup

General Enterprise Asset Management Setup tasks include the following:

- Setting Up Areas, page 3-21
- Defining Work Order Statuses at the Organization Level, page 3-22
- Defining Departments and Resources, page 3-24
- Defining Department Approvers, page 3-28
- Defining Miscellaneous Documents, page 3-30
- Setting Up Electronic Records, page 3-30

Setting Up Areas

Use areas to logically sort assets by the zones in which they reside. Areas divide the maintenance plant or facility into zones, which help to track and account for assets. Areas are later associated with assets.

To set up areas:

1. Navigate to the Area window.

Area

Area (EM1)

Area

Area	Description	Effective Dates	
		From	To
Warehouse	Warehouse Building	26-SEP-2002	
Fleet Garage	Fleet Services Garage	26-SEP-2002	
Prod IJM	Production Injection Molding Machine Area	26-SEP-2002	
Prod PPress	Productin Punch Press Area	26-SEP-2002	
Prod Assembly	Production Assembly Line Area	26-SEP-2002	
BLG 100	Office Building 100	26-SEP-2002	

2. Using the Add icon on the tool bar, add an area.
3. Enter a Description for this location.
4. The Effective From Date defaults as the system date, but you can optionally update it. Optionally select an Effective To Date to indicate an expiration of the area.
5. Save your work.

Defining Work Order Statuses at the Organization Level

You can define work order statuses and apply them for use by specific organizations.

User-defined work order statuses are defined upon system statuses and are assigned to organizations. For example, you can define a work order status of "Ready to Start" based on the Released system status. You can also have a work order status of Ready to Start based on the system status of Draft. Both statuses can then be assigned to your organization for use.

User-defined work order statuses are available in the (work order) Status field in the UIs, Forms and APIs for Enterprise Asset Management.

To define work order statuses at the Organization level:

1. Navigate to the Define Statuses form (Enterprise Asset Management > Setup > Work Order Statuses).

The Define Statuses page appears.

2. Click the Add Row button.

Status	System Status	Enabled	Global
V-DRAFT	Draft	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Failed Close	Failed Close	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
On Hold	On Hold	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
V-ON HOLD	On Hold	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pending Close	Pending Close	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Awaiting Scheduling	Released	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Released	Released	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
V-RELEASE	Released	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Unreleased	Unreleased	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Unreleased By Approver	Unreleased	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Organization Assignment

3. Enter values for the following fields:

1. Status (name)

The Unreleased by Approver status is automatically assigned to approvers of work orders. This status enables an approver to update the work order, make required changes, and then approve the work order to be released.

2. Status

3. Enabled check box: the default value is selected. If the check box is unselected, the status will not be available for use.

4. Global check box: This option will be read only indicating the status is applicable to all organizations.

The default value is selected for the status, if the status is selected for all organizations. However, if at least one organization is unselected from the Work Order Statuses page, then this check box will also be unselected.

Note: You can select a different status value to update the organization access.

5. Save your work.

- Click the Organization Assignment button, and the Work Order Statuses page appears.

- Select a work order Status.

The default status value from the Work Order Status forms page appears, but you can select a different value in the Status field to update the organization access.

- View the organizations to which the status is available in the Organization Status Assignment Table on the page.

The screenshot shows the 'Work Order Statuses' page. At the top, there is a 'Status' dropdown menu set to 'Ready to Start'. Below it, there are checkboxes for 'Global' (unchecked) and 'Enabled' (checked). The main section is the 'Organization Status Assignment Table', which lists various organizations with their codes and names. The table has columns for 'Organization Code' and 'Organization Name'. The organizations listed are AM1, AM2, AM3, AMS, DFW, EC1, EM1, EM2, EM3, EM4, and EM5. The 'Enabled' checkbox is checked for AM1, AM2, AM3, AMS, EM1, EM4, and EM5, and unchecked for DFW, EC1, EM2, and EM3. The table is titled 'Organization Status Assignment Table' and shows 'Rows 1 to 40'.

Organization Code	Organization Name
<input checked="" type="checkbox"/> AM1	AM1 - Vision A&D Maintenance Base1 US
<input checked="" type="checkbox"/> AM2	AM2 - Vision A&D Maintenance Base2 US
<input checked="" type="checkbox"/> AM3	AM3 - Vision A&D Maintenance Base Europe
<input checked="" type="checkbox"/> AMS	Amsterdam Maintenance Center Europe
<input type="checkbox"/> DFW	DFW Maintenance Center US
<input type="checkbox"/> EC1	Maintenance Org for PAC/EAM
<input checked="" type="checkbox"/> EM1	Seattle Maintenance
<input type="checkbox"/> EM2	PR1 Maintenance
<input type="checkbox"/> EM3	LA Maintenance
<input checked="" type="checkbox"/> EM4	EM4
<input checked="" type="checkbox"/> EM5	EM5

- Select the Enabled check box for organizations who can use this status.

Unselect the check box if you do not want an organization to use this status.

Note: If there are work orders and active PM schedules while performing the Unselect action, the following error message appears:

Status cannot be unassigned as there are either work orders or PM schedules associated with this status.

- Click Save.

Defining Departments and Resources

A department represents a crew within your organization. A crew may include people, machines, or suppliers. Departments are also used to collect costs, apply overhead, and compare load to capacity. Assign a department to each operation of a routing and assign resources that are available for that department. The department assigned to each operation of a routing also becomes the assigned department of the corresponding operation within the work order, if the work order is using the routing.

Resources are defined before departments. For information on defining resources, See: Defining a Resource, *Oracle Bills of Material User's Guide*. When you define a department, you specify available resources. A resource represents a craft. You can enter multiple resources for each department. For each resource, you can specify the shifts that the resource is available. For each resource shift, you can specify capacity modifications that change the available hours per day, units per day, or workdays.

To define departments (crews) and resources (crafts):

1. Navigate to the Departments window.

2. Enter the Department name, unique to the organization.
3. Optionally select a department Class (See: Creating Department Classes, *Oracle Bills of Material User's Guide*).
4. Select a Location.
Enter a location for a department if it is the receiving department following outside processing (See: Overview of eAM Contractor Services, page 9-1 and Outside Processing, *Oracle Work in Process User's Guide*).
5. Enter a Project Expenditure Organization.
6. Optionally enter an Inactive On date on which you can no longer assign this department to routing operations.
For instructions on all remaining fields, See: Defining a Department, *Oracle Bills of Material User's Guide (Bills of Material, Routings, Departments)*.
7. Click the Resources button to add resources or crafts to the current department.

Resources

Resources (EM1) - F-Maint

Owned ☒

Main Planning

Resource	Description	Available 24 Hours	Share	UOM	Units	Check CTP	Group	Schedule by Instance
ATTK	Automotive Tool	<input type="checkbox"/>	<input type="checkbox"/>	HR	3	<input type="checkbox"/>		<input checked="" type="checkbox"/>
Mechanic1	Fleet Services Me	<input type="checkbox"/>	<input type="checkbox"/>	HR	3	<input type="checkbox"/>		<input type="checkbox"/>
TMREBUILD	Truck Motor Rebu	<input type="checkbox"/>	<input type="checkbox"/>	Ea	1	<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>

Instances Tolerance Fences Shifts

Borrowed Resource	Description	Owning Department	UOM	Units	Check CTP	Group
					<input type="checkbox"/>	
					<input type="checkbox"/>	
					<input type="checkbox"/>	
					<input type="checkbox"/>	
					<input type="checkbox"/>	

8. Enter the Resource to assign to the current department.
9. Optionally, for owned resources, indicate whether the resource is available 24 hours per day.
You cannot assign shifts to a resource that is available 24 hours per day.
10. For owned resources, indicate whether this department can share the resource and capacity with other departments.
11. Enter the number of capacity Units (resource units) available for this department, for example, the number of machines for a machine resource.
Each resource can assign to any number of departments; multiple resources can be assigned to each department.
12. Optionally select the Check CTP check box to indicate that this resource is used in a Capable to Promise (CTP) check See: Capable to Promise, *Oracle Master Scheduling/MRP and Supply Chain Planning User's Guide*.
13. Optionally enter a resource Group for the resource in this department.
14. Optionally select the Schedule by Instance check box to indicate whether the department resource should be scheduled at the instance level (specific person or piece of equipment).

15. For borrowed resources, enter the Owning Department.

16. Select the Planning tab.

Optionally enter an Exception Set. The exception sets that you assign help to identify capacity problems (See: Planning Exception Sets, *Oracle Capacity User's Guide*).

17. Choose Instances to add persons (including contingent workers) or equipment to the current resource. See *Implementing Oracle HRMS*.

Instances

The screenshot shows a window titled "Instances (EM1) - Mechanic1". Inside the window is a table with two columns: "Number" and "Employee Name". The table has three rows of data. The first row has "1215" in the "Number" column and "Rome, Ms. Gerry" in the "Employee Name" column. The second row has "1216" in the "Number" column and "Short, Mr. Dave" in the "Employee Name" column. The third row has "947" in the "Number" column and "Moll, Mr. Joe" in the "Employee Name" column. The third row is highlighted with a blue background. To the right of the table is a vertical scrollbar. Above the table, there is a checkbox that is checked.

Number	Employee Name
1215	Rome, Ms. Gerry
1216	Short, Mr. Dave
947	Moll, Mr. Joe

18. Choose Shifts for owned resources that are not available 24 hours per day.

This enables you to assign and update shift information for the resource and define capacity changes for a shift.

Shifts

Shift Num	Description	Units
1	Normal daily shift	

Capacity Changes

1. Select a Shift Number.

The shifts available are those assigned to the workday calendar and assigned to the current organization.

2. Choose Capacity Changes to define capacity changes for a shift.

For more information, See: Assigning Resources to a Department, *Oracle Bills of Material User's Guide (Bills of Material, Routings, Departments)*.

Defining Department Approvers

With a responsibility assigned to the current asset's owning department, you can set up department approvers so that work request notifications are sent to each approver, using Oracle Workflow (See: Defining Departments and Resources, page 3-24 and Defining Asset Numbers, page 3-85, and *Oracle Applications Workflow*). Approvers can view these notifications on the Enterprise Asset Management Self Service Maintenance Home page (See: Maintenance Home, page 21-2). Everyone who receives the notification can access the work request to change its status, or add additional information to the Work Request log. After one user approves the work request, the notification is removed from the users' notification lists, and the work request status transitions from Open to Awaiting Work Order.

A work request can be rejected. If an approver rejects a work request, the notification is removed from that approver's notification list. You can re-assign a notification to another user for approval or additional information; for example, the originator might

need to provide additional information on the work request.

To define Department Approvers:

1. Navigate to the Department Approvers window.
2. Select a Responsibility Name. A department is assigned to one responsibility.

Department Approvers

Department	Description	Primary Approver
AS MAINT	AS MAINTENANCE DEPARTMENT	MFG

3. In the Departments region, select a Department. You can select an unlimited number of departments.
4. Optionally select a Primary Approver for the department from the Name list of values.

The list of values contains all users within the current responsibility. If the Primary Approver is not specified, the notification is sent to all users with the particular responsibility.

5. Save your work.

Related Topics

Work Requests, page 17-1

Maintenance Home, page 21-2

Defining Miscellaneous Documents

You can create text and files, such as spreadsheets, graphics, and OLE objects. You can attach these documents to a maintenance work order, asset, or operation.

To define miscellaneous documents:

1. Navigate to the Miscellaneous Documents window.

The screenshot shows the 'Miscellaneous Documents' window. The title bar reads 'Miscellaneous Documents'. The form contains several sections: 'Category' with a dropdown set to 'Miscellaneous', 'Title' and 'Description' text fields. The 'Source' section includes 'Data Type' (a dropdown set to 'File') and a 'File' text field. The 'Security' section includes 'Type' (a dropdown set to 'Organization'), 'Owner' (a dropdown set to 'Seattle Maintenance'), and a 'Share' checkbox. The 'Usage' section has radio buttons for 'Standard' (selected) and 'Template'. The 'Effective Dates' section has 'From' and 'To' text fields. At the bottom, there is a large text area and a button labeled 'Open Document...'. A scrollbar is visible at the bottom of the window.

2. Select a Data Type:
 - File: Attach the appropriate file.
 - Web Page: Enter the relevant URL.
 - Short Text: Insert the text in the Text field.

For information on all fields, See: *Working With Attachments, Oracle Applications User's Guide*.

Setting Up Electronic Records and Signatures

During work order completion, you can require electronic signatures and electronic records. These are provided using the Oracle ERES framework. Electronic signatures

require a User Identification and password during the transaction. Electronic records provide a permanent snapshot of the transaction data that the user is verifying.

For more information regarding setting up electronic records and signatures, see the *Oracle E-Records Implementation Guide*.

To set up electronic records and signatures:

1. Navigate to the Electronic Records page (ERES Administrator > Administration Tasks > Setup > Configuration Variables).

Electronic Records

Evidence Store Utilities **Setup**

Configuration Variables XML Elements Security Rules

Information

There is no configuration variable associated with the rule provided.

Configuration Variables

Search

* Indicates required field

* Transaction Name

Rule Name

Transaction Variables

| ...

Variable Name	Description	Value	E-record	Update	Delete
E-record Required	Whether e-record is required	Y			
E-record Style Sheet	The e-record style sheet	eamwocomp.xml			
E-record Style Sheet Version	The e-record style sheet version	1.0			
E-signature Required	Whether e-signature is required	Y			

2. Select *EAM Work Order Completion - SSWA* from the Transaction Name list of values.
3. Optionally select a rule name.
4. Choose Create to create variable names.
 - Select *E-record Required* from the Transaction Name list of values. Set this value to Y.
 - Select *E-signature Required* from the Transaction Name list of values. Set this value to Y.
5. Choose Apply.

Creating XML Elements for EAM Work Order Completions

All e-records are XML documents consisting of many XML elements. An XML element which is indexed and used for special purposes such as querying or creating security rules is called an Indexed XML Element.

You must set up XML elements to be used for EAM work order completions.

Use the following steps to create and index the XML elements for use in an Advanced Search.

1. Create the XML elements.
2. Run the E-record Indexed XML Element Maintenance concurrent program.
3. Run the Oracle E-Records XML Element Synchronization Program.

Creating XML elements for EAM work order completions:

1. Navigate to the XML Elements page (ERES Administrator > Administration Tasks > Setup > XML Elements).
2. Click the **Create Element** button and the Create Element page appears.
3. Enter EAM as the Owner Application.
4. Enter the XML Element name, for example, ASSET_ACTIVITY.
5. Enter the Display Name, for example, Activity.
6. Select the Query Element check box.
7. Click the Apply button.

The screenshot shows the 'Create Element' page within the 'Setup: XML Elements' section. The page has a breadcrumb trail: Evidence Store > Utilities > Setup > XML Elements > Security Rules. The 'XML Elements' tab is active. The page title is 'Create Element'. Below the title is a description: 'An Element can be defined for all e-records or those conforming to a specific document type definition. It can be used as a Query Element to search e-records or as a Secure Element to create security rules for e-records. It is owned by an Oracle Applications module.' A note indicates that an asterisk (*) denotes a required field. The form contains the following fields: 'Owner Application' (required), 'XML Element' (required), 'Document Type Definition' (required), and 'Display Name' (required). There is also a 'Description' field. At the bottom, there are two checkboxes: 'Query Element' and 'Secure Element'. The 'Apply' button is visible in the top right corner.

8. You will receive a confirmation message indicating that the specific XML element has been created.

EAM XML Elements:

The following table includes the EAM XML elements to be defined.

Important: Use EAM as the Owner Application for each XML element.

Work Order Header XML Elements

XML Element	Display Name
ORGANIZATION_CODE	Organization Code
WORK_ORDER	Work Order Number
WO_DESC	Work Order Description
ASSET_GROUP	Asset Group
ASSET_GROUP_DESC	Asset Group Description
ASSET_NUMBER	Asset Number
ASSET_SERIAL_NUMBER	Asset Serial Number
ASSET_NUM_DESC	Asset Number Description
AREA	Area
LOCATION_CODE	PN Location Code
LOCATION_NAME	PN Location Name
ASSET_ACTIVITY	Activity
ASSET_ACTIVITY_DESC	Activity Description
CLASS_CODE	Accounting Class Code
ACTIVITY_TYPE	Activity Type
ACTIVITY_CAUSE	Activity Cause

XML Element	Display Name
ACTIVITY_SOURCE	Activity Source
SCHEDULED_START_DATE	Scheduled Start Date
SCHEDULED_END_DATE	Scheduled End Date
PM_SUGGESTED_START_DATE	PM Suggested Start Date
PM_SUGGESTED_END_DATE	PM Suggested End Date
DATE_RELEASED	Date Released
DATE_COMPLETED	Date Completed
PROJECT_NUMBER	Project Number
PROJECT_NAME	Project Name
TASK_NUMBER	Task Number
TASK_NAME	Task Name
PRIORITY	Priority
FIRM	Firm
WO_TYPE	Work Order Type
WO_DEPARTMENT	Work Order Department
SHUTDOWN_TYPE	Shutdown Type
SHUTDOWN_START_DATE	Shutdown Start Date
SHUTDOWN_END_DATE	Shutdown End Date

Completions XML Elements

XML Element	Display Name
ACTUAL_START_DATE	Actual Start Date
ACTUAL_DURATION	Actual Duration
ACTUAL_END_DATE	Actual End Date
RECONCILIATION_CODE	Reconciliation Code
SUB_INVENTORY	Completion Sub-Inventory
LOCATION	Location
LOT_NUMBER	Lot Number

Running the E-records Indexed SML Element Maintenance Concurrent Program:

You must run a concurrent program to index the XML elements that you created. The job of the concurrent program is to index all the non-indexed elements. The indexing consists of changing the status field in the table EDR_IDX_XML_ELEMENT_B and creating a section in the interMedia text index for the indexed XML element.

Important: After creating or updating an indexed XML element, you must run this program again in order to index the element.

Follow these steps to submit the program:

1. Navigate to the Submit Requests page (ERES Administrator > Requests > Run).
2. Enter the *E-record Indexed XML Element Maintenance* value in the Name field.
3. Click the Submit button.

Submit Request

Run this Request...

Name: E-records Indexed XML Element Maintenance

Operating Unit:

Parameters:

Language: American English

Language Settings... Debug Options

At these Times...

Run the Job: As Soon as Possible

Schedule...

Upon Completion...

☒ Save all Output Files ☐ Burst Output

Layout:

Notify:

Print to: noprint

Options... Delivery Opts

Help (C) Submit Cancel

Running the Oracle E-Records XML Element Synchronization Program:

When new, deleted, or changed XML elements are synchronized into the system, they are available for query on all existing records in the system. To make them available for query on new elements, the Oracle E-records XML Element Synchronization Program must be run. This program is run in the background as a cron job. It is run as often as necessary, based on the amount of querying done in your system. For example, if your system has several hundred records entered every day, and there is a need to have the ability to query these records immediately, then have this program run every hour.

After you have run the indexing concurrent program, submit the Oracle E-Records XML Element Synchronization Program.

Note: Oracle recommends that you schedule this program to run multiple times to pick up newly processed E-records.

Follow these steps to submit the program:

1. Navigate to the Submit Requests page (ERES Administrator > Requests > Run).
2. Enter the *Oracle E-Records XML Element Synchronization Program* value in the Name field.
3. Click the Submit button.

Related Topics

For more information regarding setting up XML elements, see the *Oracle E-Records Implementation Guide*.

Defining Lookups

Lookup codes must be decided upon and defined during the implementation process. Lookup codes fall within three categories:

- Extensible: Existing lookup codes cannot be modified, but you can add new codes to the table.
- User-defined: All codes may be modified.
- System-defined: Existing codes cannot be modified, and new codes cannot be added to the table.

You must define Asset Lookups, Work Request Lookups, and Work Order Lookups.

This section includes the following topics:

- Activity Types, *Oracle Enterprise Asset Management User's Guide*
- Activity Causes, *Oracle Enterprise Asset Management User's Guide*
- Activity Sources, *Oracle Enterprise Asset Management User's Guide*
- Asset Activity Priorities, *Oracle Enterprise Asset Management User's Guide*
- Cost Category Codes, *Oracle Enterprise Asset Management User's Guide*
- Criticality Codes, *Oracle Enterprise Asset Management User's Guide*
- Asset Import Scope Codes, *Oracle Enterprise Asset Management User's Guide*
- Asset Import Statuses, *Oracle Enterprise Asset Management User's Guide*
- Asset Log User-Defined Events, *Oracle Enterprise Asset Management User's Guide*
- Contact Preferences, *Oracle Enterprise Asset Management User's Guide*
- Failure Code Types, *Oracle Enterprise Asset Management User's Guide*
- Functional Hierarchy Types, *Oracle Enterprise Asset Management User's Guide*
- Work Request Statuses, *Oracle Enterprise Asset Management User's Guide*

- Work Request Types, *Oracle Enterprise Asset Management User's Guide*
- Work Order and Work Request Priority Codes, *Oracle Enterprise Asset Management User's Guide*
- Work Order Reconciliation Codes, *Oracle Enterprise Asset Management User's Guide*
- Work Order Types, *Oracle Enterprise Asset Management User's Guide*

Activity Types

Activity types are used to describe the type of maintenance work that is performed on an asset (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*). For example, Inspections, Lubrications, Overhauls, Calibration, and Repetitive work. Activity types are extensible (See Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity types:

1. Navigate to the Oracle Manufacturing Lookups window.

Oracle Manufacturing Lookups

Manufacturing Lookups

Type: MTL_EAM_ACTIVITY_TYPE

Meaning: Activity Type

Application: Inventory

Description: Asset Activity Types

Access Level:

☐ User

☒ Extensible

☐ System

Effective Dates

Code	Meaning	Description	Tag	From	To	Enabled
1	Maintenance	Maintenance		26-JUN-2000		<input checked="" type="checkbox"/>
10	Calibration	Calibration		10-SEP-2003		<input checked="" type="checkbox"/>
11	Contracted	Contracted Service		10-SEP-2003		<input checked="" type="checkbox"/>
2	Replacement	Replacement		26-JUN-2000		<input checked="" type="checkbox"/>
20	Service	Service		23-OCT-2003		<input checked="" type="checkbox"/>
21	Janitorial	Janitorial		30-OCT-2003		<input checked="" type="checkbox"/>
25	Reformat	Department Reformat		04-MAR-2005		<input checked="" type="checkbox"/>
3	Inspection	Inspection		25-JUN-2001		<input checked="" type="checkbox"/>
4	Lubrication	Lubrication		25-JUN-2001		<input checked="" type="checkbox"/>
5	Repetitive	Repetitive		25-JUN-2001		<input checked="" type="checkbox"/>

2. Click the Find icon.
3. Select MTL_EAM_ACTIVITY_TYPE from the Type list of values.
4. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

5. Enter the Meaning of the code, for example, Lubrication.
6. Enter a Description for the code.
7. Optionally enter a Tag to categorize lookup values. This field is for informational purposes.
8. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.
9. Select the Enabled check box to enable this code for Enterprise Asset Management.
10. Save your work.

Activity Causes

Activity cause codes are reasons for an asset failure. For example, Preventive, Normal Wear, Rework, and Breakdown. This information enables you to understand the dynamics that affect an asset's ability to perform. They establish critical data that is used for reporting and analysis of asset failure causes and the frequency of such conditions. Asset cause codes are referenced when setting up an activity (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*). Activity cause codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity cause codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Activity Cause Codes

Manufacturing Lookups

Type: MTL_EAM_ACTIVITY_CAUSE

Meaning: Activity Cause

Application: Inventory

Description: Asset Activity Cause

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To

Code	Meaning	Description	Tag	From	To	Enabled
1	Breakdown	Breakdown		26-JUN-2000		<input checked="" type="checkbox"/>
10	Accident	Accident		30-OCT-2003	30-MAR-2004	<input checked="" type="checkbox"/>
2	Preventive	Preventive		26-JUN-2000		<input checked="" type="checkbox"/>
20	Health & Safety	Health and Safety		20-NOV-2003		<input checked="" type="checkbox"/>
3	Modification	Modification		15-JUN-2001		<input checked="" type="checkbox"/>
4	Non-Equipment Work	Non-Equipment Work		15-JUN-2001		<input checked="" type="checkbox"/>
5	Normal Wear	Normal Wear		25-JUN-2001		<input checked="" type="checkbox"/>
6	Vandalism	Vandalism		25-JUN-2001		<input checked="" type="checkbox"/>
7	Rework	Rework		25-JUN-2001		<input checked="" type="checkbox"/>
8	Damage	Damage		06-FEB-2003		<input checked="" type="checkbox"/>

2. Select MTL_EAM_ACTIVITY_CAUSE from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Breakdown.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration date of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Activity Sources

Activity source codes are the reasons why activities are executed. For example, warranty compliance, OSHA compliance, or military specification requirements. Activity source codes are referenced when setting up an activity (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*). Activity source codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity source codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Activity Source Codes

Code	Meaning	Description	Tag	Effective Dates	Enabled	
				From	To	
10	Regulatory	Regulatory Compliance		07-JUL-2003		<input checked="" type="checkbox"/>
20	Warranty	Warranty Compliance		07-JUL-2003		<input checked="" type="checkbox"/>
30	Routine	Routine		01-AUG-2003		<input checked="" type="checkbox"/>
40	Vandalism	Vandalism		30-MAR-2004		<input checked="" type="checkbox"/>
50	Accident	Accident		30-MAR-2004		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select MTL_EAM_ACTIVITY_SOURCE from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering of alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Breakdown.
5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration of the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Asset Activity Priorities

Activity priority codes indicate asset activity priority levels, for example, Low, Medium, and High. Activity priorities are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity priorities:

1. Navigate to the Oracle Manufacturing Lookups window.

Activity Priorities

Manufacturing Lookups

Type: WIP_EAM_ACTIVITY_PRIORITY
Meaning: WIP_EAM_ACTIVITY_PRIORITY
Application: Work in Process
Description: Asset Activity Priority

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To

Code	Meaning	Description	Tag	From	To	Enabled
1	Emergency	Emergency Work Prio		09-OCT-2002		<input checked="" type="checkbox"/>
2	Urgent	Urgent Priority		09-OCT-2002		<input checked="" type="checkbox"/>
3	High	High Priority		09-OCT-2002		<input checked="" type="checkbox"/>
4	Routine	Routine Priority		13-FEB-2004		<input checked="" type="checkbox"/>
5	Medium	Medium Priority		13-FEB-2004		<input checked="" type="checkbox"/>
6	Low	Low Priority		13-FEB-2004		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select WIP_EAM_ACTIVITY_PRIORITY from the Type list of values.
3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering of alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description.
6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.
7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Asset Failure Source Types

Failure is reported on a work order. Each work order represents one single failure occurrence (event) for the asset specified on the work order (See: Failure Analysis Overview, *Oracle Enterprise Asset Management User's Guide*). You can optionally add more codes, specifying different source types. For example, you may specify different types of work orders with different source types. Asset failure source types are user-defined (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset failure source types:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Failure Source Types

Code	Meaning	Description	Tag	Effective Dates	Enabled	
				From	To	
1	Work Order	Work Order		27-MAR-2006		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select EAM_ASSET_FAIL_SRC_TYPE from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, Preventive Maintenance Work Order.

5. Enter a Description.

6. Optionally enter a Tag to categorize lookup values.

This field is for informational purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration date for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Asset Import Scope Codes

The eAM Asset Number Open Interface enables you to import asset numbers into eAM, using a batch process. You can optionally import asset number attributes. You can create asset numbers and attributes, or update existing asset numbers and attributes. See *eAM Asset Number Open Interface, Oracle Enterprise Asset Management Implementation Guide*. Define the process' parameter scope codes. Asset Import Scope codes are user-defined (See: Defining Lookups, page 3-37).

To define Asset Import Scope codes:

1. Navigate to the Oracle Manufacturing Lookups window.

[illegible]

2. Select EAM_ASSET_IMPORT_SCOPE from the Type list of values.

- 3.** Enter a numeric code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the meaning, for example, With Attributes.

5. Enter a description.

6. Optionally enter a tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date default value appears as the system date, but you can update this field.
Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Asset Import Statuses

The eAM Asset Number Open Interface enables you to import asset numbers into eAM, using a batch process. You can optionally import asset number attributes. You can create new asset numbers and attributes, or update existing asset numbers and attributes. See eAM Asset Number Open Interface, *Oracle Enterprise Asset Management Implementation Guide*. Define the process' import statuses. Asset import statuses are user defined (See: Defining Lookups, page 3-37).

To define asset import statuses:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Import Statuses

Manufacturing Lookups

Type: EAM_ASSET_IMPORT_STATUS
Meaning: EAM_ASSET_IMPORT_STATUS
Application: Enterprise Asset Management
Description:

Access Level
☒ User
☐ Extensible
☐ System

Code	Meaning	Description	Tag	Effective Dates		Enabled
				From	To	
0	Pending			17-OCT-2003		<input checked="" type="checkbox"/>
1	Running			17-OCT-2003		<input checked="" type="checkbox"/>
2	Error			17-OCT-2003		<input checked="" type="checkbox"/>
3	Success			17-OCT-2003		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select EAM_ASSET_IMPORT_STATUS from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, Success.

5. Enter a Description.

6. Optionally enter a Tag to categorize lookup values.

This field is for informational purposes.

7. The Effective From Date defaults as the system date, but you can update this.

Optionally enter a Effective To Date to indicate an expiration date for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Asset Log User-Defined Events

Asset log events are user-defined (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset log user-defined events:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Log User-Defined Events

Manufacturing Lookups

Type: EAM_USER_EVENTS
Meaning: EAM USER EVENTS
Application: Enterprise Asset Management
Description: Asset Log User Defined Events

Access Level:
☒ User
☐ Extensible
☐ System

Code	Meaning	Description	Tag	Effective Dates	Enabled	
				From	To	
10	Incident Report	Incident Report		24-OCT-2006		<input checked="" type="checkbox"/>
20	Installation Sign-off	Installation Sign-off		24-OCT-2006		<input checked="" type="checkbox"/>
25	Installed	Installed		21-DEC-2006		<input checked="" type="checkbox"/>
30	Roadside Assistance	Roadside Assistance		24-OCT-2006		<input checked="" type="checkbox"/>
40	Visual Inspection	Visual Inspection		24-OCT-2006		<input checked="" type="checkbox"/>
45	Safety Check	Safety Check		21-DEC-2006		<input checked="" type="checkbox"/>
50	In Service	In Service		21-DEC-2006		<input checked="" type="checkbox"/>
60	Out of Service	Out of Service		21-DEC-2006		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select EAM_USER_EVENTS from the Type list of values.
3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code.
5. Enter a Description.
6. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.

6. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
7. Select the Enabled check box to enable this code for Enterprise Asset Management.
8. Save your work.

Cost Category Codes

Cost category codes are used as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost elements. Valid values are Maintenance, Operations, Contract, and any other values that you might add within this extensible lookup table. See: Overview of eAM Cost Management, *Oracle Enterprise Asset Management User's Guide*.

To define cost category codes:

1. Navigate to the Oracle Manufacturing Lookups window.

BOM Cost Category Codes

Manufacturing Lookups

Type: BOM_EAM_COST_CATEGORY
Meaning: BOM_EAM_COST_CATEGORY
Application: Bills of Material
Description: Enterprise Asset Management Cost Category

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To

Code	Meaning	Description	Tag	From	To	Enabled
1	Maintenance	Maintenance				<input checked="" type="checkbox"/>
2	Operations	Operations				<input checked="" type="checkbox"/>
3	Contract	Contract				<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select BOM_EAM_COST_CATEGORY from the Type list of values.
3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Criticality Codes

Criticality codes suggest the importance of an asset to an organization, for example, High and Low. An asset that has a direct impact on production or that is difficult to replace may be considered a critical asset. Asset criticality codes help you to determine the urgency of requested work. Asset criticality codes are referenced when defining an asset (See: Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*). Asset Criticality Codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset criticality codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Criticality Codes

Manufacturing Lookups

Type: MTL_EAM_ASSET_CRITICALITY

Meaning: Asset Criticality

Application: Inventory

Description: Asset Criticality

Access Level:

☐ User

☒ Extensible

☐ System

Effective Dates

Code	Meaning	Description	Tag	From	To	Enabled
1	High	High		26-JUN-2000		<input checked="" type="checkbox"/>
2	Medium	Medium		26-JUN-2000		<input checked="" type="checkbox"/>
3	Normal	Normal		26-JUN-2000		<input checked="" type="checkbox"/>
4	Low	Low		26-JUN-2000		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select MTL_EAM_ASSET_CRITICALITY from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

Warning: Oracle recommends that you do not create more than 250 asset criticality codes in order to avoid performance issues.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Failure Code Types

Failure, cause, and resolution codes are organized into multiple tree structures called failure code sets, which are then assigned to asset groups. Each set provides asset group-specific information on the possible failures of an asset group, the possible causes of each failure, and the possible resolutions for each cause. Assets within an asset group inherit the assigned failure code set. At the work order level, failure tracking codes are entered to report a failure, its cause, and resolution. (See: Failure Analysis Overview, *Oracle Enterprise Asset Management User's Guide*). You can optionally update the meaning for the failure code types.

To define failure code types:

1. Navigate to the Oracle Manufacturing Lookups window.

Failure Code Types

The screenshot shows the 'Manufacturing Lookups' window with the 'Failure Code Types' configuration. The 'Type' field is set to 'EAM_FAILURE_CODE_TYPE'. The 'Meaning' field is set to 'Failure Code Type'. The 'Application' field is set to 'Enterprise Asset Management'. The 'Description' field is set to 'Failure Code Type'. The 'Access Level' is set to 'Extensible'. The 'Effective Dates' section shows 'From' and 'To' dates as '03-17-2006'. The 'Enabled' checkbox is checked. Below the configuration fields is a table with columns: Code, Meaning, Description, Tag, From, To, and Enabled.

Code	Meaning	Description	Tag	From	To	Enabled
10	Failure Code	Failure Code		03-17-2006		<input checked="" type="checkbox"/>
20	Cause Code	Cause Code		03-17-2006		<input checked="" type="checkbox"/>
30	Resolution Code	Resolution Code		03-17-2006		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select EAM_FAILURE_CODE_TYPE from the Type list of values.
3. Optionally update the Meaning, for example, Failure Code.
4. Enter a Description.
5. Optionally enter a Tag to categorize lookup values.

This field is for informational purposes.

6. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
7. Select the Enabled check box to enable this code for Enterprise Asset Management.
8. Save your work.

Functional Hierarchy Types

Functional hierarchy types are used to define location hierarchies for assets. There are several seeded lookup types and they are extensible.

For more information about location hierarchies, see *Defining Location Hierarchies*, page 3-97 and *Using Location Hierarchies*, page 3-97.

To define functional hierarchy types:

1. Navigate to the Oracle Manufacturing Lookups window.
2. Select EAM_FUNC_HIER_TYPE from the Type list of values.

Functional Hierarchy Types

The screenshot shows the 'Manufacturing Lookups' window with the 'Type' field set to 'EAM_FUNC_HIER_TYPE'. The 'Meaning' is 'Functional Hierarchy Type', 'Application' is 'Enterprise Asset Management', and 'Description' is 'Functional Hierarchy Type'. The 'Access Level' is set to 'User'. Below this is a table of codes with columns for Code, Meaning, Description, Tag, Effective Dates (From, To), and Enabled.

Code	Meaning	Description	Tag	From	To	Enabled
10	Facility	Facility		10-MAR-2022		<input checked="" type="checkbox"/>
20	Plant	Plant		10-MAR-2022		<input checked="" type="checkbox"/>
30	Location	Location		10-MAR-2022		<input checked="" type="checkbox"/>
40	CL	Customer Location	C_L	20-JUN-2021		<input checked="" type="checkbox"/>
50	Building	Building		20-JUN-2021		<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

3. Optionally add codes to the pre-existing list of codes.
The codes that are pre-existing cannot be deleted; however, the meaning can be modified.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Request Statuses

The Work Request Approval is the process of changing a work request status from Open to Awaiting Work Order. Maintenance work orders are linked to work requests with a status of Awaiting Work Order. If the Auto Approve check box is selected on the eAM Parameters page (See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*) then work requests for that organization are created with an automatic status of Awaiting Work Order. If the check box is not selected, work requests are created with a status of Open. Any user who receives the notification (See: Defining Department Approvers, *Oracle Enterprise Asset Management User's Guide*) can change the work request status to Awaiting Work Order.

A plant or facility may need to include additional statuses. Currently, the workflow cannot be customized to work with user-defined work request statuses. However, work request approval statuses are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define work request statuses:

1. Navigate to the Oracle Manufacturing Lookups window.

Work Request Statuses

Manufacturing Lookups

Type: WIP_EAM_WORK_REQ_STATUS

Meaning: WIP_EAM_WORK_REQ_STATUS

Application: Work in Process

Description: Work Request Status

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To

Enabled: []

Code	Meaning	Description	Tag	From	To	Enabled
1	Open	Open				<input checked="" type="checkbox"/>
2	Additional Information	Additional Information				<input checked="" type="checkbox"/>
3	Awaiting Work Order	Awaiting Work Order				<input checked="" type="checkbox"/>
4	On Work Order	On Work Order				<input checked="" type="checkbox"/>
5	Rejected	Rejected				<input checked="" type="checkbox"/>
6	Complete	Complete				<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select WIP_EAM_WORK_REQ_STATUS from the Type list of values.
3. Optionally add codes to the pre-existing list of codes. The codes that are pre-existing cannot be deleted; however the meaning can be modified.
Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.
4. Enter the Meaning of the code, for example, Open.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.
7. Optionally enter Effective From and To Dates to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Request Types

Work request types describe and categorize work requests, for example, Manual,

System, Routine, Capital, and Furniture. Work request types are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define a work request type:

1. Navigate to the Oracle Manufacturing Lookups window.

Work Request Types

Manufacturing Lookups

Type: WIP_EAM_WORK_REQ_TYPE
Meaning: WIP_EAM_WORK_REQ_TYPE
Application: Work in Process
Description: Work Request Type

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To Enabled

Code	Meaning	Description	Tag	From	To	Enabled
1	New Business	New Business		06-FEB-2003		<input checked="" type="checkbox"/>
10	Routine	Routine Work Requests		25-SEP-2002		<input checked="" type="checkbox"/>
11	Refurbish	Refurbish		06-FEB-2003		<input checked="" type="checkbox"/>
12	Relocation	Relocation		06-FEB-2003		<input checked="" type="checkbox"/>
13	Property Damage	Property Damage		06-FEB-2003		<input checked="" type="checkbox"/>
14	Lighting	Lighting		06-FEB-2003		<input checked="" type="checkbox"/>
15	Power	Power		06-FEB-2003		<input checked="" type="checkbox"/>
16	Service Entrance	Service Entrance		06-FEB-2003		<input checked="" type="checkbox"/>
2	Outage	Outage		06-FEB-2003		<input checked="" type="checkbox"/>
20	Preventive	Preventive Maintenance		25-SEP-2002		<input checked="" type="checkbox"/>

2. Select WIP_EAM_WORK_REQ_TYPE from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Manual.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values. This field is for informational purposes only.
7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration date for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Order and Work Request Priority Codes

Work order priority codes contribute to the organization and execution of work orders. For example, High, Medium, and Low, or 1,2, and 3, respectively. Typically, a priority is assigned by the people entering work requests and work orders. The planner or supervisor compares this priority to the asset criticality (See: Asset Criticality Codes, *Oracle Enterprise Asset Management User's Guide*). These codes are entered when creating activity associations, work orders, and work requests. Typically, a priority is assigned by the person that enters the work request and its related work order. Priority specified during activity association becomes the work order priority when a work order is created, using the activity association (See: Routine Work Orders, *Oracle Enterprise Asset Management User's Guide* and Work Requests, *Oracle Enterprise Asset Management User's Guide*). Work order priority codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To create work order priority codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Priority Codes

Manufacturing Lookups

Type: WIP_EAM_ACTIVITY_PRIORITY
Meaning: WIP_EAM_ACTIVITY_PRIORITY
Application: Work in Process
Description: Asset Activity Priority

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To Enabled

Code	Meaning	Description	Tag	From	To	Enabled
1	Emergency	Emergency Work Prio		09-OCT-2002		<input checked="" type="checkbox"/>
2	Urgent	Urgent Priority		09-OCT-2002		<input checked="" type="checkbox"/>
3	High	High Priority		09-OCT-2002		<input checked="" type="checkbox"/>
4	Routine	Routine Priority		13-FEB-2004		<input checked="" type="checkbox"/>
5	Medium	Medium Priority		13-FEB-2004		<input checked="" type="checkbox"/>
6	Low	Low Priority		13-FEB-2004		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select WIP_EAM_ACTIVITY_PRIORITY from the Type list of values.

3. Optionally add additional codes to the pre-existing list of codes.

The codes that are pre-existing cannot be deleted; however, the Meaning can be modified.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for informational purposes only.

7. The Effective From Date defaults as the system date, but you can update this value. Optionally enter a Effective To Date to indicate an expiration code for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Work Order Reconciliation Codes

Reconciliation codes detail how work orders and operations were completed. These codes usually fall within two categories: Completed as Planned or Partial Completion. You can further define the condition within these two types of completion statuses. These codes enable you to evaluate work orders by percentage completed or delayed, and if they were delayed, the reason for the delay. Reconciliation codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define work order reconciliation codes:

1. Navigate to the window.

Work Order Reconciliation Codes

Manufacturing Lookups

Type: WIP_EAM_RECONCILIATION_CODE
Meaning: EAM Reconciliation Code
Application: Work in Process
Description:

Access Level:
☐ User
☒ Extensible
☐ System

Effective Dates: From To Enabled

Code	Meaning	Description	Tag	From	To	Enabled
10	Fixed Completely	Fixed Completeley		25-SEP-2002		<input checked="" type="checkbox"/>
20	Partial Repair	Partially Fixed		25-SEP-2002		<input checked="" type="checkbox"/>
30	Mfg Service Call	Contact Manufacturer fo		25-SEP-2002		<input checked="" type="checkbox"/>
40	Scrap	Scrap asset - not feasak		25-SEP-2002		<input checked="" type="checkbox"/>
50	Skipped	Skipped for Production F		08-JUL-2005		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select WIP_EAM_RECONCILIATION_CODE from the Type list of values.

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Fixed Completely.
5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Order Types

Work order types enable you to differentiate work orders. For example, Routine, and Rebuild. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting. Work order types are referenced in the activity and work order.

Work order types are created manually or automatically. For example, rebuildable work orders are created automatically or manually (See: Rebuild Work Orders, page 4-14). Preventive maintenance work orders are created automatically, based on meter readings (See: Preventive Maintenance Work Orders, page 4-13).

Work order types are extensible (See: Defining Lookups, page 3-37).

To define work order types:

1. Navigate to the Oracle Manufacturing Lookups window.

Work Order Types

The screenshot shows the 'Manufacturing Lookups' window. The top section contains a form for defining a new lookup type. The 'Type' field is set to 'WIP_EAM_WORK_ORDER_TYPE'. The 'Meaning' field is set to 'EAM Work Order Type'. The 'Application' field is set to 'Work in Process'. The 'Description' field is empty. The 'Access Level' section has three radio buttons: 'User', 'Extensible' (selected), and 'System'. Below the form is a table of existing lookup types.

Code	Meaning	Description	Tag	Effective Dates	Enabled	
				From	To	
10	Routine	Routine Work Orders		25-SEP-2002		<input checked="" type="checkbox"/>
11	Reactive	Reactive Work Order		12-MAR-2004		<input checked="" type="checkbox"/>
12	Planned	Planned Work Order		12-MAR-2004		<input checked="" type="checkbox"/>
20	Preventive	Preventive Maintenance		25-SEP-2002		<input checked="" type="checkbox"/>
30	Emergency	Emergency Work Orders		25-SEP-2002		<input checked="" type="checkbox"/>
40	Facilities	Facilities Work Orders		28-OCT-2003		<input checked="" type="checkbox"/>
50	Health & Safety	Safety Related Work		27-APR-2004		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select WIP_EAM_WORK_ORDER_TYPE from the Type list of values.

3. Enter a numeric code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. The use of alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Routine.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values.

This field is for informational purposes.

7. The Effective From Date default value is the system date, but you can update this field.

Optionally enter a Effective To Date to indicate an expiration date for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Asset Setup

This section includes the following asset setup tasks:

- Setting Up Category Codes, page 3-63
- Defining Asset Groups, page 3-66
- Defining Activities, page 3-69
- Activity Association Templates, page 3-76
- Setting Up Attributes, page 3-79
- Defining Asset Documents, page 3-82
- Defining Asset Statuses, page 3-83
- Defining Asset Numbers, page 3-85
- Defining Location Hierarchies for Assets, page 3-97
- Updating Asset Groups for Asset Numbers, page 3-99
- Defining Asset Routes, page 3-101
- Setting Up Asset Bills of Material, page 3-103
- Reapplying All Activity, Meter and PM Templates Simultaneously, page 3-106

Setting Up Category Codes

Category codes are used as naming conventions for assets by creating classes and subclasses. Category codes are user defined, and used to logically group assets, simplifying the search for asset numbers.

For example, Cranes are classified by several different types, such as Overhead Cranes, Jib Cranes, and Mobile Cranes. You can query using the class CRANE, which displays all assets defined as Cranes within that organization. If you enter CRANES.JIB, the system would then narrow the results to just those assets defined as Jib Cranes. With both queries, you can identify assets based on familiar names rather than numbers.

Process to use category codes:

1. Define category codes.
2. Add the category code to a category set.

3. Associate the category set to asset groups, which are tied to individual assets.

See also: Defining Categories and Defining Category Sets, *Oracle Inventory User's Guide*.

To set up category codes:

1. Navigate to the Find Categories window.

You can find existing category codes, or create new ones.

2. Choose New.

Categories

Structure Name	Category	Description	Enabled	Inactive On	Viewable by Supplier
Asset Management	AS EQUIPMENT.AS	AS EQUIPMENT ASS	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Actuator.Valve	Valve Actuator	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Asset.Asset	Default Asset Group A	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	BLDG100.Room100	Building 100 room 100	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Boiler.System	Boiler Systems	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Building.Lesed	Leased Building	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Building.Office	Office Building	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Building.Owned	Owned Building	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Car.Chassis	Car Chassis	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Asset Management	Car.HVAC	Car Heating, Cooling a	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

3. Select the Asset Management category to create a new Class.Subclass from the Structure Name list of values.
4. Enter in a new Category, for example TRUCK.FRKLFT.
5. Add a long Description for this category.
6. Optionally select the Enabled check box to indicate that this category is enabled.
7. Optionally enter an Inactive On date.
8. Optionally select the Enabled for iProcurement check box to indicate that this category is enabled for iProcurement.
9. Optionally select the Viewable by Supplier check box to indicate that this category is viewed by the supplier.
10. Save your work.

To set up category sets:

To associate category codes (TRUCK.FRKLFT) with an asset group, first define the item category relationship using the Category Sets menu option.

1. Navigate to the Category Sets window.

Category Sets

Name Enterprise Asset Management

Description Enterprise Asset Management Category Set

Flex Structure Asset Management

Controlled At Master Level

Default Category Maintenance Supply.Supply

☒ Allow Multiple Item Category Assignments

☒ Enforce List of Valid Categories

Category

- Actuator.Valve
- BLDG100.Room100
- Boiler.System
- Building.Licensed
- Building.Office
- Building.Owned
- Car.Chassis

Category People Assign

2. Click the Find button, and then select Enterprise Asset Management.
3. A default value appears in the Description field, but you can change it.
4. Select Asset Management from the Flex Structure list of values.
5. Indicate the Controlled At level. Values are Master Level and Organization Level.
6. Enter a Default Category code for the category set.

7. If you select Allow Multiple Item Category Assignments, you can define a series of categories, such as Crane.Jib, and Crane.Overhead that are associated to a single asset group.
8. If you select Enforce List of Valid Categories, you are preventing users from entering incorrect categories that are not associated with the asset group associated with the asset being created.
9. Enter the Category Codes that you want to associate with this category set.
10. Select Assign to display a table enabling you to associate the categories with an asset group.
11. Save your work.

Defining Asset Groups

During implementation, Asset Group (Asset Group or Rebuildable Item) names should be established. Asset groups represent groups of assets that are virtually identical. Generally, an asset group is defined for each Manufacturer and Model Number combination (Make, Model, and Year). Examples include Acme Model 123 Pump and Ford F150 2002 Truck.

Note: If you have assets in your organization that are virtually identical (for example, the same manufacturer and model), consider creating an asset group for those assets.

Note: The Asset Groups page does not support electronic signatures. If you create an asset group, the record does not contain your electronic signature.

To set up asset groups:

1. Navigate to the Asset Groups page.

Asset Groups

The screenshot shows a window titled "Asset Groups (EM1)". Inside, there are several input fields and a dropdown menu. The "Asset Group" field contains "Lexus ES300". The "Description" field contains "2002 Make Lexus ES300 Car Fleet Maint. Group". The "Template" field contains "@Asset Group". Below these fields is a "Serial Generation" section with a "Generation" dropdown menu set to "Predefined", a "Starting Prefix" field containing "LX000", and a "Starting Number" field containing "4". There is also a small icon in the bottom right corner of the main form area.

2. Enter the name of the asset group.
3. Enter a Description for this asset group, up to 240 characters.
4. Select the @Asset Group Template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.

Note: You can create asset groups using the template described above, or you can copy an asset group from an existing asset group (See: Defining Items, *Oracle Inventory User's Guide*).

The following table presents the required attribute values that are applied automatically to the asset group when using the template.

Asset Group Attributes

Attribute	Value
User Item Type	Asset Group
Item Status	Active
Inventory Item	Enabled
Transactable	Disabled

Attribute	Value
Serial Number Generation	Predefined
Effectivity Control	Model/Unit Number
EAM Item Type	Asset Group

5. In the Serial Generation region, select Predefined for the Generation value.
6. Define a Starting Prefix and Starting Number for this asset group.
If Serial Generation is set at Item Level for the Organization, the system populates the prefix, along with the starting number sequence, when a new asset number is created for this asset group.
7. Save your work.

To view failure analysis information:

You can access the Failure Set page to view failure tracking codes that are assigned to the current asset group.

1. From the Asset Groups page, select Maintain Failure Set from the Tools menu.
If the asset group does not have an associated failure set, this menu option is disabled. See: *Defining Failure Codes and Sets, Oracle Enterprise Asset Management User's Guide* and *Failure Analysis Overview, Oracle Enterprise Asset Management User's Guide*.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts **Failure Analysis** Construction Units Safety Management Reports

Failure History Failure Analysis **Failure Tracking Setup**

Failure Analysis: Failure Tracking Setup >

Update Failure Set: Equipment Failure Set Cancel Save Apply

Name: Equipment Failure Set End Date:

Description: Equipment Failure Set for C

Equipment Failure Set

- ▶ CALB
- ▶ NOGO
- ▶ NOIS
- ▶ OLLK
- ▶ VIBR
- ▶ WIRE
- ▶ WTLK
- ▶ XHOT

Failure Codes

Copy From Failure Set

Export

Failure	Description	Cause	Description	Resolution	Description	End Date	Clear	Delete
OLLK	Oil Leak	MECH	Mechanical	AJST	Adjust		<input type="button" value="Clear"/>	<input type="button" value="Delete"/>
OLLK	Oil Leak	MECH	Mechanical	REPR	Repair		<input type="button" value="Clear"/>	<input type="button" value="Delete"/>
OLLK	Oil Leak	MECH	Mechanical	REPL	Replace		<input type="button" value="Clear"/>	<input type="button" value="Delete"/>
OLLK	Oil Leak	HYDR	Hydraulic	REPR	Repair		<input type="button" value="Clear"/>	<input type="button" value="Delete"/>
OLLK	Oil Leak	HYDR	Hydraulic	REPL	Replace		<input type="button" value="Clear"/>	<input type="button" value="Delete"/>

Assign Asset Groups

Asset Group	Description	Failure Code Required	Delete Assignment
Fork Lifts	Fork Lift Asset Group	No <input type="button" value="v"/>	<input type="button" value="Delete"/>
Production Machine	Production Machine Asset Group	No <input type="button" value="v"/>	<input type="button" value="Delete"/>

Rows 1 to 11

2. Close the page.

To associate asset groups with multiple organizations:

1. From the Asset Groups page, select Item Details from the Tools menu.
2. Select the Organization Assignment tab.
3. Select additional organizations in the available table.
4. After saving your work, you can create assets for this asset group.

Defining Activities

Activities provide you with a standard template of jobs, which are applied to work orders, such as Routine or Preventive Maintenance. After these activity templates are created, they are associated with one or more asset numbers or rebuildables. They are also associated to a maintenance BOM and routing containing the materials and resources needed for operations, respectively. When work orders are created for assets associated to the activity, the material and resources associated with the current activity automatically copy to the work orders created.

There are three methods you can use to create an activity. You can create an activity within the Master Activity (Master Item) window, using the Activity Workbench, or from within a Maintenance work order.

To set up activities within the Master Activity window:

1. Navigate to the Activity (Master Item) window.

The Master Item window is used to create asset groups, activities, and rebuildables.

Master Item

Master Item (V1)

Organization: V1 Vision Operations

Item: 30000 Mile TuneUp

Description: 30000 Mile Vehicle Maintenance [...]

Display Attributes: ☐ Master ☐ Org ☒ All

Main Inventory Bills of Material **Asset Management** Costing Purchasing Receiving Physical Attributes

Asset Item Type: Asset Activity

Asset Activity Properties

Activity Type	Maintenance	Shutdown Type	Required
Activity Cause	Normal Wear	<input type="checkbox"/> Activity Notification Required	
Activity Source	Routine		

2. Enter the name of the activity in the Item field.
3. Enter a Description for this activity, up to 240 characters.
4. Use the @Activity template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.
 1. Select Copy From located under the Tools menu.
 2. Select the @Activity template.

Note: You can create activities using the template described above, or you can copy an activity from an existing activity (See: Defining Items, *Oracle Inventory User's Guide*).

The following table presents the necessary attribute values that are applied automatically to the activity, when using the template:

Activity Attributes

Attribute	Value
User Item Type	Activity
Item Status	Active
Inventory Item	Enabled
EAM Item Type	Activity

5. Select the Asset Management tab.

In the Activity Property region, optionally enter an Activity Type to indicate the type of maintenance for this activity. It is used when defining a work order. It should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning.

6. Optionally select an Activity Cause to specify what situation caused this work to generate; for example, Breakdown, Vandalism, Normal Wear, or Settings.

7. Optionally select an Activity Source.

Activity Source codes are reasons activities are executed.

For example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. See: Activity Sources, page 3-40.

8. Optionally select a Shutdown Type.

This indicates whether a shutdown is necessary to perform this maintenance activity. For example Required, and Not Required. This field is for information purposes.

9. Optionally select an Activity Notification Required value to indicate whether the asset requiring work is mobile, and should be brought into the shop for repairs.

This field is for informational purposes.

10. Save your work.

After saving your work, this activity can be associated with an asset.

To associate activities to multiple organizations:

1. Navigate to the Master Item window, and select an activity.

2. Select the Tools menu and click Organization Assignment.
3. Select additional organizations.
4. Save your work.

To associate assets with activities:

After you have defined asset groups, assets, and activities, you can associate the activities with assets and rebuildables. However, you can streamline the creation of activities and associations using an Activity Association Template. Assets are associated with activities before entering the activity into a preventive maintenance schedule.

Note: The Activity Workbench is generally used to streamline your activity setups, including asset number and activity associations. Also, you can streamline the creation of activity associations using an activity association template. For example, when you create an asset group and the asset numbers within that group, you do not need to utilize the Association window to associate those asset numbers with an activity. If you create an Activity Association Template, the activity that you associate with the current asset number's asset group automatically determines the activity that is associated with the current asset number.

You can also use Oracle Web Services to automatically create, update and search for asset activity associations. These public interfaces enable you to more easily convert data from another instance or another system. These web services are annotated and available in the I-Repository along with other public Oracle APIs.

1. Navigate to the Activity Association window.

Activity Association

Activity Association (EM1)

Activity: 30000 Mile TuneUp
Description: 30000 Mile Vehicle Maintenance

Associations

Main Work Order Defaults

Asset Type	Asset Group	Asset Number	Priority	Effective Dates		[]
				From	To	
Capital	Vehicles	DTF35000		12-NOV-2002		
Capital	Vehicles	DTF35001		12-NOV-2002		...

2. Select an activity.
3. Within the Main tab, select Asset or Rebuildable from the Item Type list of values.
This field works directly with the Asset Group and Asset Item fields.
If the Asset value is selected, then the Asset Group field refers to the asset group, and the Asset Number value refers to the asset number. If the Rebuildable value is selected, the Asset Group field refers to the rebuildable item, and the Asset Number field refers to the specific serial numbers for the current rebuildable item.
4. Select an asset group.
If the Asset field is populated in the Item Type field, your asset groups are available for selection.
5. Select an asset number.
Asset numbers associated with the previously selected asset group are available. Asset numbers are always serial controlled. If you select a non-serialized rebuildable in the Asset Group field, then an asset number value is not required.
6. Optionally select a priority code.
This field is for informational purposes.
7. Optionally enter Effective Dates.

If the Effective From field is left blank, it defaults to the system date. If the Effective To field is left blank, it defaults to NULL.

8. Click the Work Order Defaults tab.

Use this tab to optionally define default information that will appear for work orders such as:

- Activity Cause: Default value comes from the Activity definition, specifying what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings.
- Activity Type: Default value comes from the Activity definition, indicating the type of maintenance activity to perform for this activity, and is used during job definition.

This code should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. Optionally, you can select an activity type.

- Tagging Required: Select this check box to indicate whether tag out procedures are required.

This indicates that the area may need securing to perform operations for a work order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown, and should not be started. This check box helps the planner isolate those jobs that require a tagout. This is for informational purposes.

- Owning Department: Default value comes from the asset number definition and indicates a planner or supervisor who is responsible for the activity or asset.
- Shutdown Type: This value defaults from the Master Activity information that was created within the Master Item window.

This option indicates whether a shutdown is necessary to perform this maintenance activity, for example, Required or Not Required. This field is for informational purposes.

- WIP Accounting Class: Defaults from the eAM Parameters information for the current organization; you can update this value.
- Activity Source: This value defaults from the Master Activity information created in the Master Item window.

Activity source codes are the reasons why activities are executed, for example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements.

- **Work Order Type:** Select a value to differentiate work orders. For example, Routine, and Rebuild. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting.
- **Planner:** Select a planner to be assigned to the work order.
- **Firm:** Select to indicate the work order is to be firmed and planning and scheduling will not automatically adjust the schedule, regardless of material or resource availability.
- **Planned:** Select to indicate that this is a planned order.
- **Notification:** Select if a notification is to be generated.

9. Save your work.

Reapplying an Activity Template:

You can reapply an activity template to an entire asset group or to specific asset numbers or serialized rebuildables within an asset group. The activity template can only be applied to those assets whose activity template has not been previously applied.

Important: The concurrent program applies to asset groups that have existing activity templates **associated**.

1. Navigate to the Reapply Asset Template form (Enterprise Asset Management > Assets > Reapply Asset Template).
2. Select the Asset Type (required). Values are Capital or Rebuildable.
3. Enter the Asset Group (required).
4. (Optional) Select the Activity Template to be reapplied.
If the Activity Template field is blank, the concurrent program reapplies all activity templates to the entire asset group.
5. (Optional) Enter values in these fields to reapply the Activity template to a range of asset numbers within the asset group:
 - **Asset Status**
 - **Asset Number From:** Enter the beginning asset number value if you want to apply the activity template to a range of asset numbers in the asset group.
 - **Asset Number To:** Enter the ending asset number value if you want to apply the activity template to a range of asset numbers in the asset group.

If you enter a value in the Asset Number From field but leave the Asset Number To field blank, the concurrent program will apply the activity template to a specific asset number.

6. Optionally select Yes in the **View Only** field if you do not want the system to apply the templates.

A log is generated but the templates are not reapplied to the assets. The default value is No.

The screenshot shows two overlapping windows from an Oracle EAM application. The top window is titled "REAPPLY ASSET TEMPLATE (EM1)" and contains a "Run this Request..." section with a "Copy..." button. Below this are fields for "Name" (set to "Reapply Asset Template"), "Operating Unit", "Parameters", and "Language" (set to "American English"). The bottom window is titled "Parameters" and contains the following fields: "Asset Type" (Capital), "Asset Group" (Fork Lifts), "Template Type" (Activity Template), "Asset Status", "Asset Number From", "Asset Number To", "Activity Template", "Meter Template", "PM Template", and "View Only" (set to No). At the bottom of the Parameters window are buttons for "OK", "Cancel", "Clear", and "Help".

7. Click OK to run the concurrent program.

Activity Association Templates

Activities provide you with a standard template of jobs, which are applied to work orders, such as Routine or Preventive Maintenance. After the activity templates are created, they are associated with one or more asset numbers or rebuildables (See: Defining Asset Numbers, page 3-85 and Rebuildable Item/Activity Association, page 3-150). They are also associated to a maintenance BOM (See: Setting Up Activity Bills of Material, page 3-134) and activity routing (See: Defining Asset Routes, page 3-139), containing the materials and resources needed for operations, respectively. When work orders are created for assets associated to the activity, the material and resources associated with the current activity automatically copy to the work orders created.

You can streamline the creation of activity associations using an Activity Association Template. For example, when you create an asset group, and then asset numbers within that group, you do not need to utilize the Association window to associate those asset

numbers with an activity. If you create an Activity Association Template, the activity that you associate with the asset group for the current asset number automatically determines the activity that is associated with the current asset number.

Note: The Activity Workbench is generally used to streamline your activity setups, including Activity Association Templates (See: Using the Activity Workbench, page 3-122).

To create activity association templates:

1. Navigate to the Activity Association Template window.

Activity Association Template

Asset Type	Asset Group	Priority	From	To	[]
Capital	Fork Lifts	Medium	05-JUN-2006		

2. Select an activity. The activity is created using the Master Item window.
3. Within the Main tab, select an Item Type of Asset or Rebuildable.
4. Select an asset group.

After this record is saved, this asset group is associated with the current activity. Each asset number created within the current asset group is automatically associated with the current activity.

5. Optionally select a Priority code.

This default value comes from the Master Activity information created using the

Master Item window.

6. Optionally enter Effectivity Dates for this Activity Template.
7. Click the Work Order Defaults tab.

Use this tab to optionally define default information that will appear for work order such as:

- Activity Cause: Defaults from the Activity definition, specifying what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings.
- Activity Type: Defaults from the Activity definition, indicating the type of maintenance activity to perform for this activity, and is used during job definition.

This code should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. Optionally, you can select an activity type.

See Defining Activities, page 3-69.

- Tagging Required: Select this check box to indicate whether tag out procedures are required.

The area may need securing for operations required for carrying out a work order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown, and should not be started. This check box helps the planner isolate those jobs that require a tagout. This is for informational purposes.

- Owning Department: Defaults from the asset number definition and indicates a planner or supervisor who is responsible for the activity or asset.
- Shutdown Type: This value defaults from the Master Activity information that was created within the Master Item window.

This option indicates whether a shutdown is necessary to perform this maintenance activity, for example, Required or Not Required. This field is for informational purposes.

- WIP Accounting Class: Default values come from the eAM Parameters information for the current organization, but you can update this value.
- Activity Source: This value defaults from the Master Activity information created in the Master Item window.

Activity source codes are the reasons why activities are executed, for example, Warranty Compliance, OSHA Compliance, or Military Specification

Requirements. Activity Sources, page 3-40.

- Work Order Type: Select a value to differentiate work orders. For example, Routine, and Rebuild. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting.
 - Planner: Select a planner to be assigned to the work order.
 - Firm: Select to indicate the work order is to be firmed and planning and scheduling will not automatically adjust the schedule, regardless of material or resource availability.
 - Planned: Select to indicate that this is a planned order.
 - Notification: Select if a notification is to be generated.
8. Save your work.

Setting Up Attributes

You can define common characteristics data specific to asset groups, such as Facility Information, Engineering Specifications, Regulation Requirements, Horsepower, Voltage, and Square Footage, by creating attribute groups using descriptive flexfields. After the attribute group is created, you can then assign it to an asset group. This enables you to define additional characteristics data when defining an asset associated with the asset group. This provides extensive query capabilities. Attribute groups are descriptive flexfields, defined by segments and values.

For example, you can define an Attribute Group, Front Loader Nameplate data. This group can then be associated with the CARS Asset Group. When defining an asset within the CARS Asset Group, you can optionally utilize the attributes to specify nameplate data (specified data such as make, year, and model) for the asset. This creates a simplified way of entering specified data (See: Defining Asset Numbers, page 3-85) related to a specific Asset Group.

To set up attributes:

1. Navigate to the Descriptive Flexfield Segments window.

Descriptive Flexfield Segments

Application: Inventory Title: Asset Attributes

☒ Freeze Flexfield Definition Segment Separator: Period (.)

Context Field

Prompt: Context Value

Value Set:

Default Value:

Reference Field:

☐ Required

☐ Displayed

☐ Synchronize with Reference Field

Context Field Values

Code	Name	Description	Enabled
Feeder Line	Feeder Line	Feeder Line	<input checked="" type="checkbox"/>
Fork Lift Classifications	Fork Lift Classifications	Fork Lift Data	<input checked="" type="checkbox"/>
HVAC Specifications	HVAC Specifications	HVAC Specifications	<input checked="" type="checkbox"/>
Injection Molding Specs	Injection Molding Specifications	Injection Molding Specifications	<input checked="" type="checkbox"/>
Loader Specifications	Loader Specifications	Loader Specifications	<input checked="" type="checkbox"/>
Location	Location	Location	<input checked="" type="checkbox"/>

Compile Segments

2. Select the Search icon from the tool bar, and then select the Oracle Inventory Application with the Title, Asset Attributes.
3. Unfreeze the Flexfield Definition by clearing the Freeze Flexfield Definition check box.
4. In the Context Field Values region, select a row, then click the New icon. A blank row is added for you to create an attribute group.
5. Enter the attribute group name in the Code field.
6. Optionally enter a Description for this attribute group.
7. Select Segments to add attributes to the attribute group you just created.

Segments Summary

Number	Name	Window Prompt	Column	Value Set	Displayed	Enabled
1	Make	Make	C_ATTRIBUTE1	15 Characters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Model	Model	C_ATTRIBUTE2	15 Characters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Load	Max Weight Capacity	C_ATTRIBUTE3	15 Characters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Mast	Max Reach Height	C_ATTRIBUTE4	15 Characters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>

Value Set New Open

8. Enter a Number to sequence the data.
9. Define the Name of the specific attribute. The Window Prompt defaults to this name.
10. Select a Column value.
11. Select a Value Set, or optionally choose Value Set to create a new one.
12. If the Displayed check box is selected, this attribute appears for you when defining data for an asset within the asset group (for example, Fork Lift Classifications) associated with the attribute group in which this attribute (for example, Make) resides.
13. Optionally select the Enabled check box to enable the attribute for availability when defining assets (See: Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*).
14. Save your work, and return to the Descriptive Flexfield Segments window.
15. Select the Freeze Flexfield Definition check box. Failure to do this prevents you from querying the segments from the Attribute window.
16. Save your work.

To associate the attribute group with an asset group:

1. Navigate to the Attributes Assignment window.

In the following example, any asset created within the Fork Lifts asset group has the Fork Lift Classifications attribute group available as an option for data entry.

Attributes Assignment

Attribute Group Code	Attribute Group Name	Description	Enabled
Fork Lift Classifications	Fork Lift Classifications	Fork Lift Data	<input checked="" type="checkbox"/>
Warranty Data	Warranty Data	Warranty Data	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

2. Select an Asset Group. See Defining Asset Groups, page 3-66.

3. Select an Attribute Group Code.

You can have an unlimited number of attribute groups associated with an asset group.

4. Save your work.

Defining Asset Documents

You can attach existing documents to an asset, and create text to associate with an asset. You can attach text, URLs, or files, such as spreadsheets, graphics, and OLE objects. When creating a work order for an asset with attachments, you can attach the asset's attachments to the work order. For this to function, the appropriate attachment category, Asset Attachments (1), must be associated with the attachment function, EAMWOMDF (See: Working With Attachments, *Oracle Applications User's Guide*).

To define asset documents:

1. Navigate to the EAM Asset Documents window.

EAM Asset Documents

The screenshot shows the 'EAM Asset Documents' form. It includes fields for Category (set to 'Asset Attachments'), Title, and Description. The Source section has Data Type and File fields. The Usage section has radio buttons for Standard (selected) and Template. The Security section has a Type dropdown (set to 'Organization'), an Owner dropdown (set to 'Seattle Maintenance'), and a Share checkbox. The Effective Dates section has From and To date fields. A large empty text area is at the bottom.

2. Select a Data Type.
3. If the Data Type is File, attach the appropriate File. If the Data Type is Web Page, enter the relevant URL. If the Data Type is Short Text, insert the text in the text field.

For information on all fields, See: *Working With Attachments, Oracle Applications User's Guide*.
4. Save your work.

Defining Asset Statuses

Use the Create Status page to define asset statuses. The status value appears for selection in the Asset Status field in the Define Asset Number, Define Rebuildable Serial Number and Define Asset Route forms, and can be used by discrete and GIS assets.

1. Navigate to the Create Status page (Maintenance Super User > Assets > Asset Setups > Asset Statuses > Create Status or Maintenance Super User > Assets > GIS Assets > Asset Statuses > Create Status).

Create Status - GIS Assets tab

The screenshot shows the 'Create Status' form in the GIS Assets tab. The form has a left sidebar with navigation links: Maintenance Home, Assets, Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, Reports, Rebuildable Inventory, Mass Meter Readings, Mass Geocode Entry, Asset Setups, Map Workbench, GIS Assets, and Capital. The 'Assets' tab is selected. The main content area is titled 'Assets: GIS Assets: Asset Statuses >' and 'Create Status'. There are 'Cancel', 'Save', and 'Apply' buttons at the top right. A note indicates that an asterisk (*) denotes a required field. The 'Name' field is required and has a dropdown menu. Below it are checkboxes for 'Terminated', 'Status Change Allowed', 'Service Allowed', 'Request Allowed', 'Updateable' (checked), and 'Pre-Defined'. To the right, there are date pickers for 'Active Start Date' (07-May-2019) and 'Active End Date'. Below these is a large text area for 'Description'. The footer contains copyright information and links to 'About this Page' and 'Privacy Statement'.

2. Enter a Name for the asset status (required).
3. Select the check box for any of the following statuses:
 - Terminated
 - Status Change Allowed
 - Service Allowed
 - Request Allowed
 - Updateable
 - EAM Asset Status
4. Optionally enter an Active Start Date.
5. Optionally enter an Active End Date.
6. Optionally enter a Description.
7. Click Save or Apply.

Updating Asset Statuses:

1. Navigate to the Update Asset Statuses page (Maintenance Super User > Assets > Asset Statuses or Maintenance Super User > Assets > GIS Assets > Asset Statuses > Create Status).

You cannot modify an asset status if there are existing assets using the asset status.
The Update Asset Status page appears.

Update Status Cancel Save Apply

* Indicates required field

* Name	<input type="text" value="Loaned"/>	<input checked="" type="checkbox"/> EAM Asset Status
<input type="checkbox"/> Terminated	Active Start Date	<input type="text" value="02-May-1997"/>
<input checked="" type="checkbox"/> Status Change Allowed	Active End Date	<input type="text"/>
<input checked="" type="checkbox"/> Service Allowed	Description	<input type="text" value="Loaned to customer while unit is being repaired"/>
<input checked="" type="checkbox"/> Request Allowed		
<input checked="" type="checkbox"/> Updateable		
<input type="checkbox"/> Pre-Defined		

2. Search for an asset status and click the Update icon in the search results table.

Note: Only assets with a status of Updateable are available for selection.

3. Select the check box for any of the available statuses such as:

- Terminated
- Status Change Allowed
- Service Allowed
- Request Allowed
- Updateable
- Pre-Defined
- EAM Status Change

4. Optionally enter an Active Start Date.
5. Optionally enter an Active End Date.
6. Optionally enter a Description.
7. Click Save or Apply.

Defining Asset Numbers

Oracle Enterprise Asset Management provides several methods in which you can define a new asset. You can create them individually, copy information from an existing asset,

utilize the multiple asset entry method, use the Import Asset Number interface, or use the Asset Number WebADI and Asset Attribute WebADI.

See *Creating and Updating Asset Numbers Using the Asset Number WebADI Feature, Oracle Enterprise Asset Management User's Guide* and *Creating and Updating Asset Attributes Using the Attribute WebADI Feature, Oracle Enterprise Asset Management User's Guide*.

You can also use Oracle Web Services to automatically create, update and search for asset numbers. These public interfaces enable you to more easily convert data from another instance or another system. These web services are annotated and available in the I-Repository along with other public Oracle APIs.

Warning: You cannot use "_" or "%" when creating an asset number using Oracle EAM.

In addition, when an asset is received and delivered to inventory, an asset number is created automatically.

Prerequisites

You must set up the following task prior to defining asset numbers in Oracle eAM:

- Define asset groups. See *Defining Asset Groups*, page 3-66

To define assets individually using the EAM responsibility:

1. Navigate to the Define Asset Number window.

You can also create assets using the Create Asset page located in the Maintenance Super User responsibility (Maintenance Super User > Home > Assets > Create button). See *Creating Capital or Rebuildable Assets*, page 21-6 for more information.

2. Enter an asset number or accept or modify the default, if you have automatic number generation enabled (See Defining eAM Parameters, page 3-13).

After an asset is saved, it cannot be deleted. The asset can be deactivated if there are no open work orders or work requests for the asset, and if the asset is not part of an asset hierarchy.

3. Optionally enter an Asset Description, up to 240 characters.
4. Select an asset group. This asset group is associated with this asset.

Note: After an asset group is associated with an asset and then saved, it can be changed under certain conditions. See Updating Asset Groups for Asset Numbers, page 3-99.

5. Enter a value in the Asset Serial Number field, or accept the default value that appears if automatic number generation is enabled.

Note: The Asset Serial Number can be modified to be identical to the asset number.

The Asset Serial Number might have a non-unique value across organizations, but the asset number must be globally unique, regardless of the defaulting value. When an asset number generates automatically at receipt by the Deliver to Inventory transaction, it defaults to the Item Instance number. You can change it, as long as it

is a globally unique number.

6. Optionally associate this asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See Setting Up Category Codes and Sets, page 3-63.

7. Optionally, change the default value in the **Organization** field.

This organization may be different than the eAM-enabled organization that maintains the asset. You can define an asset group and asset number directly in the production organization.

You can define an asset group in an organization that is not eAM-enabled, if it is associated with an eAM-enabled organization in its Organization parameters.

In this Define Asset Number window, you can define an asset number for asset groups defined in the eAM-enabled organization itself, and also for asset groups that are defined in organizations that are maintained by the eAM organization, by specifying the organization in this field.

The list of values includes the eAM-enabled organization, as well as all organizations that are not eAM-enabled but are associated with the eAM-enabled organization in their Organization Parameters.

8. Within the Main tab, optionally select an owning Department for this asset to represent the crew responsible for the asset.

Notifications regarding work requests are sent to the Primary Approver of the work request's associated asset's current owning department (See Defining Department Approvers, page 3-28).

9. Optionally select a Criticality code to indicate the importance of the asset to the organization. This field is for informational purposes.
10. Optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.
11. Select an Asset Status to indicate the status of the asset; CREATED is the default value.
12. Optionally enter the Area where this asset resides.

This is a user-defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See Setting Up Areas, page 3-21).

13. Indicate whether this asset is maintainable. If the Maintainable check box is selected, you can create work requests and work orders for this asset.

For example, you can create an asset for cost-tracking purposes. For example, you might want to view the cost for all top level assets in an asset hierarchy, but you do not want to maintain those assets. In this situation, do not select this check box.

Note: After work orders are created for this asset, you cannot clear this check box unless those work orders are at Complete, Canceled or Closed statuses.

14. Optionally select the Active check box to indicate that the asset is functioning, for example, maintenance work orders can be created for this asset.

This check box changes when you activate or deactivate an asset from the Tools menu.

15. Select the GIS Assets check box if you want to define the asset as a linear or area asset.

This field is also available on the Define Rebuildable Serial Number page.

See Defining GIS Asset Numbers, page 22-2 or Defining Rebuildable Serial Numbers, page 3-145 for more information.

16. Indicate whether Asset Operational Logging is enabled for this asset.

If you select the Operation Log Enabled check box, you can view all current and past asset operational information such as Check Out, Check In, associated work requests and work orders. You can remove or add a child asset, remove a parent asset, activate or deactivate the asset, transfer the asset to another location, and receive or issue the asset into and from Inventory. By default, logging is turned off for an asset. See Asset Operational Logging, page 21-27.

17. Within the Parent region, optionally select a parent asset number to establish asset hierarchy information.

Work order costs roll up through the parent and child hierarchies defined, and can roll up to any level within an asset hierarchy. This enables you to review all cost associated with an asset or asset hierarchal view.

Note: When a child asset is transferred to another eAM organization, it is still included in the parent hierarchy. The organization that the asset currently resides in appears in parentheses. Transferring the asset does not remove the asset from the asset hierarchy. You must remove the asset manually, to remove the asset from its hierarchy.

18. The Checked Out check box indicates whether the current asset is checked in or out.

You can check out an asset to view asset details, enter collection plan data, enter meter information, and optionally create a work request, within Maintenance Super User. This check box is protected against update. See Asset Operational Logging, *Oracle Enterprise Asset Management User's Guide*.

19. Within the Location tab, the Subinventory and Locator fields are view-only, displaying the subinventory location of this asset within Inventory and its Locator segments.

If this asset is received into Inventory, these fields are populated.

20. Optionally select a Location Code to specify a physical location for this asset.

The Address field simultaneously populates with the selected Location Code's associated Address. The previously defined area is organization-specific and not associated with a physical location.

If your asset does not reside in a subinventory, you can specify an external location for it. You can only select an external location that is defined as a HZ location. You may optionally define external locations with a location code.

Valid Location Codes are defined within Oracle Installed Base.

21. The Address defaults as the populated Location Code's associated address.

You can optionally select a different address. If the current asset is in stores, the address of the Location's organization appears (See Stores, page 27-1).

22. Optionally select a Production Organization.

The list of values displays the production inventory organizations maintained by the current asset's organization. See: Enabling Organizations for Enterprise Asset Management, page 3-8 for information on designating eAM organizations to maintain equipment items for designated production organizations.

23. Select an Equipment Item.

This is mandatory if you populated the Production Organization field. Items that were defined with an equipment template (See: Item Templates, *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: Physical Attributes, *Oracle Inventory User's Guide*), are available.

24. Enter an Equipment Serial Number.

This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, if an asset resides directly in the Production Organization, and its asset group is defined directly in the Production Organization as Equipment. You can view the Production Organization and the Asset Serial Number fields, but you cannot update them.

25. Use the Location tab to specify the geocode information with details of latitude, longitude, direction, and ESRI reference details for the asset.

This information is used to display the assets in the chosen map viewer. If both longitude and latitude and ESRI references are provided, the ESRI Feature and Feature ID would be used to plot the asset on the map, and the latitude and

longitude fields would be ignored.

If you are using the ESRI integration, you can alternatively enter values in the following fields rather than enter Latitude and Longitude to display assets on a map.

- **ESRI Feature:** These values are defined on the ESRI Map Manager page.

This value is referenced to a published Feature table which has a Point shape from the ESRI system.

- **ESRI Feature ID:** The specific ESRI reference identifier from the selected ESRI Feature table which has a corresponding Point geometry.

If the Latitude, Longitude and ESRI fields are entered, then the ESRI related fields take priority and are used to display assets on a map.

Note: Geocode entry and ESRI Feature associations are enabled for point assets only and are not applicable for GIS assets.

See Using Map Manager, page 22-14 for more information regarding the ESRI Map Manager fields.

The screenshot displays a web interface with four tabs: Main, Location (selected), Safety, and Others. The Location tab contains several input fields and a dropdown menu. On the left, there are fields for Subinventory, Location Code (with a dropdown arrow), Address, Production Organization, Equipment Item, and Equipment Serial Number. On the right, there are fields for Locator, Latitude (with sub-fields for Degrees, Minutes, Seconds, and a Direction dropdown), Longitude (with sub-fields for Degrees, Minutes, Seconds, and a Direction dropdown), ESRI Feature (with a dropdown arrow), and ESRI Feature ID.

26. Optionally enter the Number if Oracle Fixed Assets is installed.

This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.

27. The Property Management fields, Location Name and Location Code default values come from a Property Manager export process (Export Locations to Enterprise Asset Management), if Oracle Property Management is installed.

These fields are display only and cannot be changed.

Important: Asset groups must be defined before information is

passed from Property Manager into Enterprise Asset Management.
See Defining Asset Groups, page 3-66.

28. Optionally choose Location Details to view or update Property Manager field information.
29. You can indicate if an asset is a positional asset or a lockout device.

Note: You can leave the field blank (no value) or indicate if the asset is a positional asset or a lockout device, but not both.

Click the Safety tab to enter values for the positional asset or to indicate if the asset will be associated with a lockout device used during isolation. See Defining Positional Assets, page 30-4.

30. Optionally click the Attributes button to enter attribute values for the asset (See: Setting Up Attributes, page 3-79).

Existing, enabled attribute groups appear. These attribute groups are optional. You do not need to enter values for all existing attribute groups. From this window, you cannot generate attribute groups.

Asset Attributes

The top screenshot shows the 'Asset Attributes (EM1)' dialog box. It contains the following fields:

Field	Value	Label
Asset Group	Fork Lifts	Fork Lift Asset Group
Asset Number	FL1040	Fork Lift 1040
Attribute Values	Fork Lift Classifications	Fork Lift Classifications.Clark.EL20.4000.40

The bottom screenshot shows the 'Asset Attributes' dialog box. It contains the following fields:

Field	Value	Label
Context Value	Fork Lift Classifications	Fork Lift Data
Make	Clark	
Model	EL20	
Max Weight Capacity	4000	
Max Reach Height	40	

Buttons: OK, Cancel, Clear, Help

31. You can choose Resource Usage if the fields in the Production Equipment region are populated.

This enables you to view production work orders using the equipment that corresponds with this asset number as a resource.

Resource Usage

Resource Usage

Production Equipment

Production Org

M1

Item

Assembly Conveyor

Serial Number

VPAL0001

Resources

Resource	Description	UOM	Resource Group	Department	Owning Department
VPAL	Vision Pad Assembly Line	HR		VISION PAD	VISION PAD
TS-RES2	RES-2	HRS		TS-DEPT2	TS-DEPT2

Work Order

Work Order	Scheduled Start Date	Scheduled Completion Date	Status	Entity Type

Ok

32. Click the GIS Asset Workbench to enter GIS (linear and area) asset details.
See Using the GIS Asset Workbench, page 22-24 for more information.
33. Optionally select Associate Activity to directly associate this asset with an asset group. See Activity Association Templates, page 3-76.

Activity Association

Asset Group: Production Conveyor/Lin (Production Conveyors for assembly lines)

Asset Number: Conveyor Line 1 (Assembly Conveyor Line)

Activity Association (EM1)

Main Activity

Activity	Description	Priority	Effective Dates		[]
			From	To	
INJ Molding PM	Injection Molding Machine Plat		21-SEP-2009		

Cancel Ok

34. Optionally enter file, URL, or text attachments to this asset by choosing the paperclip Attachments icon.

You can then choose Document Catalog to add asset specific documents. See Defining Asset Documents, page 3-82.

35. Save your work.

To copy assets from existing assets:

You can copy asset information from existing assets.

When using this method, everything copies to the new asset, including attributes and attachments. Equipment serial numbers are not copied. You are prompted to enter the Equipment Serial Number, when saving.

1. Navigate to the Define Asset Number window.
2. Select an asset group. This asset group is associated with this asset.
3. Enter an asset number if you do not have them automatically generated, or accept or modify the default, if you have automatic generation enabled. (See: Defining eAM Parameters, page 3-13).

After an asset has been saved, it cannot be deleted. The asset can be deactivated if

there are no open work orders or work requests for the asset, and if the asset is not part of an asset hierarchy.

4. Optionally enter an Asset Description up to 240 characters.
5. From the Tools menu, select *Copy Asset Number from*.
6. Select the asset.
7. Optionally associate this Asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD, or BUILDING.FLOOR. See: Setting Up Category Codes and Sets, page 3-63.
8. Select an owning Department for this asset.

Email notifications regarding work requests are sent to the Primary Approver of the owning department for the associated asset (See: Defining Department Approvers, page 3-28).
9. Save your work.

To access failure analysis information:

You can access the Failure Set page to view failure tracking codes that are assigned to the current asset number.

1. From the Define Asset Number window, select Maintain Failure Set from the Tools menu.

If the asset number does not have an associated Failure Set, this menu option is disabled. See: Defining Failure Codes and Sets, page 28-2 and Failure Analysis Overview, page 28-1.
2. Close the window.

To deactivate an asset:

1. Navigate to the Define Asset Number window.
2. Select the flashlight Find icon to display the Find Asset Number window.
3. Select an asset number to deactivate.
4. From the Tools menu, select De-Activate Asset Number.
5. Save your work.

Important: An asset cannot be updated unless it is in an Active state.

Therefore, any simultaneous updates to the asset will reactivate the asset.

To activate an asset:

1. Navigate to the Define Asset Number window.
2. Select the flashlight Find icon to display the Find Asset Number window.
3. Select a Deactivated Asset Number to activate.
4. From the Tools menu, select Re-Activate Asset.
5. Save your work.

Defining Location Hierarchies for Assets

A functional location is an organizational unit that structures the maintenance objects of an organization to functional, process-related or spatial criteria. In Oracle Enterprise Asset Management, a functional location represents the place at which a maintenance task is to be performed. The functional location hierarchy represents the list of assets that are impacted by the maintenance tasks based on a physical location.

Follow these steps to define information used with location hierarchies:

1. Define the lookups for functional location hierarchy types:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management > Setups > Lookups).
2. Review the seeded values; you cannot delete these values, but you can change the description and effective dates.
3. Enter values for additional lookups to be used by your organization.

Manufacturing Lookups

Type: EAM_FUNC_HIER_TYPE

Meaning: Functional Hierarchy Type

Application: Enterprise Asset Management

Description: Functional Hierarchy Type

Access Level:

- ☒ User
- ☐ Extensible
- ☐ System

Effective Dates

Code	Meaning	Description	Tag	From	To	Enabled
10	Facility	Facility		10-MAR-2022		<input checked="" type="checkbox"/>
20	Plant	Plant		10-MAR-2022		<input checked="" type="checkbox"/>
30	Location	Location		10-MAR-2022		<input checked="" type="checkbox"/>
40	CL	Customer Location	C_L	20-JUN-2021		<input checked="" type="checkbox"/>
50	Building	Building		20-JUN-2021		<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- Click Save.

2. Define the functional hierarchy positions:

After you have defined the hierarchical lookup values, you will define the position codes for the hierarchy.

- Navigate to the Functional Hierarchy page (Maintenance Super User > Assets > Asset Setups > Functional Hierarchy).
- Click the **Define Functional Hierarchy** button.
- Enter values on the page:
 - Hierarchy Type (required)
 - Hierarchy Description (optional)
 - Position Code (required)
 - Description (optional)
 - Parent Position Code and Parent Code Description (optional)

4. Click **Apply**.

3. Associate asset numbers to the functional hierarchy:

The final setup step is to associate the asset numbers to the functional hierarchy. You can perform this association when you create or update the asset number.

1. Navigate to the Asset Numbers page (Maintenance Super User > Assets > Asset Numbers).
2. Search for an asset number.
3. Click the **Update Asset** icon for the asset number.
4. Select values in the fields for Hierarchy Type and Position Code in the Functional Hierarchy region of the page.

5. Click **Apply**.

For more information about viewing functional location hierarchies, see To view a functional location hierarchy for an asset, *Oracle Enterprise Asset Management User's Guide*.

Updating Asset Groups for Asset Numbers

You can update the asset group for an asset number after it has been created and saved. This update can be performed using the Define Asset Number form and Update Asset Number HTML page.

You can update an asset group even if the following setups or associations exist for the asset number:

- Asset attributes have been defined.

- Quality results have been entered.
- Activity association has been made.
- Meter association has been made and meter readings have been entered.
- PM schedule has been defined.
- Asset number is part of an asset hierarchy (parent or child).
- Asset number has a relationship with other GIS or discrete assets.

However, you cannot update the asset group if:

- The asset number is in inventory.
- The asset number has an equipment association.
- The asset number has a Property location association.
- The asset number has a Fixed Asset association.

Note: You cannot update an asset group for an asset route.

For Assets With Work History - Special Considerations

- Asset Search: Based on the current group association.
 - Work Order Search: Based on the asset group associated with the work order was created.
1. Navigate to the Define Asset Number page (Enterprise Asset Management > Assets > Asset Numbers).
 2. Search for the asset number that you want to update.
 3. Click the search button next to the Asset Group field.
The Asset Group page appears.
 4. Search for the new asset group using the % wildcard to view all valid asset groups associated with the organization, or enter a specific asset group value.
Select the new asset group. The new asset group name and description appear.
 5. Click the Save button.
 6. Upon save, the following occurs:
 - If the asset is serial controlled, the original asset serial number does not change.

- A new item instance is created in Oracle Installed Base.

Transaction History in Oracle Installed Base

The transaction history will capture the asset group updates performed on the asset number.

Defining Asset Routes

You might need to perform an activity on multiple asset numbers. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. You can define a Preventive Maintenance schedule for your asset route to specify when an activity should be scheduled for the asset route. You can define day interval rules for asset routes.

To define asset routes:

1. Navigate to the Define Asset Route window.

Define Asset Route

The screenshot shows the 'Define Asset Route (EM1)' window. The top section contains fields for Asset Number, Asset Group, Asset Serial Number, Asset Category, Organization, and Asset Type. The middle section has tabs for Main, Location, Safety, and Others. The 'Main' tab is active, showing fields for Owning Department, Criticality, WIP Accounting Class, Asset Status, Area, Parent Asset Type, Parent Asset Number, Parent Asset Group, Warranty Expiration, and Checked Out. There are also checkboxes for Maintainable, Active, GIS Asset, and Operation Log Enabled. At the bottom, there are buttons for Attributes, Resource Usage, GIS Workbench, Asset Route, and Associate Activity.

2. Enter the name of the asset route in the Asset Number field.
3. Select an Asset Group.
4. The Asset Serial Number defaults to the asset number.

You can optionally select the next serial number for the current organization. The Asset Serial Number might have a non-unique value across organizations, but the asset number must be globally unique, regardless of the defaulting value.

5. Optionally associate this asset route to an Asset Category.
This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See Setting Up Category Codes and Sets, page 3-63.
6. Within the Main tab, optionally select an owning Department for this asset route.
This represents the crew responsible for the asset. Notifications, regarding work requests, are sent to the Primary Approver of the work request's associated asset's current owning department (See Defining Department Approvers, page 3-28 and Defining Asset Numbers, page 3-85).
7. Optionally select a Criticality code to indicate the importance of the asset route to the organization.
This field is for information purposes.
8. Optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.
9. Select an Asset Status.
This field represents the current status of the asset route.
10. Optionally enter the Area where this asset route resides.
This is a user defined listing of logical areas of work, for example, North Plant, East Wing, or Area 1. (See Setting Up Areas, page 3-21).
11. Indicate whether this asset route is maintainable.
If the Maintainable check box is selected, you can create work requests and work orders for this asset route.
12. Optionally select the Active check box to indicate that the asset route is functioning.
This check box changes when you activate or deactivate an asset route from the Tools menu.
13. The GIS Asset option is unavailable.
Note: You cannot define an asset route as a GIS asset.
14. Choose Asset Route to display the Asset Route window.

Asset Route

Associated Asset Numbers		Effective Dates		
Asset Group	Asset Number	From	To	[]
Fork Lifts	FL1010	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL1020	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL1030	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL1040	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL2010	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL2020	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL2030	16-OCT-2002		<input type="checkbox"/>
Fork Lifts	FL2040	16-OCT-2002		<input type="checkbox"/>

15. In the Associated Asset Numbers region, select an Asset Group.

16. Select an asset number.

Asset numbers associated with the previously selected asset group are available.
You can associate an unlimited number of asset numbers.

17. Optionally enter values for the Effective Dates fields.

If the Effective Date From field is left blank, the system date defaults.

18. Save your work.

Note: Asset numbers can be associated with asset routes. An asset route cannot be associated with another asset route.

Setting Up Asset Bills of Material

You can identify and select the required items that make up an asset. A bill of material (BOM) is used to list all items and components that make up a particular asset, and is defined for each asset group. The items defined on an asset BOM are standard inventory components (See: Defining Items, *Oracle Inventory User's Guide*).

Note: Even if you are not using Project Manufacturing applications,

Project Parameters are defined for your eAM enabled organization to successfully create asset groups. This is required because an Asset BOM is of type Model/Unit Effective and this BOM type is currently allowed if PJM organization parameters are set up for the eAM enabled organization to which the asset group has been assigned. To define Project Parameters, open the Project Parameters window using Project Manufacturing Super User responsibility and without entering any data in the window, save the record. If you plan to use Project Manufacturing, see: Project Manufacturing Integration Setup, page 3-238 for information on defining Project Parameters.

To set up an Asset BOM:

1. Navigate to the Bills of Material window.

Bills of Material

Bills of Material (EM1)

Item: Fork Lifts Fork Lift Asset Group UOM: Ea

Alternate: Revision: 0 Date: 21-SEP-2009 13:25:13

Display: Future and Current ☒ Implemented Only

Main Date Effectivity Serial Effectivity ECO Component Details Material Control Order Management

Item Seq

Item Seq	Operation Seq	Component	Item Description	Revision	UOM	Basis
10	1	Motor - Electric Fork L	Electric Fork Lift Motor	0	Ea	Item
20	1	Motor - Propane Fork L	Propane Fork Lift Motor	0	Ea	Item
30	1	Battery - Electric Fork	Power Battery For Electric Fork Lifts	0	Ea	Item
40	1	Battery - Propane Fork	Battery (electrical systems) for Propane Fork Lifts	0	Ea	Item
50	1	Fuel Tank - Propane Fork	Fuel Tanks for Propane Fork Lifts	0	Ea	Item

Substitutes Designators Operations Bill Details Revision

2. Select an asset group from the Item list of values.
3. Within the Main tab, the Item Sequence and an Operation Sequence values default.
4. Enter the inventory Component to make up the asset number.
5. Enter the Quantity of that component necessary for the asset.
6. Select the Serial Effectivity tab.

Bills of Material - Serial Effectivity

Item Seq	Operation Seq	Component	From	To	Disabled
10	1	Motor - Electric Fork L	FL1010	FL1040	<input type="checkbox"/>
20	1	Motor - Propane Fork L	FL2010	FLB2040	<input type="checkbox"/>
30	1	Battery - Electric Fork	FL1010	FL1040	<input type="checkbox"/>
40	1	Battery - Propane Fork	FL2010	FL2040	<input type="checkbox"/>
50	1	Fuel Tank - Propane Fi	FL2010	FL2040	<input type="checkbox"/>

7. Select the asset number (asset numbers are always serialized) that the inventory items are associated with, in the From and To fields.

Asset numbers associated with the current asset group are available.

If the component is installed in all asset numbers within the asset group, enter 0 in the From field, and leave the To field blank.

8. Optionally select the Material Control tab, and enter a subinventory location or source locator for this asset BOM.

If the Auto Request Material option is selected at the BOM level, material allocation will be initiated when the work order is released, and the source subinventory and source locator values you enter will override these values in the Inventory sourcing rules. If the Auto Request Material option is not selected, you can specify a source subinventory and source locator for your material when you perform a material request or a One-Step Material Issue transaction.

Material Control

Bills of Material (EM1)

Item: Fork Lifts Fork Lift Asset Group UOM: Ea

Alternate: Revision: 0 Date: 14-MAY-2008 11:44:13 [.]

Display: Future and Current ☒ Implemented Only

Main Date Effectivity Serial Effectivity ECO Component Details **Material Control** Order Management

Item Seq	Operation Seq	Component	Supply Type	Subinventory	Locator
10	1	Motor - Electric Fork L	Push	FkltStore	
20	1	Motor - Propane Fork L	Push	FkltStore	
30	1	Battery - Electric Fork	Push	FkltStore	
40	1	Battery - Propane Fork	Push	FkltStore	
50	1	Fuel Tank - Propane F	Push	FkltStore	

Substitutes Designators Operations Bill Details Revision

9. Save your work.

For information on all remaining fields, See: Creating a Bill of Material, *Oracle Bills of Material User's Guide*.

Reapplying Activity, Meter and PM Templates Simultaneously

You can reapply all activity, meter and PM templates for assets that do not have existing templates attached. You can perform the reapplication using a concurrent program.

To apply activity, meter and PM templates simultaneously:

1. Navigate to the Apply Asset Template form (Enterprise Asset Management > Assets > Reapply Asset Template).
2. Enter values in the following required fields:
 1. **Asset Type:** Capital or Rebuildable
 2. **Asset Group:** Select an asset group to which you want to apply all templates.
 3. **Template Type:** All

Reapply Asset Template - All

REAPPLY ASSET TEMPLATE (EM1)

Run this Request...

Copy...

Parameters

Asset Type	Capital	Capital
Asset Group	Fork Lifts	Fork Lift Asset Group
Template Type	All	Activity, Meter and PM Templates
Asset Status		...
Asset Number From		
Asset Number To		
Activity Template		
Meter Template		
PM Template		
View Only	No	

OK Cancel Clear Help

3. Optionally select Yes in the View Only field if you do not want the system to apply the templates; a log is generated but the templates are not reapplied to the assets. The default value is No.
4. Click the OK button.

To reapply meter templates only, see Reapplying a Meter Template to an Asset Group, page 3-158.

Related Topics

Defining Activities, *Oracle Enterprise Asset Management User's Guide*

Using the Activity Workbench, *Oracle Enterprise Asset Management User's Guide*

Rebuildable/Activity Association, *Oracle Enterprise Asset Management User's Guide*

GIS Asset Setup

The following setup steps must be performed to use the GIS assets feature:

1. Enable the EAM: Enable GIS asset functionality profile option. See Profile Option Details, *Oracle Enterprise Asset Management Implementation Guide*.
2. Define GIS asset reference UOM and UOM Classes. See Defining GIS Asset Reference UOM and UOM Classes, page 3-108.
3. Define GIS asset reference methods. See Defining Reference Methods, page 3-108.

The following setups are optional:

- Define Y references. See Defining Y References, page 3-109.
- Define Z references. See Defining Z References, page 3-111.
- Define X, Y, and Z Offset UOMs. See Defining X, Y, and Z Offset Units of Measure, page 3-112.
- Define direction types. See Defining Direction Types, page 3-112.
- Define map entity event types. See Defining GIS Asset Map Entity Event Types, page 3-113.
- Define map entity types. See Defining Map Entity Types, page 3-115.
- Define properties. See Using GIS Asset Properties, page 22-8.
- Define element types. See Using Element Types, page 22-10.
- Define relationship types. See Using GIS Asset Relationships, page 22-12.
- Define line styles. See Using Line Styles, page 22-7.
- Define GIS asset icons. See Using GIS Asset Icons, page 22-5.
- Define map visualization entities. See Defining Map Visualization Entities, page 3-116

Defining GIS Asset Reference UOM and UOM Classes

Define reference UOM and UOM classes for GIS assets:

- GIS asset reference UOM using the Units of Measure page (Inventory > Setup > Units of Measure > Units of Measure).
- UOM classes using the Unit of Measure Classes page (Inventory > Setup > Units of Measure > Classes).

See Defining Units of Measure, *Oracle Inventory User's Guide* for more information.

Defining Reference Methods

Reference methods indicate the manner in which GI assets are identified in the system using criteria such as X and Z references, and offset units of measure.

Use the Create Reference Method page to create reference methods.

1. Navigate to the Create Reference Method page (Maintenance Super User > Maintenance Home > Assets > GIS Assets > Reference Methods > Create Reference

Method).

Create Reference Method page

2. Enter or select values in the following fields:

- Reference Method Code (required)
- Reference Method Name (required)
- Reference UOM (required)
- Active Start Date (required)
- Active End Date (optional)
- Y references (optional)
- Z references (optional)
- X Offset UOM (optional)
- Y Offset UOM (optional)
- Z Offset UOM (optional)
- Description (optional)
- Context Value (optional)

3. Click Save or Apply.

Defining Y References

GIS asset Y references describe the vertical (up-down or North-South) reference point for the GIS asset. GIS asset Y references are user-defined.

To define Y references for GIS assets:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management > Setup > Lookups).
2. Click the Find icon.
3. Select EAM_LAM_Y_REFERENCE from the Type list of values.

GIS Asset Y References

The screenshot shows the 'Manufacturing Lookups' window. At the top, there are input fields for 'Type' (EAM_LAM_Y_REFERENCE), 'Meaning' (EAM LAM Y REFERENCE), 'Application' (Enterprise Asset Management), and 'Description'. To the right, there is an 'Access Level' section with radio buttons for 'User' (selected), 'Extensible', and 'System'. Below these fields is a table with columns: Code, Meaning, Description, Tag, Effective Dates (From, To), and Enabled. The table contains two rows: one with Code 10, Meaning Test1, Description Test Y Offset, and one with Code 20, Meaning MDE Y REF1, Description MDE Y REF1. The 'Enabled' column has checkboxes for each row, both of which are checked. A vertical scrollbar is visible on the right side of the table.

Code	Meaning	Description	Tag	From	To	Enabled
10	Test1	Test Y Offset		24-MAR-2014		<input checked="" type="checkbox"/>
20	MDE Y REF1	MDE Y REF1		02-APR-2014		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

4. Enter a numeric Code.
Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.
5. Enter the Meaning.
6. Enter a Description.
7. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
8. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
9. Select the Enabled check box to enable this code for Enterprise Asset Management.

10. Save your work.

Defining Z References

GIS asset Z references describe the location (above or below) the GIS asset. GIS asset Z references are user-defined.

To define Z references for GIS assets:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management > Setup > Lookups).
2. Click the Find icon.
3. Select EAM_LAM_Z_REFERENCE from the Type list of values.

GIS Asset Z References

The screenshot shows the 'Manufacturing Lookups' window. The top section contains fields for 'Type' (EAM_LAM_Z_REFERENCE), 'Meaning' (EAM LAM Z REFERENCE), 'Application' (Enterprise Asset Management), and 'Description'. To the right, there is an 'Access Level' section with radio buttons for 'User' (selected), 'Extensible', and 'System'. Below these fields is a table with columns: Code, Meaning, Description, Tag, From, To, and Enabled. The table contains two rows: one with Code 10, Meaning Test2, Description Test Z Offset, Tag, From 24-MAR-2014, To, and Enabled checked; and another with Code 20, Meaning MDE Z REF 01, Description MDE Z REF 01, Tag, From 02-APR-2014, To, and Enabled checked. The table has a vertical scrollbar on the right.

Code	Meaning	Description	Tag	From	To	Enabled
10	Test2	Test Z Offset		24-MAR-2014		<input checked="" type="checkbox"/>
20	MDE Z REF 01	MDE Z REF 01		02-APR-2014		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

4. Enter a numeric Code.
Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.
5. Enter the Meaning.
6. Enter a Description.
7. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.

8. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration date for the code.
9. Select the Enabled check box to enable this code for Enterprise Asset Management.
10. Save your work.

Defining X, Y, and Z Offset Units of Measure

The GIS asset feature of Oracle Enterprise Asset Management uses units of measure for the following offsets:

- X offset: UOM used to describe a known point along a GIS asset such as from an intersection or a mile post.
- Y offset: UOM used to describes the distance perpendicular to the direction of the GIS asset. For example, define a Y offset UOM of Feet to indicate that a speed limit sign is located X number of feet from Road X (GIS asset).
- Z offset: UOM used to describe the distance above or below a GIS asset. For example, define a Z offset UOM of Mile to indicate that Road Z is located X number of miles from Road X (GIS asset).

Define X, Y and Z offset UOMs using the Units of Measure page (Inventory > Setup > Units of Measure > Units of Measure).

See Defining Units of Measure, *Oracle Inventory User's Guide* for more information.

Defining Direction Types

Direction types are used to identify the location of the GIS asset in relationship to the GIS asset reference method. You can define directions such as Same, Opposite, North, South, and so on. For example, using the Pipe Line Reference method, Asset XYZ-Pipeline has a direction of South, indicating that the GIS asset is south of the Pipe Line Reference. Direction types are user defined.

To define GIS asset direction types:

1. Navigate to the Oracle Manufacturing Lookups window.
2. Click the Find icon.

GIS Asset Direction Types

Manufacturing Lookups

Type:

Meaning:

Application:

Description:

Access Level:
☒ User
☐ Extensible
☐ System

Code	Meaning	Description	Tag	Effective Dates		Enabled
				From	To	
10	Same	same	111	02-APR-2014		<input checked="" type="checkbox"/>
20	Opposite	Opposite	222	02-APR-2014		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

3. Select EAM_LAM_DIRECTION_TYPE from the Type list of values.

4. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

5. Enter the Meaning, for example, Opposite.

6. Enter a Description.

7. Optionally enter a Tag to categorize lookup values.

This field is for informational purposes.

8. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration date for the code.

9. Select the Enabled check box to enable this code for Enterprise Asset Management.

10. Save your work.

Defining GIS Asset Map Entity Event Types

Map Entity Event Types are user-defined.

To define map entity event types:

1. Navigate to the Oracle Manufacturing Lookups window.
2. Select EAM_LAM_MAP_ENTITY_EVENT_TYPE from the Type list of values.

GIS Assets Map Entity Event Types

The screenshot shows the 'Manufacturing Lookups' window. The 'Type' field is set to 'EAM_LAM_MAP_ENTITY_EVENT_TYPE', and the 'Meaning' field is set to 'EAM LAM MAP EVENT ENTITY TYPE'. The 'Application' field is set to 'Enterprise Asset Management'. The 'Access Level' is set to 'User'. The table below shows the configuration for the event type.

Code	Meaning	Description	Tag	From	To	Effective Dates	Enabled
1	Properties	Properties		24-MAR-2014			<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, Properties.
5. Enter a Description.
6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.

Optionally enter a Effective To Date to indicate an expiration date for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Defining GIS Assets Map Entity Types

Map Entity Types are user-defined.

To define map entity event types:

1. Navigate to the Oracle Manufacturing Lookups window.
2. Select EAM_LAM_MAP_ENTITY_TYPE from the Type list of values.

GIS Assets Map Entity Types

The screenshot shows the 'Manufacturing Lookups' window. The 'Type' field is set to 'EAM_LAM_MAP_ENTITY_TYPE', the 'Meaning' is 'EAM LAM_MAP ENTITY TYPE', and the 'Application' is 'Enterprise Asset Management'. The 'Access Level' is set to 'User'. Below these fields is a table with columns: Code, Meaning, Description, Tag, Effective Dates (From, To), and Enabled. The table contains two rows: Row 1 has Code '1', Meaning 'Organization', Description 'Organization', Tag, '24-MAR-2014', and is checked in the Enabled column. Row 2 has Code '2', Meaning 'Site', Description, Tag, '24-MAR-2014', and is checked in the Enabled column. There are several empty rows below.

Code	Meaning	Description	Tag	Effective Dates	Enabled	
				From	To	
1	Organization	Organization		24-MAR-2014		<input checked="" type="checkbox"/>
2	Site			24-MAR-2014		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

3. Enter a numeric Code.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, Organization and Site.

5. Enter a Description.
6. Optionally enter a Tag to categorize lookup values.
This field is for informational purposes.
7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Defining Map Visualization Entities

Assets, work orders and GIS asset attributes can be visualized on a map. GIS geometric shape entities such as GIS asset and GIS asset attributes require a line style; point geometry entities such as discrete asset require icons to be visualized on a map.

These map visualizations are user-defined, and can have specific line styles and icons defined for various entities. Related line styles or icons are used to display the entities on a map depending on whether they are linear or point.

You can define visualization entities for:

- Assets
- Asset Status
- Work Order Status
- Element Type
- Property

Defining Map Visualizations for Assets

Follow these steps to define line styles and icons for assets and asset groups to be displayed on a map:

To define map visualizations for assets and asset groups:

1. Navigate to the Define Map Visualization for Asset page (Maintenance Super User > Home > Assets > GIS Assets > Map Visualization Setup > Assets).
The Map Visualization for Asset page appears.
2. Click the Define Map Visualization button.
3. Enter values in the following fields:

- Asset Group (required)
- Asset Number (optional): If this field is left blank, then the map visualization setup applies to all assets in the asset group.

You can define map visualization for an asset group and a specific asset number.

Note: Map visualization defined for a specific asset number takes priority over map visualization defined at the Asset Group level.

- Icon Code
- Line Style Code
- Active Start Date
- Active End Date (optional)

4. Click Save or Apply.

Defining Map Visualizations for Asset Status

1. Navigate to the Define Map Visualization for Asset Statuses page (Maintenance Super User > Home > Assets > GIS Assets > Map Visualization Setup > Asset Status).
2. Enter values in any of the following fields:
 - Asset Status (required)
 - Icon Code
 - Line Style Code
 - Active Start Date

Important: Map visualization defined for the Asset Status would be used even if map visualization is defined at the Asset Number or Asset Group level.

Asset Status map visualization is the highest priority when displaying assets.

3. Click Save or Apply.

Defining Map Visualizations for Work Order Status

1. Navigate to the Define Map Visualization for Work Order Statuses page (Maintenance Super User > Home > Assets > GIS Assets > Map Visualization Setup > Work Order Status).
2. Enter values in any of the following fields:
 - Work Order Status (required)
 - Icon Code
 - Line Style Code
 - Active Start Date
3. Click Save or Apply.

Defining Map Visualizations for Element Types

1. Navigate to the Define Map Visualization for Elements page (Maintenance Super User > Home > Assets > GIS Assets > Map Visualization Setup > Element Type).
2. Enter values in any of the following fields:
 - Element Type (required)
 - Icon Code
 - Line Style Code
 - Active Start Date
3. Click Save or Apply.

Defining Map Visualizations for Property Types

1. Navigate to the Define Map Visualization for Properties page (Maintenance Super User > Home > Assets > GIS Assets > Map Visualization Setup > Property).
2. Enter values in any of the following fields:
 - Property (required)
 - Property From Value
 - Property To Value

- Icon Code
 - Line Style Code
 - Active Start Date
3. Click Save or Apply.

GIS Assets Map Visualization Setup: Integration Options

GIS assets are defined as:

- **Linear:** Represented by its length and measure values to indicate its start point and end point, and has a geometric profile and shape.
- **Area:** Represented by a geometric shape that is non-linear, but is identified by the closed area or shape having multiple linear sections forming its geometry. Examples are bodies of water such as lakes and ponds, forest areas, playgrounds, and so on.

Important: Entering the length and measure while associating GIS geometry to EAM asset segments is optional. Currently, this feature is enabled for ESRI integration.

The geometric shape of GIS assets can be visualized on a map. The geometry must be mapped to GIS asset using the GIS Asset Workbench to enable the visualization of the assets on a map. The mapping of the geometry profile associated to the GIS assets details by mapping integration option that you choose to implement.

You can use one of the following integration options:

- **ESRI**

Use this option to directly integrate with the ESRI GIS system. The polyline geometry in the ESRI Feature Class can be mapped to EAM GIS assets. The geometry continues to be maintained and stored in ESRI, and EAM maintains the reference to the ESRI geometry in GIS asset segments. The geometry is retrieved from ESRI when it needs to be displayed.

- **Oracle Spatial**

Using this option, the geometry of the asset is maintained in the EAM system. You can start by drawing the needed line geometry shape on Oracle Maps or Google Maps using the EAM web-based map tool, Spatial Route, in the EAM GIS Assets setup. The drawn geometry can be mapped to an EAM asset. The line geometry and asset both are maintained by EAM.

See Using the GIS Spatial Route Map, *Oracle Enterprise Asset Management User's Guide* for more information regarding the line geometry edit tool.

- **Custom GIS with Oracle Spatial**

Use this option to integrate with any Custom GIS system that has existing assets and associated geometry. By implementing a simple custom API which converts the asset geometry from the Custom GIS to Oracle Spatial geometry, the geometry can then be mapped to an EAM asset. The geometries would be defined and maintained in the Custom GIS system, and EAM maintains the reference to Custom GIS geometry in linear asset segments. The geometry is retrieved from the custom GIS by calling the custom implemented API when it needs to be displayed.

Prerequisites

- ❑ Perform the following steps to use GIS asset map visualization.
 1. Purchase and install the required GIS software to be integrated with EAM for GIS asset management. You can use any of the following options:
 - ESRI
 - ESRI Server and Desktop
 - ESRI Roads and Highways Extension for Server/Desktop (Only if your ESRI Line Feature Table/Class geometry supports measure(M) dimension in its Shape column. You need this extension to have GIS Referencing capabilities in EAM).
 - Oracle Spatial
 - EBS DB requires an Oracle Spatial license (Only if you use GIS Asset feature and display assets)
 - Google Maps if assets need to be displayed on Google Maps
 - Custom GIS with Oracle Spatial
 - EBS DB requires an Oracle Spatial license (Only if you use GIS Asset feature and display assets)
 - Google Maps if assets needs to be displayed on Google Maps

Important: This license prerequisite is mandatory only if you want to use the Map visualization feature with any of these GIS products.

2. Enable the appropriate profile option value:
 - ESRI integration: Set the CSI: Map Viewer Name value to *ESRI*.
 - Oracle Spatial integration: Set the CSI: Map Viewer Name value to *Oracle Spatial*.
 - Custom GIS with Oracle Spatial integration: Set the CSI: Map Viewer Name value to *Oracle Spatial*.
3. Set up the parameters in Map Manager.
4. Run the EAM: Reindexing Oracle Spatial Tables if you are using Oracle Spatial.

Related Topics

Profile Option Details, *Oracle Enterprise Asset Management Implementation Guide*

GIS Assets Map Integration, page 23-1

Enabling the Indoor Map Workbench Menu

Oracle EAM provides you the ability to visualize indoor GIS assets on a map workbench. Before you can use this feature, the page must be enabled.

To enable the Indoor Map Workbench:

1. Navigate to the Menus window (System Administrator > Application > Menu).
2. Click in the User Menu Name field, and click the Find button (flashlight).
3. Enter EAM Maintenance Unit Search in the Find User Menu Name window, and click Find.
4. Select the value, and then click OK.
The system populates the window.
5. Scroll to the Indoor Map Workbench value, and select the Grant check box.
6. Click the Save button.

The Indoor Map Workbench link appears on the Assets tab (Maintenance Super User > Maintenance Home > Assets). See *Using the Indoor Map Workbench*, page 22-40.

Using the Activity Workbench

You can use a central workbench to manage your organization's activity functions. Using the Activity Workbench, you can view, create (See: Defining Activities, page 3-69), query, and manage all of your activities. From this central workbench, you can view, create, and update maintenance routes, maintenance BOMs, Preventive Maintenance schedules, and suppressions associated with your activities. You can create various copy functions within a single activity, across multiple Activities, as well as between work orders and activities or asset activity associations. You can view or update Last Service for the asset activity association, as well as view cost estimates for the activity. These copy functions save time and standardize processes across your organization.

This section includes the following topics:

- Defining Activities, page 3-122
- Navigating the Activity Workbench, page 3-126
- Setting Up Maintenance Bills of Material, page 3-134
- Associating Asset Numbers with Activities, page 3-136
- Defining Maintenance Routes, page 3-139
- Creating Activity Templates, page 3-142

Defining Activities

There are three methods you can use to create an activity:

- Within the Master Activity (Master Item) window.
- From the Activity Workbench.
- Within a maintenance work order.

To set up activities using the Activity Workbench:

1. Navigate to the Activity Workbench window.
2. Click the **Launch** button.

Activity Association

Asset Type	Asset Group	Asset Number	Activity	Description
Capital	Fork Lifts	FL1010	Lubricate Fork Lift Mast	Lubricate Fork Lift Mast
Capital	Fork Lifts	FL1010	Change Fork Lift Battery	Change Fork Lift Battery

Buttons: Preventive Maintenance, Suppression, Last Service

Activity: Lubricate Fork Lift Mast, Description: Lubricate Fork Lift Mast

Buttons: New, Assign to Org., Routing, BOM, Cost Estimate

3. To create an activity, select New.

Create Activity

Activity Name: Overhaul
Description: Overhaul of fork lift
Template: @Activity

Activity Properties

Activity Type: Shutdown Type:
Activity Cause: Activity Source:
☐ Activity Notification

Copy Options

Copy From: Activity

Activity

Activity: Lubricate Fork Lift Mast
BOM: ☒
Routing: ☒
Association: All

Work Order

Work Order:
Operation: All
Material: All
Resource: All
Association: All

4. Enter an Activity Name.
5. Enter an Activity Description.

6. Choose an activity Template. This automatically links the properties associated with an activity. The @Activity template is created for you. You can create your own Activity Templates, as well.
7. Within the Activity Properties region, optionally select an Activity Type (See: Activity Types, page 3-38). The value defaults from the Template properties above.
8. Within the Activity Properties region, optionally select an Shutdown Type. The Shutdown Type is user defined, and indicates whether an activity shutdown is required. For example, the Shutdown Type can refer to whether the Asset Activity association shutdown is required before the activity is performed. The value defaults from the Template properties above. This field is for information purposes.
9. Within the Activity Properties region, optionally select an Activity Cause (See: Activity Causes, page 3-39). The value defaults from the Template properties above.
10. Within the Activity Properties region, optionally select an Activity Source (See: Activity Sources, page 3-40). The value defaults from the Template properties above.
11. The Activity Notification check box is informational until a future release.
12. You can optionally create an activity by copying it from another activity or a work order. Within the Copy Options region, select the entity to copy information from. Valid values are Activity and Work Order. If you select Activity, the values within the Activity region are relevant, and the values within the Work Order region are irrelevant. If you select Work Order, the values within the Work Order region are relevant, and the values within the Activity region are irrelevant.
13. Within the Activity region, if Activity is populated in the Copy From field, optionally select an Activity name. This is the activity from which you are copying.
14. Within the Activity region, if Activity is populated in the Copy From field, optionally select the BOM check box to indicate that the Maintenance Bill of Material, associated with the current activity within the Activity region, copies to the new Activity Name.

For example, in the screen shot, the Maintenance Bill of Material, associated with the 3000 Mile Truck Maint, copies to Oil Change.
15. Within the Activity region, if Activity is populated in the Copy From field, optionally select the Routing check box to indicate that the routings associated with the current activity within the Activity region copies to the new Activity Name.

For example, in the screen shot, routings that are associated with the 3000 Mile Truck Maint copy to Oil Change.
16. Within the Activity region, if Activity is populated in the Copy From field, select

All or None from the Association list of values.

- *All*: All asset and rebuildable associations related to the current activity within the Activity region copy to the new activity.
 - *None*: No asset and rebuildable associations related to the current activity within the Activity region copy to the new activity.
17. Within the Work Order region, if the work order number is populated in the Copy From field, select an existing maintenance work order.
18. Within the Work Order region, if the work order number is populated in the Copy From field, select All or None from the Operation list of values.
- *All*: All operations associated with the current work order, populated in the Work Order field, copy to the new activity.
 - *None*: No operations associated with the current work order, populated in the Work Order field, copy to the new activity.
19. Within the Work Order region, if the work order number is populated in the Copy From field, select All, Issued, or None from the Material list of values.
- *All*: All material associated with the current work order, populated in the Work Order field, copies to the new activity.
 - *Issued*: Material issued to the current work order, populated in the Work Order field, copies to the new activity.
 - *None*: No material associated with the current work order, populated in the Work Order field, copies to the new activity.
20. Within the Work Order region, if the work order number is populated in the Copy From field, select All, Issued, or None from the Resource list of values.
- *All*: All resources associated with the current work order copy to the new activity.
 - *Issued*: Resources issued to the current work order copy to the new activity.
 - *None*: No resources associated with the current work order copy to the new activity.
21. Within the Work Order region, if Work Order is populated in the Copy From field, select None, Current, or All from the Association list of values.
- *None*: No Assets and Rebuildables, associated with the current work order, associate with the new activity.

- *Current*: An Asset and/or Rebuildable, associated with the current work order, associates with the new activity.
- *All*: All Assets and/or Rebuildables, associated with the current work order's activity, associate with the new activity.

22. Save your work.

After saving, the new activity is automatically assigned to the current organization.

Navigating the Activity Workbench

The Activity Workbench enables you to manage all of your organization's activity functions. Before launching the Activity Workbench, you can narrow your data selection; the Activity Workbench provides a query capability as you enter the Activity Workbench. The top portion of the window enables you to query by Asset Type, Asset Number, Asset Group, Area, Asset Category, Owning Department, and provides you the choice of including child assets within asset hierarchies. The bottom portion of the window enables you to query by activity, Activity Type, Activity Source, Shutdown Type, and Activity Cause. You can also select data that is between specified effective dates.

To navigate the Activity Workbench:

1. Navigate to the Activity Workbench window.
2. Optionally narrow your data selection by selecting criteria within the Activity Workbench window.

If you make selections, you can view those selections after you launch the Activity Workbench.
3. Choose Launch.
4. Optionally select the Results (Capital) tab.
5. Optionally expand the Results (Capital) folder.
 - Optionally expand the All Assets folder to display all asset number, based on your chosen selection criteria.

You can select an asset and view related activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can associate activities with the current asset.
 - Optionally expand the Assets with Activities folder to display all asset number that are currently associated with one or more activities, based on your chosen

selection criteria.

You can select an asset and view its related activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can view, create, or update preventive maintenance schedule definitions, create or update Suppression definitions, view or update last service information, view the parts list, and view or update the maintenance routing.

You can also view Work Order Default information such as:

- **Activity Cause:** Defaults from the Activity definition, specifying what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings.
- **Activity Type:** Defaults from the Activity definition, indicating the type of maintenance activity to perform for this activity, and is used during job definition.

This code should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. Optionally, you can select an activity type.

- **Tagging Required:** Select this check box to indicate whether tagout procedures are required.

The area may need securing for operations required for carrying out a work order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown, and should not be started. This check box helps the planner isolate those jobs that require a tagout. This is for informational purposes.

- **Owning Department:** Defaults from the asset number definition and indicates a planner or supervisor who is responsible for the activity or asset.
- **Shutdown Type:** This value defaults from the Master Activity information that was created within the Master Item window.

This option indicates whether a shutdown is necessary to perform this maintenance activity, for example, Required or Not Required. This field is for informational purposes.

- **WIP Accounting Class:** Defaults from the eAM Parameters information for the current organization; you can update this value.
- **Activity Source:** This value defaults from the Master Activity information created in the Master Item window.

Activity source codes are the reasons why activities are executed, for

example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements.

- Work Order Type: Select a value to differentiate work orders. For example, Routine, and Rebuild. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting.
 - Planner: Select a planner to be assigned to the work order.
 - Firm: Select to indicate the work order is to be firmed and planning and scheduling will not automatically adjust the schedule, regardless of material or resource availability.
 - Planned: Select to indicate that this is a planned order.
 - Notification: Select if a notification is to be generated.
- Optionally expand the Routes folder to display all asset routes that are currently associated with one or more activities, based on your chosen selection criteria.

You can select an asset route and view related activity information within the corresponding Activity Associations window.

6. Optionally select the Results (Rebuildable Inventory) tab.

7. Optionally expand the Results (Rebuildable Inventory) folder.

8. Optionally expand the All Rebuildables folder.

- Optionally expand the Serialized folder to display all Rebuildable Serial Numbers, based on your chosen selection criteria, within the Activity Workbench window.

You can select a Rebuildable Serial Number and view related activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can associate activities to the current Rebuildable Serial Number.

- Optionally expand the Non-serialized folder to display all Non-serialized Rebuildables, based on your chosen selection criteria, within the Activity Workbench window.

You can select a Non-serialized Rebuildable and view related activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can associate activities to the current Serialized Non-rebuildable.

9. Optionally select the Rebuildables with Activities folder.

- Optionally expand the Serialized with Activities folder to display all Rebuildable Serial Numbers that are currently associated with one or more activities, based on your chosen selection criteria, within the Activity Workbench window.

You can select a rebuildable serial number and view related activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can create or update preventive maintenance schedule definitions, create or update Suppression definitions, view or update last service information, view the parts list, view or update the maintenance routing, and view cost estimations for a rebuildable serial number and activity combination.

- Optionally expand the Non-serialized with Activities folder to display all non-serialized rebuildables that are currently associated with one or more activities, based on your chosen selection criteria, within the Activity Workbench window.

You can select a non-serialized rebuildable and view related activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can create or update preventive maintenance schedule definitions, create or update Suppression definitions, view or update last service information, view the parts list, view or update the maintenance routing, and view cost estimations for a non-serialized rebuildable and activity combination.

10. Optionally select the Results (Activities) tab.

11. Optionally expand the All Activities folder to display all valid activities, based on your chosen selection criteria, within the Activity Workbench window.

You can select an activity and view its related activity information within the corresponding Activity Associations window, if an association exists. You can associate an asset number with the current, selected activity using the corresponding Activity Associations window. You can select an activity within the Activity Workbench pane, and then view its related information within the corresponding Activity Associations window. For a selected activity, you can create a new activity, create or update its associated Maintenance Routing, create or update the associated maintenance BOM, and view cost estimations.

12. Optionally expand the Activities with Association folder to display all activities that are associated with an asset number, based on your chosen selection criteria, within the Activity Workbench window.

You can select an activity within the Activity Workbench pane, and then view its related information within the corresponding Activity Associations window. For a selected activity, you can create a new activity, create or update its associated

maintenance routing, create or update the associated maintenance BOM, and view cost estimations.

To create or update a PM schedule definition:

You can view, create or update a Preventive Maintenance (PM) Schedule definition for activity and asset number, and activity and asset route combinations.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Capital), Results (Rebuildable Inventory), or Results (Activities).
2. If you selected Results (Capital), expand either the Assets with Activities or Routes folders, then select an asset number or route, respectively.

You cannot create or update a PM Schedule definition for an asset number that is not associated with an activity.

If you selected Results (Rebuildable Inventory), expand the Rebuildables with Activities folder, expand either the Serialized with Activities or Non-serialized with Activities folder, then select a serialized or non-serialized rebuildable, respectively.

You cannot create or update a PM Schedule definition for an asset number that is not associated with an activity.

If you selected Results (Activities), expand the Activities with Association folder, then select an activity.

3. Select Preventive Maintenance.

The PM Schedules window displays all PM Schedule definitions for the current activity and asset number, or activity and asset route combination.

1. Optionally choose New to create a new PM Schedule definition.

Preventive Maintenance (Schedule Definition)

Schedule Name: DMP100A
Set Name: MAIN
Asset Type: Capital
Asset Number: DMP100
Asset Group: 3D Printers
Schedule Type: Rule Based
Effective From: 01-JUN-2021
Lead Time In Days:
Work Order Status: Unreleased
Next WO Only: No
Intervals Per Cycle: 30
Current Cycle: 1
Current Interval Count: 0

☒ Default
☐ Reschedule Manual Work Orders
☐ Run To Failure
Reviewer: Stock, Ms. Pat
Review Date: 01-JUN-2021
DMP series 3D Printers
3D Printers

Scheduling Options
Use: Actual Start Date
to suggest Next Service: Start Date
For Multiple Rules
Use date that comes: First

Activity	Interval Multiple	Repeat in Cycle	Tolerance in Days	Last	Last Date
3D Printer Weekly Mainten:	7	Yes		<input type="checkbox"/>	
3D Printer Biweekly Mainte	15	Yes		<input type="checkbox"/>	
3D Printer Monthly Mainte	30	Yes		<input type="checkbox"/>	

Last Service Info Suppression

2. Optionally choose Last Service Information to create or update Last Service Information.
3. Optionally choose Suppression to create or update a suppression definition, associated with the current activity and asset number, or activity and asset route combination.
4. Optionally select a PM Schedule definition, and then choose Open to view its details.
4. Close the window.
5. Save your work.

To create or update an activity suppression:

You can view, create, or update suppression definitions for activity and asset number, or activity and asset route combinations.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Assets), Results (Rebuildables), or Results (Activities).
2. If you selected Results (Assets), expand either the Assets with Activities or Routes folders, then select the asset number or route, respectively.

You cannot create or update a suppression definition for a asset number that is not associated with an activity.

If you selected Results (Rebuildables), expand the Rebuildables with Activities folder, expand either the Serialized with Activities or Non-serialized with Activities

folder, then select a serialized or non-serialized rebuildable, respectively. You cannot create or update a suppression definition for a asset number that is not associated with an activity.

If you selected Results (Activities), expand the Activities with Association folder, then select an activity.

3. Choose Suppression.
4. Add or update the Suppression Activity associated with the current activity.

5. Save your work.

To view or update last service information:

You can view or update last service information for activity and asset number, or activity and asset route combinations.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Assets), Results (Rebuildables), or Results (Activities).
2. If you selected Results (Assets), expand either the Assets with Activities or Routes folders, then select the asset number or route, respectively.

If you selected Results (Rebuildables), expand the Rebuildables with Activities folder, then expand either the Serialized with Activities or Non-serialized with Activities folder, and finally select a Serialized or Non-serialized Rebuildable,

respectively.

If you selected Results (Activities), expand the Activities with Association folder, then select an activity.

3. Choose Last Service to view or update last service information.

The screenshot shows a window titled "Last Service Information". It contains several input fields and a table.

Fields:

- Item Type: Asset (dropdown)
- Asset Number: FL1010
- Asset Group: Fork Lifts
- Activity: Lubricate Fork Lift Mast
- Actual Start Date: 06-APR-2011 07:09:00
- Actual End Date: 06-APR-2011 07:10:33
- Scheduled Start Date: 06-APR-2011 07:09:00
- Scheduled End Date: 06-APR-2011 08:09:00

Table:

Meter Name	Usage Rate	UOM	Description	Last Service Reading
FL1010 Hour Meter	8	HR	Fork Lift 1010 Usage Hour M	4065

4. Save your work.

To view estimated cost information:

You can view estimated cost information for an activity. Estimating activity costs is often necessary for planning and budgeting purposes.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Assets), Results (Rebuildables), or Results (Activities).
2. If you selected Results (Assets), expand either the Assets with Activities or Routes folders, then select the asset number or route, respectively.

If you selected Results (Rebuildables), expand the Rebuildables with Activities folder, then expand either the Serialized with Activities or Non-serialized with Activities folder, and finally select a Serialized or Non-serialized Rebuildable, respectively.

If you selected Results (Activities), expand the Activities with Association folder, then select an activity.

3. Choose Cost Estimate to view the activity's cost estimation information.

The screenshot shows a window titled 'Activity Cost'. It contains two input fields: 'Activity' and 'Description', both with the text 'Lubricate Fork Lift Mast'. Below these is a section titled 'Estimated Activity Cost' which contains a table. The table has five columns: 'Cost Category', 'Total', 'Material', 'Labor', and 'Equipment'. The rows are 'Maintenance', 'Contract', 'Operations', and 'Activity Total'. The values are: Maintenance (Total: 27.08, Material: 2.08, Labor: 25.00, Equipment: 0.00), Contract (Total: 0.00, Material: 0.00, Labor: 0.00, Equipment: 0.00), Operations (Total: 0.00, Material: 0.00, Labor: 0.00, Equipment: 0.00), and Activity Total (Total: 27.08, Material: 2.08, Labor: 25.00, Equipment: 0.00).

Cost Category	Total	Material	Labor	Equipment
Maintenance	27.08	2.08	25.00	0.00
Contract	0.00	0.00	0.00	0.00
Operations	0.00	0.00	0.00	0.00
Activity Total	27.08	2.08	25.00	0.00

Setting Up Maintenance Bills of Material

You can identify and select the required items used by an activity. A bill of material (BOM) is used to list all inventoried or Direct Items needed to perform a particular activity, and is defined for each activity. For example, you might have an activity titled, Fork Lift Daily Maintenance. The items necessary to perform this activity include water, fork lift lubrication oil, filled propane tanks, and shop rags. As maintenance BOMs are created, they are associated to an activity.

When a work order is created for an activity, the Maintenance BOM corresponding to the activity explodes to the work order all components specified in the maintenance BOM are copied to the work order as material requirements.

To set up a maintenance BOM:

1. Navigate to the Activity Workbench window.
2. Choose Launch.
3. Within the Activity Workbench pane, select the activity for which you wish to define the Bill of Material.
4. Choose BOM.

Bills of Material (EM1)

Item: Fork Lift Daily Maintenance | All Fork Lift Daily Maintenance | UOM: Ea

Alternate: | Revision: 0 | Date: 20-MAY-2011 15:10:42 | [:]

Display: Future and Current | ☒ Implemented Only

Main | Date Effectivity | Unit Effectivity | ECO | Component Details | Material Control | Order Management

Item Seq	Operation Seq	Component	Item Description	Revision	UOM	Basis
10	1	Water	Water for Fork Lift Battery	0	GAL	Item
20	1	Fork Lift Lubrication	Lubrication for Masts	0	Ea	Item
30	1	Filled Propane Tanks	Fuel for Propane Fork Lifts	0	Ea	Item
40	1	Shop Rags	Shop Rags for Clean up	0	Ea	Item

Substitutes | Designators | Operations | Bill Details | Revision

5. Select an activity from the Item field list of values.
6. Select the Main tab. The Item Sequence defaults.
7. Enter the Operation Sequence that this Component (material item necessary for the operation sequence, NOT rebuildable item) is needed for (See: Defining Maintenance Routes, page 3-139).
8. Enter necessary Components and their Quantities that are required to perform the activity. You can enter an unlimited number of inventory and non-inventory, direct items.

Note: The Purchasing tab is enabled for Maintenance and Asset Bills of Material, and contains attributes specific to non-stockable, inventory items.

9. Optionally select the Auto Request Material check box to indicate that requisitions and purchase orders are created automatically, for the current component or Direct Item, when the work order is released.
10. Optionally select the Date Effectivity tab to specify effectivity dates per component.
11. Save your work.

For information on all remaining fields, See: Creating a Bill of Material, *Oracle Bills of Material User's Guide*

For information on defining activities using the Activity Workbench, See: Defining Activities, page 3-69.

Associating Asset Numbers with Activities

After you have defined asset groups, asset numbers, and activities, you can associate the activities with assets and rebuildables. However, you can streamline the creation of activities and associations using an activity association template. Assets are associated with activities before entering the activity into a preventive maintenance schedule (See: Entering Preventive Maintenance Schedule Definitions, page 3-173).

Note: You can streamline the creation of activity associations using an Activity Association Template. For example, when you create an asset group, and then asset numbers within that group, you do not need to utilize the Association window to associate those asset numbers with an activity. If you create an Activity Association Template, the activity that you associate with the current asset number's asset group automatically determines the activity that is associated with the current asset number .

- Defining Asset Groups, page 3-66
- Defining Asset Numbers, page 3-85
- Defining Rebuildable Serial Numbers, page 3-145
- Defining Activities, page 3-69
- Activity Association Templates, page 3-76

To associate asset numbers (capital or rebuildable inventory) with activities using the Activity Workbench:

1. Navigate to the Activity Workbench window.

Activity Workbench

The screenshot shows the 'Activity Workbench (EM1)' window. It contains the following fields and controls:

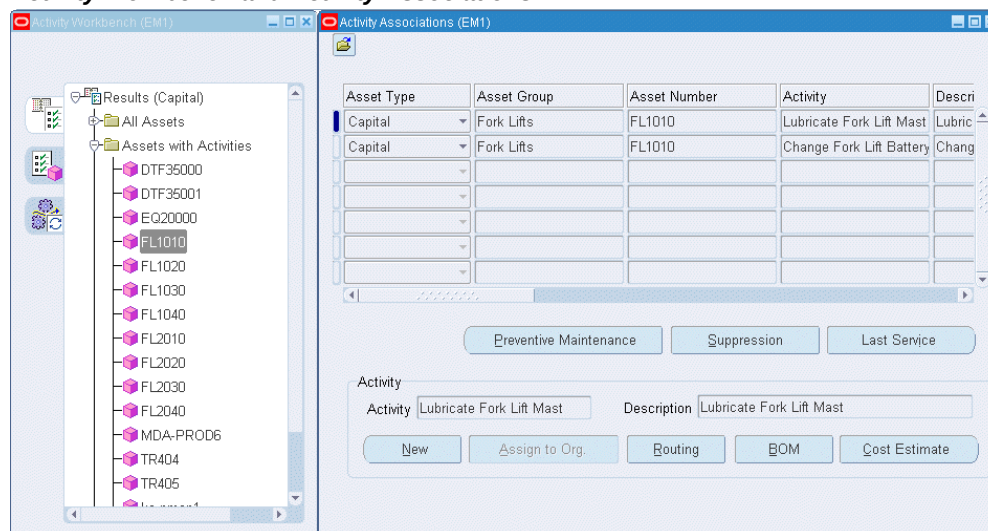
- Asset Type:** A dropdown menu with 'Capital' selected.
- Area:** A text input field.
- Asset Number:** A text input field.
- Asset Category:** A text input field.
- Asset Group:** A text input field.
- Owning Department:** A text input field.
- Include Children:** A checkbox.
- Activity Section (enclosed in a box):**
 - Activity:** A text input field.
 - Activity Type:** A text input field.
 - Activity Source:** A text input field.
 - Shutdown Type:** A text input field.
 - Activity Cause:** A text input field.
- Effective From:** A text input field with '21-JAN-2007' entered.
- Effective To:** A text input field.
- Buttons:** 'New' and 'Launch' buttons at the bottom right.

2. Select Asset or Rebuildable from the Item Type list of values.

The item type determines the type of asset number you are associating with the activity.

3. Optionally narrow your data selection by selecting the asset number you intend to associate with an activity.
4. Optionally narrow your data selection by selecting an activity.
5. Choose Launch.

Activity Workbench and Activity Associations



6. Depending on the Item Type chosen while performing step 2, select the corresponding tab within the Activity Workbench pane.
For example, if you selected an Item Type of Asset, select the Results (Assets) tab. If you selected an Item Type of Rebuildable, select the Results (Rebuildables) tab.
7. Expand the All Assets (within the Results (Assets) tab) or All Rebuildables (within the Results (Rebuildables) tab) folder.
If you specified an asset number while performing step 3, that asset number appears.
8. Select an asset number by highlighting it.
The Activity Associations window appears. If the asset number is already associated with one or more Activities, those rows display within the window.
9. Select the next available row and then select an asset group.
10. Select an asset number.
Asset numbers associated with the previously selected asset group are available. Asset numbers are always serial controlled. If you had selected a Non-serialized Rebuildable in the Asset Group field, then the Asset Number field is not required.
11. Select an activity.
12. When an asset is transferred from one organization to another, its maintenance may be handled by a new eAM organization. Any activities that are assigned to the asset are visible in the Activity Workbench, within the new eAM organization. Activities

that are not currently assigned to the new organization are displayed in blue.

Choose **Assign to Org** to assign the selected activities to the new organization.

13. Save your work.

Defining Maintenance Routes

Operations are the instructions or tasks to perform a repair. Because each operation is associated with a department, each operation contains assigned resources, for example, trades people, outside service providers, and equipment (See: Defining Departments and Resources, page 3-24). A maintenance route is the set of operations or jobs necessary to perform an activity. When a work order is created for an activity, the maintenance route corresponding to the activity explodes to the work order (See: Defining Activities, page 3-69); all operations specified in the maintenance route are copied to the work order as its operations.

Maintenance routes are not asset routes. For information on asset routes, See: Defining Asset Routes, page 3-101.

Enterprise Asset Management operations differ from manufacturing operations because manufacturing operations are performed sequentially, whereas eAM operations may not be performed sequentially. You can specify that one operation is dependent on another, and one operation can depend on multiple operations. Also, two unrelated operations can occur concurrently. Multiple operations can depend on one operation. The dependency may not be totally connected.

To define a maintenance route:

1. Navigate to the Activity Workbench window.
2. Click the Launch button.
3. Within the Activity Workbench pane, select the Activity for which you wish to create the routing.
4. Click the **Routings** button.

Routings (EM1)

Item: Fork Lift Daily Maintenai | All Fork Lift Daily Maintenance | UOM: Ea

Alternate: | ☐ Capable To Promise

Revision: 0 | Date: 20-MAY-2011 15:17:49 | []

Display: Future and Current | ☒ Implemented Only

Operations

Main | Date Effectivity | WIP | ECO | Description

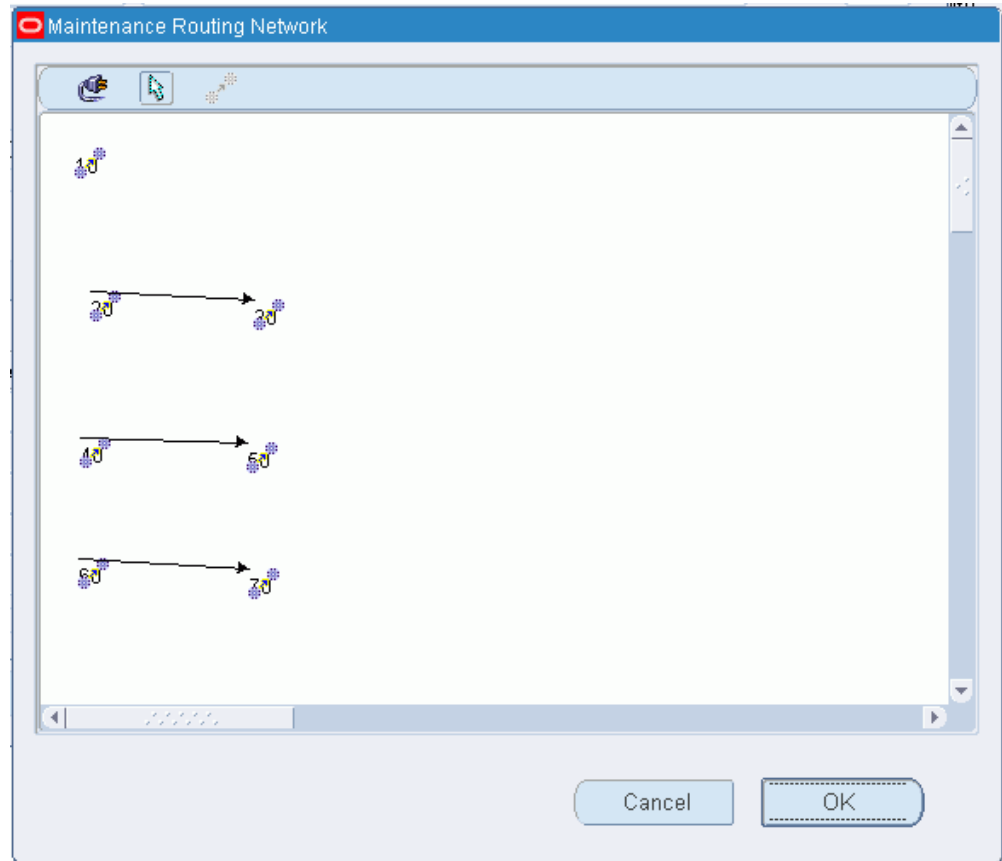
Seq	Code	Referenced	Department	Option Dependent	Lead Time %
10	F10	<input type="checkbox"/>	W-Maint	<input type="checkbox"/>	
20	F20	<input checked="" type="checkbox"/>	W-Maint	<input type="checkbox"/>	
30	F30	<input checked="" type="checkbox"/>	W-Maint	<input type="checkbox"/>	
40	F40	<input checked="" type="checkbox"/>	W-Maint	<input type="checkbox"/>	
50	F50	<input checked="" type="checkbox"/>	W-Maint	<input type="checkbox"/>	

Routing Details | Routing Network | Operation Resources | Operation Competencies

5. Select an Activity from the Item list of values.
6. Within the Main tab, enter an operation Sequence, or let the system automatically generate it for you, according to your profile setup (See: Item and Operation Sequence, *Oracle Bills of Material User's Guide*).
7. To copy or reference standard operations into a routing, use the operation Code list of values. You can define a new standard operation by selecting Standard Operations from the Tools menu.

If you use a standard operation code, the operation information for that code is copied into the current operation. You can then update that information as desired (See: Creating a Standard Operation, *Oracle Bills of Material User's Guide*).
8. Select a Department where the operation is performed.
9. Select the Referenced check box to indicate that any changes to standard operations are reflected in the routing. If the standard operation is selected, this check box is selected by default.
10. The Effective date defaults to the system date, but you can optionally change this (See: Effective Date Fields, *Oracle Bills of Material User's Guide*).
11. Optionally enter a Disabled date to indicate the current operation's expiration.
12. Select the Description tab. Enter a Description for the current operation.

13. Optionally choose Routing Network to view the operation dependencies for the current asset route.



You can schedule operations to execute in parallel, sequence, or through dependent steps. In the screen shot above, for example, Operations 20, 30, 40, and 50 are dependent on Operation 10, since there is a line connecting the operations. These operations also run in parallel to each other. The operation numbers identify the sequence that they are performed (See: Preparing Work Order Operations, page 4-31).

14. Optionally select an operation, then choose Operation Resources to view the resources associated with the current department attached to this operation (See: Defining Departments and Resources, page 3-24). Optionally you can modify the resources listed (See: Assigning Operation Resources, *Oracle Bills of Material User's Guide*).

Operation Resources (EM1) - 10

Item: Fork Lift Daily Maintena
 Sequence: 10
 Alternate:
 Effective Date: 16-OCT-2002 00:00:00

Resources

Main | Scheduling | Costing

Seq	Resource	UOM	Basis	Usage	Inverse
10	FliftMech	HR	Item	.05	20
20	FKTK	HR	Item	1	1

15. Save your work.

For information on all remaining fields, See: *Creating a Routing, Oracle Bills of Material User's Guide*

For information on defining Activities using the Activity Workbench, See: *Defining Activities*, page 3-69.

Creating Activity Templates

You can streamline the creation of activity associations using an Activity Association Template. For example, when you create an asset group, and then asset numbers within that group, you do not need to use the Association window to associate those asset numbers with an activity. If you create an Activity Association Template, the activity that you associate with the asset group for the current asset number automatically determines the activity that is associated with the current asset number.

You can also create an activity template during an asset activity association.

To create an activity template:

1. Navigate to the Activity Workbench page.
2. Click the Launch button.
3. Select the Results (Activities) tab.
4. Select the Activities with Associations directory.

Select the appropriate activity.

5. Select Yes from the Template Flag list of values to indicate that this activity and asset association is also an Activity Association Template.

If you select No, an asset and activity association is created.

6. For information on all remaining fields within the Activity Associations window, See: Associating Asset Numbers with Activities, page 3-136.
7. Save your work.

Related Topics

Defining Activities, page 3-122

Preventive Maintenance Setup, page 3-155

eAM Cost Estimation, page 7-2

Activity Association Templates, page 3-76

Rebuildable Item Setup

Rebuildable Item Setup tasks include:

- Defining Rebuildable Items, page 3-143
- Defining Rebuildable Serial Numbers, page 3-145
- Rebuildable Item/Activity Association, page 3-150
- Defining Rebuildable Bills of Material, page 3-152

Defining Rebuildable Items

Items that are installed, removed, and refurbished are referred to as rebuildable items. Examples of rebuildable items include motors, control boxes, and computer boards. Rebuildable items might need to be removed or refurbished while a parent asset is maintained. Rebuildable items are inventory items; you have the option to serialize them.

To set up rebuild items:

1. Navigate to the Rebuild Items window.

Rebuild Items

Rebuild item: Fork Lift Battery

Description: Batteries used for electric Fork Lifts

Template: [Icon]

Serial Generation

Generation: Predefined

Starting Prefix: Battery

Starting Number: 1011

2. Enter the name of the Rebuild Item.
3. Enter a Description for this Rebuild Item, up to 240 characters.
4. Select the *@Rebuildable* Template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.

Note: You can create rebuildable items using the template described above, or you can copy a Rebuild Item from an existing Rebuild Item (See: Defining Items, *Oracle Inventory User's Guide*).

5. In the Serial Generation region, select Predefined for the Generation value.
6. Define a Starting Prefix and Starting Number for this Rebuild Item. If Serial Generation is set at Item Level for the Organization, the system defaults the prefix, along with the starting number sequence, when a new Serialized Rebuild is created for this Rebuild Item.
7. Save your work.

To access failure analysis information:

You can access the Failure Set page to view failure tracking codes that are assigned to the current Rebuild Item.

1. From the Rebuild Items window, select Maintain Failure Set from the Tools menu. If the Rebuild Item does not have an associated Failure Set, this menu option is disabled. See: Defining Failure Codes and Sets, page 28-2 and Failure Analysis

Overview, page 28-1.

2. Close the window.

To associate rebuildable items to multiple organizations:

1. From the Rebuild Items window, select Item Details from the Tools menu.
2. Select the Organization Assignment tab.
3. Enter additional organizations in the available table.
4. After saving your work, you can associate this Rebuildable Item with an Activity (See: Rebuildable Item/Activity Association, page 3-150).

Defining Rebuildable Serial Numbers

To set up rebuildable serial numbers individually:

1. Navigate to the Define Rebuildable Serial Number page.

You can also create rebuildable assets using the Create Asset page located in the Maintenance Super User responsibility (Maintenance Super User > Home > Assets > Create button). See Creating Capital or Rebuildable Assets, page 21-6 for more information.

2. Enter an asset number (Rebuildable Serial Number) if you do not have them automatically generated.

Accept or modify the default asset number, if you have automatic generation enabled (See: Defining eAM Parameters, page 3-13).
3. Select an asset group. This is the asset group (Rebuildable Item) you are associating with the Rebuildable Serial Number you are currently creating.

Note: After an asset group (Rebuildable Item) is associated with a Rebuildable Serial Number and then saved, you cannot change it.
4. The Asset Serial Number (Rebuildable Serial Number) defaults to the asset number. You can optionally select the next serial number for the current organization.

The Asset Serial Number might have a non-unique value across organizations, but the asset number must be globally unique, regardless of the defaulting value.
5. Optionally associate this Rebuildable Serial Number to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes and Sets, page 3-63.
6. Optionally enter a description for the Rebuildable Serial Number of up to 240 characters.
7. Within the Main tab, optionally select an owning Department for this Rebuildable

Serial Number. This represents the crew responsible for the Rebuildable Serial Number. Notifications, regarding work requests, are sent to the Primary Approver of the work request's associated asset number's current owning department (See: Defining Department Approvers, page 3-28 and Defining Asset Numbers, page 3-85).

8. Optionally select a Criticality code to indicate the importance of the asset number to the organization. This field is for information purposes.
9. Optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.
10. Select the GIS Assets check box if you want to define the asset as a linear or area asset.

This field can be updated on this page or the Define Asset Numbers page.

See Defining GIS Asset Numbers, page 22-2 for more information.

11. Optionally enter the Area where this asset number resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: Setting Up Areas, page 3-21).
12. Indicate whether this asset is maintainable. If the Maintainable check box is selected, you can create work requests and work orders for this asset.

For example, you can create an asset for cost-tracking purposes. We may want to see the cost for all top level assets in an asset hierarchy, but we do not want to maintain those assets. In this situation, do not select this check box.

Note: After work orders are created for this asset, you cannot clear this check box unless those work orders are at Complete, Canceled or Closed statuses.

13. Select an Asset Status. This field represents the current status associated with the rebuildable asset.
14. Optionally select the Active check box to indicate that the asset is functioning, for example, maintenance work orders can be created for this asset. This check box change when you activate or deactivate an asset from the Tools menu.
15. Indicate whether Asset Operational Logging is enabled for this asset. If you select the Operation Log Enabled check box, you can view all current and past asset operational information, such as Check Out, Check In, associated work requests and work orders. You can remove or add a child asset, remove a parent asset, activate or deactivate the asset, transfer the asset to another location, and receive or issue the asset into/from Inventory. By default, logging is turned off for an asset.

See: Asset Operational Logging, page 21-27.

16. You can optionally associate the current Rebuildable Serial Number with a parent capital asset or parent rebuildable.
 1. Select an Asset Type. Valid values are Capital and Rebuildable Inventory.
 2. If you selected a Capital Asset Type, optionally select a parent asset number. If you previously selected a Rebuildable Inventory Asset Type, optionally select a Rebuildable Serial Number from the asset number list of values.
 3. If you selected a Capital Asset Type, optionally select a parent asset group. If you previously selected a Rebuildable Inventory Asset Type, optionally select a Rebuildable Item from the Asset Group list of values.
17. The Checked Out check box indicates whether the current asset is checked in or out. You can check out an asset to view asset details, enter collection plan data, enter meter information, and optionally create a work request, within Maintenance Super User. This check box is protected against update. See: Asset Operational Logging, page 21-27.
18. Within the Location tab, the Subinventory and Locator fields are view-only, displaying the subinventory location of this asset within Inventory and its Locator segments. If this asset is received into Inventory, these fields are populated.
19. Optionally select a Location Code to specify a physical location for this asset. The Address field simultaneously populates with the selected Location Code's associated Address. The previously defined Area is organization-specific and not associated to a physical location.

Valid Location Codes are defined within Oracle Installed Base.

20. Use the Location tab to specify the geocode information with details of latitude, longitude and direction for the asset. This information is used to display the assets in the chosen map viewer.

If you are using the ESRI feature, you can enter values in these fields to display assets on an ESRI map rather than entering values in the Latitude and Longitude fields:

- ESRI Feature: The reference to a published Feature table from the ESRI System which has a Point shape. These values are defined on the ESRI Map Manager page.
- ESRI Feature ID: The specific ESRI reference identifier from the selected ESRI Feature table which has a corresponding Point geometry.

If both longitude and latitude and ESRI references are provided, the ESRI Feature and Feature ID would be used to plot the asset on the map.

Note: Geocode entry and ESRI Feature associations are enabled only for point assets and are not applicable for GIS assets.

See Using Map Manager, page 22-14 for more information regarding the ESRI Map Manager fields.

21. The Address defaults as the populated Location Code's associated address. You can optionally select a different address. If the current asset is in stores, the address of the Location's organization appears (See: Stores, page 27-1).
22. Optionally select a Production Organization. The list of values displays the production inventory organizations maintained by the current asset's organization. See: Enabling Organizations for Enterprise Asset Management, page 3-8 for information on designating eAM organizations to maintain equipment items for designated production organizations.
23. Select an Equipment Item. This is mandatory if you populated the Production Organization field. Items that were defined with an equipment template (See: Item Templates, *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: Physical Attributes, *Oracle Inventory User's Guide*), are available.
24. Enter an Equipment Serial Number. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above.
25. Select the Safety tab to enter safety information. See Defining Positional Assets, page 30-4.
26. Select the Others tab to optionally enter the Fixed Asset region information, if Oracle Fixed Assets is installed. This is Enterprise Asset Management's integration with Fixed Assets. Enter a Category, which is a grouping of fixed assets, defined within Oracle Fixed Assets. This category is tied to a set of books, and must be the same set of books that is assigned to the current Enterprise Asset Management organization. See: Setting Up Asset Categories, *Oracle Fixed Assets User's Guide*.
27. Optionally enter the Number if Oracle Fixed Assets is installed. This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.
28. The Property Management fields, Location Name and Location Code, default from a Property Manager export process (Export Locations to Enterprise Asset Management), if Oracle Property Management is installed. These fields are disabled, and the values cannot be changed.
29. Before the above information is passed from Property Manager into Oracle Enterprise Asset Management, asset groups (rebuildable items) need to first be

established. See: Defining Rebuildable Items, page 3-143.

30. Optionally choose Location Details to view or update the Property Manager field information.
31. Optionally select Attributes to enter attribute values for the asset .

Existing, enabled attribute groups appear. These attribute groups are optional. You do not need to enter values for all existing attribute groups. From this window, you cannot generate attribute groups. (See: Setting Up Attributes, page 3-79).
32. When you select the GIS Asset check box, the GIS Workbench button becomes available.

Use the GIS Asset Workbench to enter details for the GIS asset. See Using the GIS Asset Workbench, page 22-24 for more information.
33. Optionally choose Meters to associate the current rebuildable serial number to one or more meters.
34. Optionally choose Associate Activity to associate the current rebuildable serial number to an activity.

Additional Information: To establish this Rebuildable Serial Number in Inventory, you must execute any receipt transaction, such as a Miscellaneous Receipt or a Purchase Order Receipt.

35. Save your work.

Rebuildable Item and Activity Association

After you have defined rebuildable items and activities, you can associate activities to the rebuildable items. For example, you may have a Rebuild Engine Activity, and an Engine Rebuildable Item. After you create a rebuild work order for the engine, the associated Rebuild Engine Activity attaches its associated maintenance BOM (material) and maintenance routing (resources) to the work order.

Note: Activity association for Rebuildable Serial Numbers are streamlined by using Activity Association Templates. If an Activity Template is defined for a Rebuildable Item, the activity association automatically creates when a new serial number is created for that item, within the maintenance organization.

- Defining Rebuildable Items, page 3-143
- Defining Activities, page 3-69

- Rebuild Work Orders, page 4-14
- Defining Maintenance Routes, page 3-139
- Setting Up Maintenance Bills of Material, page 3-134

To associate rebuildable items with activities:

1. Navigate to the Activity Association window.

Activity Association

Asset Type	Asset Group	Asset Number	Priority	Effective Dates	
				From	To
Capital	Fork Lifts	FL1010	Medium	31-OCT-2002	
Capital	Fork Lifts	FL1020		31-OCT-2002	
Capital	Fork Lifts	FL1030		31-OCT-2002	
Capital	Fork Lifts	FL1040		31-OCT-2002	

2. Select an Activity.
3. Within the Main tab, select Rebuildable from the Item Type list of values.
4. Select a Rebuildable Item from the Asset Group list of values.
5. If the Rebuildable Item is serial number controlled (See: Defining Rebuildable Items, page 3-143), select a Rebuildable Serial Number from the Asset Number list of values.
6. Optionally select a Priority Code.
This field is for informational purposes.
7. Optionally enter Effective Dates.

If the Effective From field is left blank, the system date defaults. If the Effective To field is left blank, it defaults as NULL.

8. Within the Activity tab, the Activity Cause defaults from the Activity definition, specifying what situation caused this work to be generated.

For example, Breakdown, Vandalism, Normal Wear, or Settings. Optionally you can select an Activity Cause.

9. The Activity Type defaults from the Activity definition (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*).

This code indicates the type of maintenance activity needed to perform for this Activity. It is used when defining a job or a standard job. It should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing or Cleaning. Optionally select an Activity Type.

10. Optionally select the Tagging Required check box to indicate whether tag out procedures are required.
11. The Owning Department field is used when associating asset numbers to activities (See: Activity Association Templates, page 3-76).
12. Save your work.

Defining Rebuildable Bills of Material

You can identify and select the required items that make up a Rebuildable Serial Number. A bill of material (BOM) is used to list all items and components that make up a particular asset or rebuildable, and is defined for each Rebuildable Item. The items defined on a Rebuildable BOM are standard inventory components or non-inventory, direct items (See: Defining Items, *Oracle Inventory User's Guide*).

Note: If you are not using Project Manufacturing applications, Project Parameters are defined for your eAM enabled organization to successfully create Rebuildable Items. This is required because a Rebuildable BOM is of type Model/Unit Effective and this BOM type is currently allowed if PJM organization parameters are set up for the eAM enabled organization to which the Rebuildable Item has been assigned. To define Project Parameters, open the Project Parameters window using Project Manufacturing Super User responsibility and without entering any data in the window, save the record. If you plan to use Project Manufacturing, see: Project Manufacturing Integration Setup, page 3-238 for information on defining Project Parameters.

To set up a rebuildable BOM:

1. Navigate to the Bills of Material window.
2. Select a Rebuildable Item from the Item list of values.
3. Within the Main tab, the Item Sequence and Operation Sequence values default.
4. Enter the inventory or non-inventory Component to make up the Rebuildable Serial Number.
5. Enter the component Quantity for the Rebuildable Serial Number.
6. Save your work.

Related Topics

Defining Items, *Oracle Inventory User's Guide*

Associating Asset Numbers with Activities, *Oracle Enterprise Asset Management User's Guide*

Defining Subinventories, *Oracle Inventory User's Guide*

Defining Stock Locators, *Oracle Inventory User's Guide*

Creating a Bill of Material, *Oracle Bills of Material User's Guide*

Non-Stock Direct Item Setup

Non-stock direct items can represent items that are not stocked in inventory, such as services that are purchased from a supplier. Non-stock direct items are not stocked in inventory; they are defined in the Item Master as an inventory item, Purchased, Purchasable, and the Stockable check box is not selected. See: Purchasing Attribute Group, *Oracle Inventory User's Guide*. These items are contrived as "one off", bought directly from a vendor for a specific work order and operation. These items are delivered directly to the Shop Floor for maintenance work order execution.

You can add only coded items (for example, Inventory Stockable and Non-Stockable-Direct items) to the maintenance BOMs. (See: Defining Direct Item Material Requirements, page 4-43).

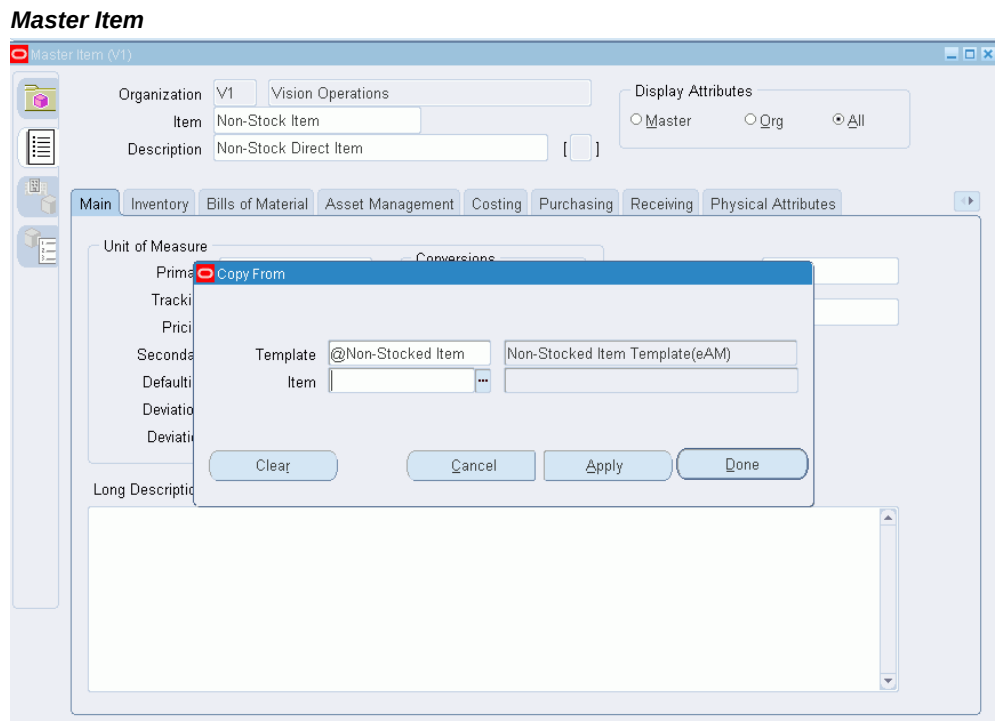
To set up non-stock direct items, access the Master Item window within Oracle Inventory, and apply the @Non Stocked Item template. See: Defining Items, *Oracle Inventory User's Guide*. Description based direct items are not set up within Oracle Inventory.

If direct items exist on a BOM, they default as material requirements when creating a work order for that asset; however, you can add direct item material requirements to an

existing work order.

To set up a non-stock direct item:

1. Navigate to the Master Item window.
2. Enter the non-stock direct Item name.
3. Enter a Description.
4. From the Tools menu, select Copy From.
5. Select the @Non-Stocked Item Template.
6. Choose Apply.
7. Choose Done.



8. Save your work.

The Stockable check box is clear, and the Purchased and Purchasable check boxes are selected.

Related Topics

- Defining Rebuildable Bills of Material, page 3-152
- Setting Up Maintenance Bills of Material, page 3-134
- Setting Up Asset Bills of Material, page 3-103
- Defining Items, *Oracle Inventory User's Guide*

Preventive Maintenance Setup

eAM can generate work orders automatically based on meter readings, runtime or calendar days. An example of meter-based preventive maintenance is an oil change for a car. Most car manufacturers recommend that you change your engine oil every 3,000 miles or six months, whichever comes first.

This section includes the following topics:

- Project and Task Setup, page 3-155
- Defining Meter Templates, page 3-156
- Defining Meters, page 3-159
- Defining Set Names, page 3-162
- Defining a Preventive Maintenance Template, page 3-164
- Reapplying a PM Template to an Asset Group, page 3-172
- Entering Preventive Maintenance Schedule Definitions, page 3-173
- Defining Preventive Maintenance (PM) Schedules, page 3-176
- Creating PM Schedules for Multiple Assets Using Web ADI, page 3-189
- Navigating to the Maintenance Workbench, page 3-190
- Navigating to the Forecast Work Orders Page, page 3-191

Project and Task Setup

Work orders can be associated with a Project, Task or Seiban number at the time of implementing PM suggestions to work orders. The Forecast Work Order window can be configured.

Defining Meter Templates

There are two ways to create meters:

- Use the Meter window.
- Use the Meter Template window, and then instantiate them when defining an asset.

If you create meters using the Meter window (See: Defining Meters, page 3-159), associate that meter definition with individual asset numbers manually.

If you utilize the meter template definition functionality, you can associate that meter template with asset groups. After the association is created, when an asset number (asset numbers or serialized rebuilds) is created within that asset group (Asset Group or Rebuildable Item), the system automatically creates a new instance of the meter, associated with the specific asset number. This enables you to streamline your meter setup. However, the meters are not created retroactively; it applies to asset numbers created after the meter template was created.

Defining Meter Templates

1. Navigate to the Meter Template window.

Meter Template

Meter Template (EM1)

		Hierarchy				Init
Name	Description	Type	UOM	Value Change	Re []	
OKS_TEMP1		Absolute	Ea	Fluctuating	.	
PMCount1154089895		Absolute	EA	Fluctuating	.	
Odometer Template	Odometer Template	Absolute	ML	Ascending	0	

Item Type	Asset Group	Description	[]
Capital	Lexus ES300	2002 Make Lexus ES300 Car Fleet Maint. Group	

2. Enter a Name for the meter template.
3. Enter the Description for the template.
4. Enter a Value or Change Reading value for new meter readings, depending on the meter type.

Note: If the meter is a Change type, the Value field indicates the difference between the last reading and the current reading. The

Change value is used to calculate the Life To Date Reading, within the Latest tabbed region.

5. Optionally change the Date, if required.

6. Optionally enter an Initial Reading.

This is automatically used as the first meter reading entered, or each new instance of the meter that is created and associated with an asset number (or Serialized Rebuild) using the Meter Template.

7. If you select the Used in Scheduling check box, the meter is used in Preventive Maintenance Scheduling.

If there are any scheduling rules associated with this meter, you cannot deselect this check box. If this is a fluctuating meter, this check box is disabled. If the Used in Scheduling check box is selected, the Usage Rate (per day) and Number of Past Reading fields are mandatory.

8. Optionally select the Required check box.

Warning: PM work orders cannot be completed unless a meter reading is entered when the meter is considered in the Meter rules section of the PM Schedule definition, even if the Required check box is not selected.

You can select or clear this check box at any time; it impacts only future meter readings. However, if the meter is a Primary Failure Meter for any current asset/meter association, you cannot deselect the check box.

9. Enter a usage Rate (per day).

This field works in conjunction with the Number of Past Readings field to provide daily meter usage estimates, based on historical readings. It supplies the system benchmark data that is used to set the occurrence of scheduled PMs. Rate per day is referred to in the absence of a sufficient value in the Number of Past Readings field.

This field is mandatory if you have selected the Used in Scheduling check box.

10. Enter a value for the Number of Past Readings.

This value designates how many readings prior the scheduler should go to for calculating the usage rate. If there is an insufficient number of readings (for example four, instead of the required five), the system continues the calculation based on the usage Rate per day.

This field is mandatory if you have selected the Used in Scheduling check box.

11. Select the meter template effective dates.

If left blank, the meter is effective all of the time. You can disable a meter effective on a specific date by selecting a To date.

12. Save your work.

To associate meter templates with asset groups:

If you use the Meter Template definition functionality (See: Defining Meter Templates, page 3-156), you can associate that Meter Template with asset groups, within the same Meter Template window. After you create the association, when a new asset number (Asset Numbers or Rebuildable Serial Numbers) is created within that asset group (Asset Group or Rebuildable Item) a new instance of the corresponding meter is automatically created. This enables you to streamline your Meter setup.

1. Select an Item Type.

Valid values are Capital or Rebuildable.

2. Select an asset group.

If you previously selected Capital, asset groups are available for selection. If you previously selected Rebuildable, Rebuildable Items are available for selection.

3. Save your work.

After saving, each asset number defined as part of the current asset group is automatically associated with the meter template.

Reapplying a Meter Template to an Asset Group:

You can reapply a meter template to asset group after the asset has been created. Meter templates can be applied to an entire asset group or a range of asset numbers or serialized rebuildables.

Note: You can apply meter templates to only those assets to which a meter template has not been previously (applied) associated.

1. Navigate to the Reapply Asset Template form (Enterprise Asset Management > Assets > Reapply Asset Template).
2. Select values for the following required fields:
 1. **Asset Type:** Select Capital or Rebuildable.
 2. **Asset Group:** Select the asset group. You can apply the meter template to an entire asset group or to specific asset numbers within an asset group.

3. **Template Type:** Select Meter Template.

3. Optionally select values for these fields:

- **Asset Status**
- **Meter Template:** Select the meter template that you want to reapply to the asset.
- **Asset Number From:** Enter the beginning asset number value if you want to apply the meter template to a range of asset numbers in the asset group.
- **Asset Number To:** Enter the ending asset number value if you want to apply the meter template to a range of asset numbers in the asset group.

If you enter a value in the Asset Number From field but leave the Asset Number To field blank, the concurrent program will apply the meter template to a specific asset number.

4. Optionally select Yes in the **View Only** field if you do not want the system to apply the templates; a log is generated but the templates are not reapplied to the assets. The default value is No.

The screenshot shows a 'Parameters' window with the following fields and values:

Field	Value	Description/Label
Asset Type	Capital	Capital
Asset Group	Chevrolet Malibu LT 2004	Make: Chevrolet, Model: Malibu LT, Y
Template Type	Meter Template	
Asset Status		
Asset Number From		
Asset Number To		
Activity Template		
Meter Template	Vehicle Miles EAM	Milage Template for Vehicles
PM Template		
View Only	No	

Buttons at the bottom: OK, Cancel, Clear, Help.

5. Click the OK button.

Defining Meters

Alternatively, you can create Meters using the Meter window. Manually associate the meter definition with individual asset numbers. If you utilize the Meter Template definition functionality, you can associate that Meter Template with Asset Groups (See: Defining Meter Templates, page 3-156).

To define a meter:

1. Navigate to the Meter page.

Meter

Name	Type	UOM	Value Change	Initial Reading	Initial Reading Date	Used In Scheduling	Rate (per day)
LXES300 Odometer-5143	Absolute	MI	Ascending	0	04-NOV-2005 12:36	<input type="checkbox"/>	25
LXES300 Odometer-5144	Absolute	MI	Ascending	0	04-NOV-2005 12:48	<input checked="" type="checkbox"/>	25
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	

Item Type	Asset Number	Asset Group	Description	Primary Failure Meter	Organization
Capital	LX0003	Lexus ES300			EM1

2. Enter a unique meter Name.
3. Enter a Description for this meter.
4. Optionally select a Source Meter from the list of values.

As the readings for the source meter are updated, the associated target meter (current meter) is updated automatically. Companies can associate a source meter to an asset number and meter association. The source meter reading subsequently feeds corresponding meters that are associated with assets within the meter hierarchy.

For example, some companies must track units, using a meter to a parent asset (truck). These units should then trickle down to all child components of that parent asset (transmission, tires, belts). Each child component has different meters to track the units and history on the individual components. If the transmission is replaced, the Rebuild Replacement process enables you to remove the replaced transmission from the meter hierarchy and add the new transmission to the hierarchy. From that point, meter readings logged to the truck should also update the transmission child meter with those units. When a reading is logged to the truck, it will update the transmission child meter with those units.

5. Select the meter Type of Absolute or Change.
6. Select a unit of measure (UOM), associated with this meter. After the meter is created, this field is disabled.
7. Select Ascending, Descending, or Fluctuating in the Value Change field.

A fluctuating meter reading is one that can go up and down, for example, a temperature gauge. As production units pass through meters, meter readings increment. Another example of an ascending meter is a car odometer. Some liquid dispensers start full and record decreasing readings as material is used.

Note: Fluctuating meters are not used in Preventive Maintenance scheduling.

After the meter is created, this field is disabled.

8. Enter an Initial Reading.

This value is automatically used as the first meter reading entered, or each new instance of the meter that is created and associated to a asset number via the Meter Template.

9. If you select the Used in Scheduling check box, the meter is used in Preventive Maintenance Scheduling.

If there are any scheduling rules associated with this meter, you cannot clear this check box. If this is a fluctuating meter, this check box is disabled. If the Used in Scheduling check box is selected, the Usage Rate (per day) and Use Past Reading fields become mandatory.

10. Optionally select the Required check box.

Warning: PM work orders cannot be completed unless a meter reading is entered when the meter is considered in the Meter rules section of the PM Schedule definition, even if the Required check box is not selected.

You can select or clear this check box at any time; it impacts only future meter readings. However, if the meter is a Primary Failure Meter for any current asset/meter association, you cannot deselect the check box.

11. Enter a usage Rate (per day).

This field works in conjunction with the Number of Past Readings field to provide daily meter usage estimates, based on historical readings. It supplies the system benchmark data that is used to set the occurrence of scheduled preventive maintenance. Rate per day is referred to in the absence of a sufficient value in the Number of Past Readings field.

This field is mandatory if you have selected the Used in Scheduling check box.

12. Enter a value for the Number of Past Readings.

This value designates how many readings prior the scheduler should go to for

calculating the usage rate. If there is an insufficient number of readings (for example four, instead of the required five), the system continues the calculation based on the usage Rate per day entered.

This field is mandatory if you have selected the Used in Scheduling check box.

Note: If you enter a value of 1, the system perpetually calculates at the usage Rate per day.

13. Select the meter Effective Dates.

If left blank, the meter is effective all of the time, after it is created. If you select a future date, the meter is disabled until that date. You can disable a meter effective on a specific date by selecting a To date.

14. Save your work.

To associate meters with capital assets or serialized rebuilds:

Meter association creates the relationship between the meter definition and the capital asset number or Serialized Rebuild.

1. Select an Item Type of Capital, if you are going to associate the current meter with an asset number. Select Rebuildable if you are associating the current meter with a Serialized Rebuild.
2. Select an asset number (or Serialized Rebuild). The Asset Group (or Rebuildable Item) default value appears.
3. Optionally select a Primary Failure Meter to indicate the default meter that is used for failure analysis. These readings are used to calculate meter-based MTBF and MTTR. See: *Failure Analysis Overview, Oracle Enterprise Asset Management User's Guide*.

You can select a Primary Failure Meter for any meter with the Required option selected. Only one meter can be selected at a time, for an asset.

4. Save your work.

Defining Set Names

A PM schedule for an activity and an asset number or asset group must uniquely belong to a set name. Multiple PM schedules for the same asset number or asset group and activity combination are created across sets. However, out of those PM schedules, one can be identified as the Default and used for generating work orders. Other schedules in other sets can be used for simulation purposes. All set names have an end date. Each PM schedule that belongs to the set name must have its effective-to date before the end date of the PM schedule set name. Before assigning a set name to a PM

schedule, you must define set names within the Set Name Definition window. If you do not want to create set names, you can assign PM schedules to the predefined MAIN set.

PM schedules might contain assets that transferred from one organization to another. The destination organization for the asset can update and use the PM schedules that are assigned to a global PM set. However, you can only view the PM schedules within the destination organization that are assigned to the local PM sets for the originating asset organization.

Defining Set Names

1. Navigate to the Set Name window.

Set Name

Set Name (EM1)

Set Name	End Date	Description	Global
MAIN			<input checked="" type="checkbox"/>
ka-set1		PM Set for Maint Assets	<input checked="" type="checkbox"/>
ka-set2		Pm Set #002	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Templates Schedules Set Default

2. Enter the Set Name.
3. Optionally enter an End Date.
Every PM schedule that belongs to the set name must have its effective-to date before the End Date of the set name for the PM schedule. If you leave this field blank, the current set name does not expire.
4. Optionally enter a Description for this set name.
5. Optionally select the Global check box to indicate that the set is visible globally.
If this check box is clear, the set is confined to the current organization.

Note: You can change this setting from Global to local, if the set is

not used in an PM schedules of assets associated with another organization.

6. Optionally choose Templates to add, change, delete, or view Preventive Maintenance Schedule Templates, associated with the current set name (See: Preventive Maintenance Schedule Templates).
7. Optionally choose Schedules to create PM schedule definitions associated with the current set name (See: Defining a Preventive Maintenance Template, page 3-164).
8. Optionally choose Set Default to identify all schedules within this set as the default value.

Default-identified PM schedules automatically generate work orders during the PM Scheduler process. PM schedules that are not identified as a default value can generate work order suggestions during the PM Scheduler process. The generated suggestions cannot be converted into work orders. You can create an unlimited number of Set Names within this window.

9. Save your work.

Defining a Preventive Maintenance Template

An activity and asset number combination can be associated with Runtime, Day Interval Rules, or a list of dates, defining when an activity should be scheduled for an Asset, Serialized and Non-Serialized Rebuildables, or an Asset Route. Day Interval rules and List of Dates rules are supported for Non-Serialized Rebuildables and Asset Routes. The Preventive Maintenance (PM) Scheduler process creates suggested work order dates based on these rules. A planner can then view these forecasted work orders, and generate them as necessary.

There are two ways to create PM schedule definitions for Rebuildable Serial Numbers and Assets. You can create them individually within the Preventive Maintenance Schedules window (See: Entering Preventive Maintenance Schedule Definitions, *Oracle Enterprise Asset Management User's Guide*), or streamline the process of creating them using a PM Template. A PM Template is a schedule, defined for an asset group (Asset Group or Rebuildable Item)/Activity association. If you utilize the PM Template functionality, a new PM Schedule is automatically created for a newly created asset number (asset or rebuildable) for the asset group. All PM Template attributes are copied over to the PM Schedule for the Instance. You can optionally modify the values of the PM Instances created.

Before a PM Template is created, the following prerequisites must exist:

- Meter Template Definition (See: Defining Meter Templates, *Oracle Enterprise Asset Management User's Guide*)

A Meter Template definition is required if the PM Template is based on Runtime Rule

- Activity Definition (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*)
- Meter Template Association (See: Associating Meter Templates with Asset Groups, *Oracle Enterprise Asset Management User's Guide*)

A Meter Template Association is required if the PM Template is based on Runtime Rules.

- Activity Association Template (See: Activity Association Templates, *Oracle Enterprise Asset Management User's Guide*)

Creating Preventive Maintenance (PM) Templates

1. Navigate to the Find Preventive Maintenance Schedules window.

This window enables you to enter information to narrow your search for query mode.

Select Yes in the Next WO only field if you want the PM Scheduler to be able to create the next work order only if the previous work order has been completed for this work order completion date.

To define a new PM Template, select the **New** button.

2. Enter a PM Template name in the Schedule Name field.
3. Enter a Set Name. A PM schedule for an activity and asset group must uniquely belong to a set name (See: Defining Set Names, page 3-162).

Each Set Name has an end date. The PM schedule that belongs to the Set Name must have its Effective To date before the end date of the PM Set Name. Before assigning a Set Name to a PM schedule, define Set Names within the Set Name Definition window. If you do not want to create Set Names, you can assign PM schedules to the predefined set, MAIN.

PM schedules might contain assets that transferred from one organization to another. The destination organization for the asset can update and use the PM schedules that are assigned to a global PM set. However, you can only view PM schedules within the destination organization that are assigned to the local PM sets for the originating asset organization. You can copy these PM schedules to a global, local set or to the local set for the organization.

4. Select an Asset Type.

Valid values are Capital and Rebuildable Inventory. If Capital is selected, the Asset Group fields refer to the asset group. If you select Rebuildable Inventory, the Asset Group fields refer to the Rebuildable Item.

5. Select an asset group.
6. Select a Schedule Type.

Valid values are Rule Based and List Dates. If you select Rule Based, the Day Interval Rules and Runtime Rules tabs are enabled to enter information. If you select List Dates, you can define information within the List Dates tab.
7. The Effective dates default from the current activity association, if they exist. Optionally select or update the Effective From and Effective To dates.
8. Optionally enter a Lead Time In Days.

Lead time in a Preventive Maintenance Schedule is different than lead time associated with work order creation. The Preventive Maintenance process suggests work orders to be created or scheduled, starting from the last service day of the Asset to the cutoff day you specified while running the process. If a Lead Time In Days is specified, the Preventive Maintenance process predicts work for those extra days beyond the cutoff date. This provides the maintenance department advanced visibility for maintenance work that is typically predicted in the next planning process. The maintenance department can prepare for such work in the current planning period.
9. Optionally select a Work Order Status that best fits your business process.

When PM work orders are generated, (See: Generating Work Orders, page 5-6) they are created with this specified status. You can optionally update this status within the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70).
10. Optionally select Yes in the Next WO only field if you want to enable the scheduler to create the next work order only if the previous work order has been completed for the work order completion date.
11. Optionally select the Default check box to indicate that the current PM schedule definition generates work orders. If this check box is not selected, work order suggestions will not generate. You can have only one Default PM for an asset item and activity combination.
12. Optionally select the Automatic Instantiation check box. If this check box is selected, a new instance of the current PM schedule template is created for each new asset (Asset Number or Rebuildable Serial Number).
13. Optionally select the Reschedule Manual Work Orders check box. If this check box is selected, non-firm, unreleased manual work orders are considered during PM scheduling.
14. If the Run To Failure check box is selected, the Preventive Maintenance Scheduler

does not automatically schedule asset numbers within this asset group and activity association, although you can create manual work orders. This is relevant for asset numbers that cost more to maintain than the asset number itself. You might also check this box for forecasting and budgeting reasons. For example, your asset is a conveyor belt. It is common in maintenance environments to let this asset wear out completely before replacing it. You estimated that the life of this asset is 18 months, and have set up a schedule for a replacement work order every 18 months. In reality, you found that the belts have ended up wearing out every 12 months, affecting your cost budget.

You may select this check box and clear it later. For example, you might associate an asset number to an activity, but maybe you cannot currently maintain or schedule this asset number. You may have future plans to maintain this asset number.

If this check box is selected, PMs created as a copy of this PM Template generate work orders for the corresponding asset in the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70).

15. In the Scheduling Options region, indicate how the PM Scheduler process calculates work order dates.

The *Use* field works in conjunction with the *to suggest Next Service* field. The date field indicates the Last Service date

- *Actual Start Date to Start Date*: The PM Scheduler process uses the Last Service Actual Start Date, and calculates scheduled start dates.

This is a forward scheduling method.

- *Actual Start Date to End Date*: The PM Scheduler process uses the Last Service Actual Start Date, and calculates the scheduled end dates.

This is a backward scheduling method.

- *Actual End Date to Start Date*: The PM Scheduler process uses the Last Service Actual End Date, and calculates the scheduled start dates.

This is a forward scheduling method.

- *Actual End Date to End Date*: The PM Scheduler process uses the Last Service Actual End Date, and schedules the scheduled end dates.

This is a backward scheduling method.

- *Scheduled Start Date to Start Date*: The PM Scheduler process uses the Last Service Scheduled Start Date, and calculates scheduled start dates.

This is a forward scheduling method.

- *Scheduled Start Date to End Date*: The PM Scheduler process uses the Last Service

Scheduled Start Date, and calculates the scheduled end dates.

This is a backward scheduling method.

- *Scheduled End Date to Start Date*: The PM Scheduler process uses the Last Service Scheduled End Date, and calculates the scheduled start dates.

This is a forward scheduling method.

- *Scheduled End Date to End Date*: The PM Scheduler process uses the Last Service Scheduled End Date, and schedules the scheduled end dates.

This is a backward scheduling method.

- *Base Date*: You must enter a date as the basis for the PM calculation.

As your intervals change, you might want to update the Base Date so that your PM work orders are generated at your choice intervals. It is recommended that you change the Base Date to the Last Service Date if your scheduling interval changes, to ensure that the new scheduling is impacted only from that point and forward. Actual and scheduled work order dates are not considered when you use the Base Date or Base Meter options.

- *Base Meter*: You must enter a meter, as well as the initial interval.

The PM engine uses that initial reading as the anchor for its calculation. Actual and scheduled work order dates are not considered when you use the Base Date or Base Meter options.

16. In the Multiple Rules region, indicate how the predicted due dates are determined for multiple rules.

- *First*: The due date is set to the first due date of all rules.
- *Last*: The due date is set to the last due date of all rules.

For example, below is a Runtime Rule that includes two meters, Meter1 and Meter2

Schedule Based On Example

Interval	Effective From	Effective To	Meter
100	0	10,000	Meter1
50	0	2,500	Meter2

If you specify First Due Date in the Scheduling Based On region of the PM Template, between the two meters, the first meter that hits the due reading triggers

the service. In this case, if Meter1's reading reaches the interval of 100 first, the service happens before Meter2's reading reaches its interval of 50. Conversely, you can choose Last Due Date in the Scheduling Based On region. In this case, even if Meter1 reaches its due reading, the service is not scheduled until Meter2 has also reached its due reading.

This region is disabled if the current PM schedule definition's Scheduling Type field is populated with List Dates.

17. In the Activity region, select one or multiple activities.

Activities associated with asset groups are eligible for use in a schedule template definition. A maintenance planner can create a single PM schedule for multiple activities on an asset template. You can list multiple activities to perform on an asset that share a common base interval of either a date, meter, or both. Each maintenance activity on the schedule generates work orders, based on a multiple of the base interval occurring. The group of maintenance activities on one PM schedule represents a cycle of activities. **Base Interval** refers to the minimum of a space of time (such as 90 days), or meter reading (such as 7,500 miles) between when PM activities included in one PM schedule should be performed. It can be considered a common denominator among the multiple activities included in one PM Schedule that share a common base interval. A **cycle** is a complete round of maintenance activities performed on an asset that share a common base interval of a meter or time period, or both, or a multiple of the shared intervals.

After the cycle of activities completes, the cycle restarts. For example, you can define a PM schedule for two activities that have a common Base Interval of 7,500 miles. The first activity is an oil change, and is scheduled every 7,500 miles. The second activity, a tune-up, is scheduled for every fourth interval or 30,000 miles. The work order for the oil change generates on each occurrence of the 7,500 mile interval and the work order for the tune-up generates on the fourth interval occurrence.

When an asset transfers to another organization, the schedule that is associated with the local PM Set is viewable within the new organization. For example, the PM Set Name, Local, is created in organization, EM1. A PM schedule is defined in EM1 for asset number, #1554877, and is associated with Local (Set Name). asset number #1554877 is transferred to another eAM-enabled organization, EM2. A planner in this new organization (EM2) can view the PM schedule that is associated with the Local PM set. However, it is view-only; it cannot be updated. The associated activity appears in blue, to indicate that the activity definition has not yet been assigned to EM2. In this scenario, to use the PM schedule, the planner must either assign the activity for the PM schedule to the current organization, EM2, or update the PM schedule Set Name from Local to a global set or a local PM set that was defined in EM2.

Note: You can define an unlimited number of activities, however, it

is recommended that you keep it simple.

18. Optionally indicate the Interval Multiple of the Base Interval.

This field works with the Repeat in Cycle field to determine how many intervals for an activity to repeat.

19. Optionally select the Repeat in Cycle value to determine if the activity interval repeats in the cycle.

If you select *Yes*, the Interval Multiple field determines how many times the activity interval repeats. If you select *No*, the activity is scheduled once for each cycle.

20. Optionally enter a value in the Tolerance In Days field to indicate a minimum interval in days between the suppressed activity and actual activity suppressing it.

21. Within the Date Rules tab, optionally enter Effective From and To dates to specify the rule's expiration.

22. Enter a Base Interval In Days.

For example, if you enter the number three, a work order suggestion is created every three days. You can optionally create variable Date Rules. For example, you would like work order suggestions created every three days in January, and every four days in February. The window below illustrates this example:

23. Within the Meter Rules tab, optionally select a Meter Name to indicate that Preventive Maintenance scheduling is based on a meter rule.

If you have previously set up a Date Rule, you can base the scheduling on a Runtime Rule, as well. Meter Templates associated with this asset group (See: Associating Meter Templates with Asset Groups, page 3-158), and with the Used in Scheduling check box selected in the meter template definition are available.

For example, trucks of a specific Make and Model need to be scheduled for an oil change every 30 days, or every 1000 miles.

Date Rule

Field	Value
Last Service Start/End Date	December 26, 2001
Interval In Days	30

Meter Rule

Field	Value
Last Service Reading	3000
Interval	1000
Latest Meter Reading	3100 (found within meter reading history)
Latest Meter Reading Date	January 1, 2002 (this can be found via meter reading history)
Usage Rate	25 miles per day (calculated, based on Linear Regression's Least Square formula. In a least-squares model, the best-fitting line for the observed data is calculated by minimizing the sum of the squares of the vertical deviations from each data point to the line. For example, if a point lies on the fitted line exactly, then its vertical deviation is zero.)

If the Meter Rule is taken into account, the next due date is February 6, 2002 (January 1 2002 + $[(3000 + 1000 - 3100)/25 = \text{January 1, 2002}] + 36$ days), and every 40 days after that. This is calculated as the interval (1000 miles) divided by the usage rate (25 miles per day).

The PM Scheduler process compares the above suggested dates from the runtime interval rule, to those of the date rule: Base Date of December 26, 2001 + every 30 days.

The work orders ultimately created by the PM Scheduler process are those of the earliest or latest dates, depending on how the Schedule Based On region is populated. If you selected First Due, the earliest suggestion is used for work order creation. The opposite is also true.

24. The Interval and UOM fields work together.

For example, for every 2000 miles, this asset number needs an oil change. The UOM defaults from the Meter Template definition of the current Meter Template. You can optionally create multiple Runtime Rules. For example, from zero to 10,000 miles, you would like your asset serviced every 3,000 miles. From 10,000 to 50,000 miles, you would like your asset serviced every 2,000 miles.

25. Optionally enter the Last Service Reading in the Last Service Information window.

This field is also automatically updated with the meter reading information recorded at work order completion (See: Work Order Completion, page 4-60).

Note: The Preventive Maintenance Scheduler (See: Generating Work Orders, page 5-6) automatically calculates the meter usage rate, based on historical data, which is then used to predict the next meter due date. Refer to the example below.

26. If you populated List Dates within the Schedule Type field, select the List Dates tab to define the specific due dates that work orders should transpire.

For example, you want asset, Car1, serviced on May 1 and November 1 every year for the next three years. In this case, you would create a List Dates type schedule definition, and list all the due dates within this tab. The PM Scheduler process creates suggested work order dates on those specified dates.

27. Save your work.

Reapplying a PM Template to an Asset Group

You can reapply an PM template to an entire asset group or to specific asset numbers or serialized rebuildables within an asset group. If there are any associated suppression templates, they are also reapplied.

Note: The concurrent program applies to asset groups that have an existing activity template applied.

To reapply a PM template to an asset group:

1. Navigate to the Reapply Asset Template page (Enterprise Asset Management > Assets > Reapply Asset Template).
2. Select the Asset Type (required). Values are Capital or Rebuildable.
3. Enter the Asset Group (required).
4. Select PM Template for the Template Type to be reapplied (required).
5. (Optional) Enter values in these fields to reapply the PM template to specific assets within the asset group:
 - **Asset Status**
 - **Asset Number From:** Enter the beginning asset number value if you want to apply the PM template to a specific asset number in the asset group.

- **Asset Number To:** Enter the ending asset number value if you want to apply the PM template to a specific asset number in the asset group.
6. Optionally select Yes in the **View Only** field if you not want the system to apply the templates; a log is generated but the templates are not reapplied to the assets. The default value is No.

Reapply Asset Template - PM Template

7. Click OK to run the concurrent program to reapply the PM template.

Entering Preventive Maintenance Schedule Definitions

Schedule definitions are implemented to create scheduled work orders, based on Day Interval rules, Runtime rules, or Calendar Based schedules. Schedules can also be based on a list of specific dates by using List Date rules. List Date rule based PM schedules cannot have Runtime or Day interval rules. Runtime or Day Interval Rule based PM schedules cannot have List Date rules. You can create a Preventive Maintenance Schedule Definition for an asset group (serialized rebuildable and activity combination, asset number/activity combination, or an asset route and activity combination).

Calendar Based Scheduling

This option enables users to define recurring calendar setups that can be defined in PM rules. Calendar based schedule options are Weekly, Monthly and Yearly.

Note: Multiple calendar rules are allowed but cannot overlap in one PM schedule.

Calendar Based Schedules - Setup Information for Weekly Option

Field	Values/Meaning
Interval	Enter the value for the interval such as enter 2 to repeat once every 2 weeks.
Day of Week	Sunday to Saturday
Day Num	Display only, values of 1 to 7 are displayed based on Day of Week value. For example, Day Num for Sunday is 1; sequence continues to Day Num as 7 for Saturday.

Weekly Example

Field	Values/Meaning
Interval	3
Day of Week	Monday
Day Num	2

In this example, the activity should occur once every 3 weeks and is always scheduled to run on a Monday.

Calendar Based Schedules - Setup Information for Monthly Option

Field	Values/Meaning
Interval	Enter the value for the interval such as enter 2 to repeat the activity once every 2 months
Repeat	First/Second/Third/Fourth/Last/Day of Month
Day of Week	Sunday to Saturday and Day option applicable for First and Last Day of the month selection.

Field	Values/Meaning
Day Num	Display only field. Values 1 to 8 are associated with Day of Week value, or values of 1 to 31 are applicable to Repeat option for Day of Month.

Monthly Example

Field	Values/Meaning
Interval	2
Repeat	Last
Day of Week	Sunday
Day Num	1

In this example the activity should occur once every 2 months on the last Sunday of the month.

Calendar Based Schedules - Setup Information for Yearly Option

Field	Values/Meaning
Interval	Enter the value for the interval such as every 2 years.
Repeat	First/Second/Third/Fourth/Last/Day of Month
Day of Week	Sunday to Saturday and Day option applicable for First and Last Day of the month selection.
Month	January to December
Day Num	Display only field. Values 1 to 8 are associated with Day of Week value, or values of 1 to 31 are applicable to Repeat option for Day of Month.

Yearly Example

Frequency	Values/Meaning
Interval	2
Repeat	Last
Day of Week	Day
Day Num	8
Month	December

In this example, the activity should occur once every two years and is scheduled on the last day of December.

If a meter is entered in a runtime interval rule, the following prerequisites must exist before creating a Preventive Maintenance schedule:

- Meter Definition (See: Defining Meters, *Oracle Enterprise Asset Management User's Guide*)
A Meter definition is required if the PM schedule is based on Runtime Rules.
- Activity Definition (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*)
- Meter/Asset Association (See: Associating Meters with Asset Numbers, *Oracle Enterprise Asset Management User's Guide*)
A Meter/Asset Association is required if the PM schedule is based on Runtime Rules.
- Asset Group (Non-Serialized Rebuildable) or Asset Number/Activity Association (See: Associating Asset Numbers with Activities, *Oracle Enterprise Asset Management User's Guide*)

Defining Preventive Maintenance (PM) Schedules

1. Navigate to the Find Preventive Maintenance Schedules window.

This window enables you to enter information such as a Planner, to narrow your search for query mode.

Select Yes in the Next WO Only field if you want the PM Scheduler to be able to create the next work order only if the previous work order has been completed for

this work order completion date.

To define a new schedule, click New.

Preventive Maintenance (Schedule Definition)

Preventive Maintenance (Schedule Definition)

Schedule Name: DocSched ☒ Default Planner: []

Set Name: MAIN ☐ Reschedule Manual Work Orders ☐ Run To Failure

Asset Type: Capital Reviewer: Stock, Ms. Pat Review Date: 28-APR-2016

Asset Number: FL1010 Fork Lift FL1010

Asset Group: Fork Lifts Fork Lift Asset Group

Schedule Type: Calendar Based

Effective From: to suggest Next Service: Start Date

Effective To: For Multiple Rules: Use date that comes: First

Lead Time In Days: Intervals Per Cycle: 1 Current Cycle: 1 Current Interval Count: 0

Work Order Status: Unreleased

Next WO Only: No

Activity

Activity	Interval Multiple	Repeat in Cycle	Tolerance in Days	Last	Last Date
	1	No		<input checked="" type="checkbox"/>	
				<input type="checkbox"/>	
				<input type="checkbox"/>	

Last Service Info Suppression

Date Rules Meter Rules List Dates Calendar Based

Effective From	Effective To	Frequency	Interval	Repeat	Day No	Day of Week	Month
03-MAR-2016	31-MAR-2016	Weekly	1		2	Monday	
01-APR-2016	30-JUN-2016	Monthly	2	FIRST	5	Thursday	

2. Enter a Schedule Name.

Important: If your PM schedule requires more than one activity and if the activities use different cycles, we recommend that you create separate PM schedules.

3. Enter a Set Name.

A PM schedule for an activity and an asset number or asset group must uniquely belong to a Set Name (See: Defining Set Names, page 3-162). Every Set Name has an end date. Every PM schedule that belongs to the Set Name must have its Effective To date before the end date of the PM Set Name. Before assigning a Set Name to a PM schedule, define Set Names within the Set Name Definition window. If you do not want to create Set Names, you can assign PM schedules to set, MAIN; it already exists.

PM schedules might contain assets that transferred from one organization to another. The asset's destination organization can update and use the PM schedules

that are assigned to a global PM set. However, you can only view, within the destination organization, PM schedules that are assigned to the asset's originating organization's local PM sets. You can copy these PM schedules to a global, local set or to your organization's local set.

4. Select an Asset Type.

Valid values are Capital and Rebuildable Inventory. If Capital is selected, the Asset Number and Asset Group fields refer to the asset number and asset group, respectively. If Rebuildable Inventory is selected, the Asset Number and Asset Group fields refer to the Rebuildable Serial Number and Rebuildable Item, respectively. If a Non-Serialized Rebuildable Item is entered in the Asset Group field, the Asset Number field is not required.

5. Select an asset number.

Assets that are maintainable and associated with activities are available. The Asset Group field populates with the asset group associated with the current asset number. If you wish to define a PM Schedule for a Non-serialized Rebuildable, enter the asset group; the Asset Number field does not apply.

For assets that transferred from one organization to another, PM schedules that are defined for assets within their originating organizations are also visible within their destination organizations.

6. Select a Schedule Type.

Valid values are Rule Based and List Dates. If you select Rule Based, the Day Interval Rules and Runtime Rules tabs are enabled to enter information. If you select List Dates, you can define information within the List Dates tab.

7. The Effective dates default from the current Asset activity association, if they exist. Optionally select or update the Effective From and Effective To dates.

8. Optionally enter a Lead Time In Days.

Lead time in a Preventive Maintenance Schedule is different than lead time associated with work order creation. Lead time within a Preventive Maintenance Schedule covers the time between the end date of the first execution of the Preventive Maintenance Schedule process, and the start date (system date) of the second execution of the Preventive Maintenance Schedule process. For example, a department executes the Preventive Maintenance Scheduler process every two months; the end date of each Preventive Maintenance Scheduler process is the end of every other month. However, due to circumstance, the meter data is not ready until the middle of the month. Therefore, the Preventive Maintenance Scheduler process starts in the middle of the month, instead of at the beginning, creating a lapse between the first and second Preventive Maintenance Scheduler executions. Lead time is used to cover this lapse.

9. Optionally select Yes in the Generate Next WO field if you want to enable the scheduler to create the next work order only if the previous work order has been completed for the work order completion date.
10. Optionally select a Work Order Status that best fits your business process.

User-defined work order statuses for your organization are available for selection.

Note: User-defined work order statuses are based upon system statuses and are assigned to organizations. For example, you can define a work order status of "Ready to Start" based on the Released system status. You can also have a work order status of Ready to Start based on the system status of Draft. Both statuses can then be assigned to your organization for use.

When Preventive Maintenance work orders are generated, (See: Generating Work Orders, page 5-6) they are created with this specified status. You can optionally specify a different status for each PM schedule. You can also update this status, using the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70).

11. Optionally select the Default check box to indicate that the current PM schedule definition generates work orders.

If this check box is not selected, work order suggestions will not generate. You can have only one Default PM for an asset item and activity combination.

12. Optionally select the Reschedule Manual Work Orders check box.

If this check box is selected, non-firm, unreleased manual work orders are considered during PM scheduling.

13. Optionally select a Planner to assign to this work order.

14. If the Run To Failure check box is selected, the Preventive Maintenance Scheduler does not automatically schedule this asset number and activity association, although you can create manual work orders.

This is relevant for asset numbers that cost more to maintain than the asset number itself. You might also check this box for forecasting and budgeting reasons. For example, your asset is a conveyor belt. It is common in maintenance environments to let this asset wear out completely before replacing it. You estimated that the life of this asset is 18 months, and have set up a schedule for a replacement work order every 18 months. In reality, you found that the belts have worn out every 12 months, affecting your cost budget.

You can select this check box and clear it later. For example, you might associate a non-maintainable asset to an activity, but maybe you cannot currently maintain or schedule this asset. You might have future plans to maintain this asset number.

If this check box is selected, the work orders for this asset do not appear in the Maintenance Workbench at the time of PM Scheduling (See: Using the Maintenance Workbench, page 4-70).

15. For new PM schedule definitions, the default value for the Reviewer is based on the user login information, and the Review Date field defaults to the current system date.

If you are updating a PM schedule definition, the Reviewer field indicates the last reviewer of the PM Schedule, and the Review Date field indicates the date on which the last review occurred. When updating the schedule definition, the Reviewed Date can be changed.

16. In the Scheduling Options region, indicate how the PM Scheduler process calculates work order dates (see PM Scheduling Options, page 3-167).
17. In the For Multiple Rules region, indicate how the predicted due dates are determined for multiple rules.
 - *First*: The due date is set to the first due date of all rules.
 - *Last*: The due date is set to the last due date of all rules.

For example, below is a Runtime Rule that includes two meters, Meter1 and Meter2.

Schedule Based On Example

Interval	Effective From	Effective To	Meter
100	0	10,000	Meter1
50	0	2,500	Meter2

If you specify First in the Multiple Rules region of the PM schedule definition, between the two meters, the first meter that hits the due reading triggers the service. In this case, if Meter1's reading reaches the interval of 100 first, the service happens before Meter2's reading reaches its interval of 50. Conversely, you can choose Last in the Multiple Rules region. In this case, even if Meter1 reaches its due reading, the service is not scheduled until Meter2 has also reached its due reading.

This region is disabled if the current PM schedule definition's Scheduling Type field is populated with List Dates.

18. Optionally enter a value for the **Intervals Per Cycle** field. This field represents the number of base intervals that comprise the complete cycle. For example, 12 monthly intervals would comprise a 1-year cycle, and four 7,500 miles base intervals would

comprise a 30,000-mile cycle.

The system automatically updates these fields:

- **Current Cycle:** The current execution cycle of a Preventive Maintenance cycle for an asset. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed.
 - **Current Interval Cycle:** The current execution interval within a current running cycle. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed. It is advisable not to change the current cycle and current interval count after initial definition, unless really required to do so. These fields can be disabled for edit by users through function based menu exclusions.
19. Within the Activity region, select one or multiple Activities. Activities associated with asset numbers or non-serialized rebuilds are eligible for scheduling.

A Maintenance Planner can create a single PM schedule for multiple activities on an Asset. You can list multiple activities to perform on an asset that share a common base interval of either a date, meter, or both. Each maintenance activity on the schedule generates work orders, based on a multiple of the base interval occurring. The group of maintenance activities on one PM schedule represents a cycle of activities. After the cycle of activities completes, the cycle restarts. For example, you can define a PM schedule for two activities that have a common Base Interval of 7,500 miles. The first activity is an oil change, and is scheduled every 7,500 miles. The second activity, a tune-up, is scheduled for every fourth interval or 30,000 miles. The work order for the oil change generates on each occurrence of the 7,500 mile interval and the work order for the tune-up generates on the fourth interval occurrence.

When an asset transfers to another organization, the schedule that is associated with the local PM Set is viewable within the new organization. For example, the PM Set Name, Local, is created in organization, EM1. A PM schedule is defined in EM1 for Asset Number, #1554877, and is associated with Local (Set Name). Asset Number #1554877 is transferred to another eAM-enabled organization, EM2. A planner in this new organization (EM2) can view the PM schedule that is associated with the Local PM set. However, it is view-only; it cannot be updated. The associated activity appears in blue, to indicate that the activity definition has not yet been assigned to EM2. In this scenario, to use the PM schedule, the planner must either assign the schedule's activity to the current organization, EM2, or update the schedule's PM Set Name from Local to a global set or a local PM set that was defined in EM2.

Note: You can define an unlimited number of activities, however, it is recommended that you keep it simple.

20. Optionally indicate the Interval Multiple of the Base Interval. This field works with the Repeat in Cycle field to determine how many intervals for an activity to repeat.
21. Optionally select the Repeat in Cycle value to determine if the activity interval repeats in the cycle. If you select *Yes*, the Interval Multiple field determines how many times the activity interval repeats. If you select *No*, the activity is scheduled once for each cycle.
22. Optionally enter a Tolerance In Days to indicate a minimum interval in days between the suppressed activity and activity suppressing it.
23. Optionally choose Last Service Info to enter the last service information for the current asset number and activity association.

Enter Last Service start and end dates. These dates are used by the Preventive Maintenance Scheduler as a starting point for calculating the next due date for a suggested work order. After the Preventive Maintenance Scheduler suggests a work order, and that work order is completed, this date resets to the completion date. Last service information is always regarding the asset number and activity association, and independent of the association's PM schedule definition.

The Last Service Reading cannot be greater than the last meter (if the meter is ascending), or less than the last meter reading (if the meter is descending).

Last Service Information

Asset Type	Capital	
Asset Number	DTF35000	Delivery Errand Truck 35000
Asset Group	Vehicles	Vehicle Asset Group
Activity	30000 Mile TuneUp	30000 Mile Vehicle Maintenance

Last Service Dates	
Actual Start Date	04-DEC-2006 00:00:00
Actual End Date	04-DEC-2006 00:00:00
Scheduled Start Date	04-DEC-2006 00:00:00
Scheduled End Date	04-DEC-2006 00:00:00

Meter Name	Usage Rate	UOM	Description	Last Service Reading
DTF35000 Odomet...	200	MI	Delivery Truck DTF35000 Od	120000

24. Within the Date Rules tab, optionally enter Effective From and To dates to specify the rule's expiration.

This tab is enabled if Rule Based is populated in the Schedule Type field.

25. Enter a Base Interval In Days. For example, if you enter the number three, a work order suggestion is created every three days.

You can optionally create variable Date Rules. For example, you would like work order suggestions created every three days in January, and every four days in February.

26. Optionally within the Meter Rules tab, select a Meter Name to indicate that Preventive Maintenance scheduling is based on a Meter Rule.

If you have previously set up a Date Rule, you can base the scheduling on a Meter Rule, as well. Meters associated with this asset number (See: Associating Meters with Asset Numbers, page 3-162), and with the Used in Scheduling check box selected in the meter definition, are available.

For example, a Truck 01 Asset Number is scheduled for an oil change every 30 days, or every 1000 miles.

Date Rule

Field	Value
Last Service Date	December 26, 2001
Interval In Days	30

Meter Rule

Field	Value
Last Service Reading	3000
Interval	1000
Last Service Reading Date	January 1, 2002 (this can be found via meter reading history)
Usage Rate	25 miles per day (calculated as the total of the meter readings value changes, divided by the total of the meter reading date intervals)

If the Meter Rule is taken into account, the next due date is February 10, 2002 (January 1 2002 + 40 days), and every 40 days after that. This is calculated as the interval (1000 miles) divided by the usage rate (25 miles per day).

The PM Scheduler process compares the above suggested dates from the meter rule, to those of the date rule: Base Date of December 26, 2001 + every 30 days.

The work orders ultimately created by the PM Scheduler process are those of the shortest interval and earliest dates: December 26, 2002 + every 30 days.

Note: Meter Rules are not applicable for Non-Serialized Rebuildables.

27. The Interval and UOM fields work together. For example, for every 2000 miles, this asset number needs an oil change.

The UOM defaults from the meter definition of the current meter.

You can optionally create multiple Meter Rules. For example, from zero to 10,000

miles, you would like your asset serviced every 3,000 miles. From 10,000 to 50,000 miles, you would like your asset serviced every 2,000 miles.

28. You cannot enter the Last Service Reading. This field is automatically updated with the meter reading information recorded at work order completion (See: Work Order Completion, page 4-60).

Note: The Preventive Maintenance Scheduler (See: Generating Work Orders, page 5-6) automatically calculates the meter usage rate, based on historical data, which is then used to predict the next meter due date. Refer to the example below.

29. If you populated List Dates within the Schedule Type field, select the List Dates tab to define the specific due dates that work orders should transpire.

For example, you want asset, Car1, serviced on May 1 and November 1 every year for the next three years. In this case, you would create a List Dates type schedule definition, and list all the due dates within this tab. The PM Scheduler process creates suggested work order dates on those specified dates.

30. Save your work.

Multiple Activity PM Schedule Definition - Fixed Meter Example: Parameters for Conveyor PM Schedule

- Inspection every 100 hours of operation
- Minor PM for every 200 hours of operation
- Major PM for every 400 hours of operation
- Scheduling Option: Base Meter

The following are the steps you will perform:

1. Enter the meter name and define the scheduling starting point to the right of the meter.

The system will define default values for the following:

- Intervals per Cycle
- Current Cycle
- Current Interval Count

2. Enter the required activities, taking the following into consideration:

- The activity "Inspection" is scheduled after 100 hours of operation: (Interval Multiple (1) x Base Interval (100)).
- The activity "Minor PM" is scheduled after 200 hours of operation.
- The activity "Major PM" is scheduled after 400 hours of operation.
- Repeat in Cycle determines if an activity can occur multiple times during a cycle, in this example the Inspection can occur multiple times within the cycle, the Minor PM will not be planned at the 400 hour interval.

3. Enter the meter name with a base interval of 100.

4. Save your work.

Activity	Interval Multiple	Repeat in Cycle	Tolerance in Days	Last	Last Date
Inspection	1	Yes		<input type="checkbox"/>	29-DEC-2008 17:38:00
Minor PM	2	No		<input checked="" type="checkbox"/>	29-DEC-2008 17:38:30
Major PM	4	No		<input type="checkbox"/>	28-DEC-2008 16:27:56

Meter	Usage Rate	UOM	Effective From	Effective To	Base Interval	Cycle Interval	Last Service Reading
Conveyor Hour M	1466.84011	HR			100	400	200

Analysis of Example

The program will update Current Cycle and Current Interval Count when PM work orders are completed. For example at 210 hours of operation, two Inspection work orders and one Minor PM work order have been generated and completed. The Current Interval Count has been updated to (2). The Current Interval Count provides a count within the Current Cycle, the Current Interval Count is updated to (1) with the start of each new cycle.

The Current Cycle provides a count of the number of times a PM Set (Inspection, Minor

PM and Major PM) has been completed. In this example, the Current Cycle remains (1), the Current Cycle will be updated to (2) with the completion of the PM Set and the start of a new cycle.

When forecasting work orders for the next 30 days, note that the activity "Minor PM" is not included in the forecast but the activity "Inspection" is included, the "Repeat in Cycle" controls if an activity will occur within a Cycle. For the activity "Inspection" the Repeat in Cycle is "Yes", for the activity "Minor PM" the Repeat in Cycle is "No", the "Minor PM" will be generated once per cycle.

Forecast Work Orders (FAC)

Start Date: 31-DEC-2008 07:23:40 - Cutoff Date: 30-JAN-2009 07:23:40

Horizon: 30

Set Name:

☐ Include Run To Failure

☒ Combine with Default

☐ Include Children

Select	Action	Type	Asset Number	Activity	Suggested Start Date	Exp
<input type="checkbox"/>	Create	Forecasted	Conveyor-10	Inspection	28-DEC-2008 08:30:01	
<input type="checkbox"/>	Create	Forecasted	Conveyor-10	Major PM	26-JAN-2009 21:12:06	
<input type="checkbox"/>	Create	Forecasted	Conveyor-10	Inspection	26-JAN-2009 21:12:06	
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						

☐ Select All

Project:

Task:

Parent Work Order:

To define a Preventive Maintenance schedule for an asset route:

Preventive Maintenance Schedules can be defined based on Asset Routes. See: Setting Up Asset Routes.

1. Navigate to the Preventive Maintenance Schedules window.
2. Select Asset from the Item Type list of values.
3. Select an Asset Route from the asset number list of values.
4. See: Preventive Maintenance Scheduling, page 3-173, for instructions on the remaining fields.

Note: You can define Date Rules and List Dates for asset routes. You cannot define Meter Rules.

To create a suppression activity:

You can suppress other activities with the current activity in the scheduling definition. You can enter suppression activities for an asset number and activity combination.

For example, there are two activities associated with a Truck 01 asset: Oil Change (to be performed every five months), and Major Service (to be performed every 12 months). A major service on a Truck 01 includes an Oil Change. Therefore, a suppression definition needs to be defined; the activity, Major Service, suppresses the child activity, Oil Change.

1. From the Preventive Maintenance Schedules window, choose Suppression.

Suppression

The screenshot shows the 'Suppression (EM1)' window. It contains the following fields:

- Asset Type: Capital
- Asset Number: DTF35000
- Asset Group: Vehicles
- Activity: 15000 Mile Maint

Below these fields is a table with the following data:

Suppressed Activity	Description	Tolerance in Days []
3000 Mile Maint		5

2. Choose a Suppressed Activity. Activities associated with the asset numbers are available.
3. Optionally enter a Description for this suppression.
4. Optionally enter a numerical value in the Tolerance in Days field to indicate a minimum interval in days between the actual suppressed activity and the activity that suppresses it.
5. Save your work.

Note: Suppression is applicable to an activity association and can also be defined from the Activity Workbench and Suppression windows.

Creating PM Schedules for Multiple Assets Using Web ADI

You can create and update PM schedules for multiple assets using the PM Schedules Web ADI option from the Schedule Definition form.

Key features of the PM Web ADI Template:

The PM schedule header contains the schedule header information is used to load the schedule information and its related child data information.

- **Schedule Name:** Select a value; this field is the primary key used to upload the information.
- **Activity Information:** Select the activities for the schedule. If there is more than one activity, a new row is added below the parent schedule header information.
- **Date Rules:** Enter an Effective start and End, and the days frequency is specified under this region, allows multiple rows with effective date validations
- **Meter Rules:** Enter the meter rule information that includes multiple rows with effective date validations. This field is used for the List Dates schedule type.
- **List Dates:** Enter dates for each schedule with a schedule type of List Dates.
- **Calendar Based:** Enter the calendar based rules information for each schedule type of Calendar Based.
- **Last Service Information:** Template does not contain this information for a new schedule definition.

Note: For an update to an existing schedule definition, the values will be the system date and the last schedule information.

- **New Schedule:** Enter the header information and the system includes the information for the child. For example: for the PM Schedule Name, there can be multiple activity rows entered for the same PM Schedule Name.
- **Update Schedule:** System will download the header information for all child information. To modify the header information, change the last row header information to update.

To create PM schedules for multiple assets using Web ADI:

1. Navigate to the **Schedule Definition** form (Enterprise Asset Management, Preventive Maintenance, Schedule Definition).
2. Click **New**.
3. Click **Tools**, and select the PM Schedules Web ADI option.

The Create Document page appears.

Primary Parameters	
Integrator	EAM PM INTEGRATOR
Viewer	Excel 2007
Reporting Flag	<input type="checkbox"/>
Layout	EAMPMLAYOUT
Content	EAMPMCNT
Mapping	EAMPMAP

Content Parameters

4. Select the **Viewer** to be used for the template, for example, Excel 2007. This is a required step.
5. Click **Create**, and the following message appears:

Information

A file will be downloaded to your desktop.
When prompted, choose to open the file and to enable macros. If no prompt appears, ensure your browser security settings allow files to be downloaded.

Return

6. Click Open with or Save the file to a desktop folder.
7. Open the file.
8. Click the **Enable Macros** button.
9. Update the spreadsheet and save your changes.
10. Select Oracle, Upload from the Microsoft Excel toolbar to upload the new instance.

This process synchronizes the data in the Excel spreadsheet with the live data in Web ADI. For more information, see *Oracle Web Applications Desktop Integrator Implementation and Administration Guide*.

Navigating to the Maintenance Workbench

You can access the Maintenance Workbench from the PM Schedule Definition window.

1. Search for a specific PM schedule definition.

2. Click **Tools** from the menubar.

3. Select **Maintenance Workbench**, and the Maintenance Workbench page appears.
For more information, see *Using the Maintenance Workbench*, page 19-1.

Navigating to the Forecast Work Orders Page

You can access the Forecast Work Orders page from the PM Schedule Definition window.

1. Search for a specific PM schedule definition, and click **Launch**.

The Preventive Maintenance (Schedule Definition) page appears.

2. Click **Tools** from the menubar.

3. Select **Forecast Work Orders**.

The Forecast Work Orders page appears. The default values for the schedule are populated on the page.

Forecast Work Orders

Schedule Name: DMP100A Start Date: 08-Jun-2021 00:00:00
Set Name: MAIN Horizon: 100
Asset Number: DMP100 CutOff Date: 16-Sep-2021 00:00:00

☐ Hide Implement Additional Details

Project: eAM Building 500 Parent Work Order: PM423919
Task: 1

Forecast Work Order Results

Select	Action	Type	Asset Number	Activity	Suggested Start Date	Expected End Date	Cycle	Interval Count	Work Order	Description	Work Order
<input checked="" type="checkbox"/>	Create	Forecasted	DMP100	3D Printer Weekly Maintenance	16-Aug-2021 16:35:32		3	7		3D Printer Weekly Maintenance	Unrelease
<input checked="" type="checkbox"/>	Create	Forecasted	DMP100	3D Printer Weekly Maintenance	24-Aug-2021 16:35:33		3	14		3D Printer Weekly Maintenance	Unrelease
<input type="checkbox"/>	Create	Forecasted	DMP100	3D Printer Biweekly Maintenance	25-Aug-2021 20:01:16		3	15		3D Printer Biweekly Maintenance	Unrelease
<input checked="" type="checkbox"/>	Create	Forecasted	DMP100	3D Printer Weekly Maintenance	01-Sep-2021 16:35:34		3	21		3D Printer Weekly Maintenance	Unrelease
<input checked="" type="checkbox"/>	Create	Forecasted	DMP100	3D Printer Weekly Maintenance	09-Sep-2021 16:35:35		3	28		3D Printer Weekly Maintenance	Unrelease

Rows 11 to 22

4. Enter a numerical value in the Horizon field, or select a date in the Cutoff Date field.

The horizon indicates a specific number of days into the future that you want to forecast. The Cutoff Date can be a specific calendar date.

5. Click Simulate to generate a 'what if' scenario. If you select Simulate, then you cannot implement work orders.
6. View the forecasted work order result such as:
 - Action
 - Type
 - Asset Number
 - Activity information
 - Work Order information
 - PM Name

Forecast Work Orders

Schedule Name: NN01
Set Name: MAIN
Asset Number: NN01

Start Date: 24-Aug-2021 00:00:00
Horizon: 5
Cutoff Date: 29-Aug-2021 00:00:00

Show Implement Additional Details

Simulate Run Clear

Forecast Work Order Results

Action	Type	Asset Number	Activity	Suggested Start Date	Expected End Date	Cycle	Interval Count	Work Order	Description	Work Order Status	PM Name	Work Order Start Date	Work Order End Date	Department	Priority	Planned	Tag out	Asset Type
No Action	Scheduled	NN01	A2	13-Mar-2013 08:26:50		1	4	322908	A2	Released	NN01	13-Mar-2013 08:26:50	13-Mar-2013 10:26:50	Operations		<input checked="" type="checkbox"/>	<input type="checkbox"/>	ASSET
Create	Forecasted	NN01	A2	12-Mar-2014 08:26:50		2	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
Create	Forecasted	NN01	A2	11-Mar-2015 08:26:50		3	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
Create	Forecasted	NN01	A2	09-Mar-2016 09:26:50		4	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
Create	Forecasted	NN01	A2	08-Mar-2017 09:26:50		5	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET

- Click Run to implement work orders for forecasted work orders only based on the horizon or cutoff date.

Forecast Work Orders

Schedule Name: NN01
Set Name: MAIN
Asset Number: NN01

Start Date: 23-Aug-2021 00:00:00
Horizon: 5
Cutoff Date: 28-Aug-2021 00:00:00

Show Implement Additional Details

Simulate Run Clear

Forecast Work Order Results

Select Implement

<input type="checkbox"/>	Action	Type	Asset Number	Activity	Suggested Start Date	Expected End Date	Cycle	Interval Count	Work Order	Description	Work Order Status	PM Name	Work Order Start Date	Work Order End Date	Department	Priority	Planned	Tag out	Asset Type
<input type="checkbox"/>	No Action	Scheduled	NN01	A2	13-Mar-2013 08:26:50		1	4	322908	A2	Released	NN01	13-Mar-2013 08:26:50	13-Mar-2013 10:26:50	Operations		<input checked="" type="checkbox"/>	<input type="checkbox"/>	ASSET
<input type="checkbox"/>	Create	Forecasted	NN01	A2	12-Mar-2014 08:26:50		2	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
<input type="checkbox"/>	Create	Forecasted	NN01	A2	11-Mar-2015 08:26:50		3	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
<input type="checkbox"/>	Create	Forecasted	NN01	A2	09-Mar-2016 09:26:50		4	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
<input type="checkbox"/>	Create	Forecasted	NN01	A2	08-Mar-2017 09:26:50		5	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET
<input type="checkbox"/>	Create	Forecasted	NN01	A2	07-Mar-2018 09:26:50		6	4		A2	Released	NN01			Operations		<input type="checkbox"/>	<input type="checkbox"/>	ASSET

- Click the Select check box for each forecasted work order that you would like to implement.

Note: You must select all activities that are associated with a work order.

- Optionally click Show Implement Additional Fields to enter values for the following:

- Project
- Task
- Parent Work Order

- Click Implement, and the system completes the process.

The following confirmation message appears:

Your selected work orders have been implemented.

Related Topics

Entering Meter Readings, *Oracle Enterprise Asset Management User's Guide*

Generating Work Orders, *Oracle Enterprise Asset Management User's Guide*

Using the Maintenance Workbench, *Oracle Enterprise Asset Management User's Guide*)

eAM Planning and Scheduling

Oracle eAM uses work orders to create demand for asset maintenance. Operations within work orders are completed using the work orders' associated material and resource requirements (See: Overview eAM Work Management, page 4-2). Cost savings and work management efficiencies can be achieved by generating predictive work activities, and then using a planning process to balance the work load for resource management.

The process is as follows:

1. A Master Demand Schedule is created.
2. This Master Demand Schedule is attached to Material Requirements Planning (MRP) options.
3. MRP is launched, creating planned work order suggestions.
You can use the Planner Workbench to implement the suggestions into purchase requisitions or manufacturing orders.
4. Using the Purchasing AutoCreate feature, purchase orders are created from the requisitions.
5. After the purchase orders are received into inventory, you can issue material into a maintenance work order.

This section includes the following topics:

- eAM Planning, page 3-194
- eAM Scheduling, page 3-195

eAM Planning

Oracle eAM uses Material Requirements Planning (MRP) to calculate net material requirements from gross material requirements, by evaluating:

- The master schedule
- Bills of material

- Scheduled receipts
- On-hand inventory balances
- Lead times
- Order modifiers

MRP then plans material replenishment by creating a set of recommendations to release or reschedule orders for material, based on net material requirements. MRP assumes infinite capacity is available to meet the material requirements plan.

The following illustration depicts how eAM uses MRP.

eAM Material Requirements Planning



This section includes the following topics:

- Defining a Master Demand Schedule Name, page 3-196
- Defining a Material Requirements Plan Name, page 3-197
- Defining Plan Options, page 3-198

eAM Scheduling

Oracle Enterprise Asset Management (eAM) uses the Oracle Production Scheduling application to schedule work orders and operations. The scheduling process calculates work order and operations scheduled duration and dates, based on the forward or backward scheduling goal (See: Routine Work Orders, *Oracle Enterprise Asset Management User's Guide*), and Work in Process parameters. The concurrent program is triggered after a work order is released (See: eAM Work Order Statuses, page 4-24). The work order is automatically moved to a Pending Scheduling status, until the concurrent program finishes scheduling. At that time, the work order is moved back to a Released status.

The Scheduler Workbench enables a planner to graphically view and reschedule single work orders and operations. It provides you with a visual display of work orders. You can interactively reschedule work orders, operations, and resources.

Important: You have the eAM Scheduler (infinite scheduler) available to you; this scheduler is not constraint-based.

Additional Information: Oracle eAM uses the Infinite Scheduler for automatic scheduling. The Infinite Scheduler considers only the calendar and shift setups for scheduling. It does not consider shift exceptions or take the resource loads and availability into consideration. The Resource Availability form is a view to display information on the availability and considers exceptions so that you can perform manual scheduling accordingly.

Defining a Master Demand Schedule Name

Before you define a master schedule manually or load a schedule from another source, you must first define a master demand schedule name. You can also set several options for each name.

To define a Master Demand Schedule name:

1. Navigate to the MDS Names window.

Master Demand Schedules

Master Demand Schedules (EM1)

Name	Description	Demand Class	Relieve	Inactive On	
MaintMDS	EM1 Maintenance only MDS		<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		
			<input type="checkbox"/>		

Load / Copy / Merge Items

2. Enter a Name and Description for the schedule.
3. Save your work.

Related Topics

Defining a Schedule Name, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Defining a Material Requirements Plan Name

The Master Demand Schedule names trigger the material requirements planning process. A master demand schedule name must be created to perform material requirement planning for maintenance work orders.

To define a MRP name:

1. Navigate to the MRP Names window.

MRP Names

Name	Description	Feedback	Production	Inactive On	[]
MaintMRP	Maintenance Only MRP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		...
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		

Launch Options

2. Enter an alphanumeric Name to identify a unique material requirements.
3. Optionally enter a Description of the MRP name.
4. Optionally select the Feedback check box to monitor the quantity of the planned order that has been implemented as maintenance work orders, purchase orders, or purchase requisitions.

This provides the planner visibility of the plan's status at any point in time.
5. Optionally select the Production check box to enable a plan to automatically release planned orders.
6. Optionally enter an Inactive On date on which to disable the plan.

As of this date, you can no longer update the plan or use the plan name in the planning process. You can still view information and run reports for disabled

names.

7. Save your work.

Related Topics

Overview of Planning Logic, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

See: Auto-release Planned Orders, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Defining MRP Names, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Defining Plan Options

You can enter plan options for any plan. If you are launching the planning process for this plan name for the first time, the plan options you defined in the setup parameters are displayed. Otherwise, the plan options you chose, for the last launch of the planning process, are displayed.

Supply Chain Planning users can also launch a DRP and supply chain MRP and master production schedule (MPS) plan (See also: Reviewing or Adding Plan Options, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

To enter plan options:

1. Navigate to the Plan Options window.

Plan Options

2. Select a material requirements Plan.
3. Select a master demand Schedule.
4. Select MRP from the Type list of values.
5. Select an Overwrite option:

All: For a master production schedule (MPS) plan, overwrite all entries and regenerate new MPS entries based on the source master demand schedule.

For an MRP, overwrite all MRP firm planned orders for MRP items. This option is displayed when you generate a plan for the first time.

Outside planning time fence: For a master production schedule (MPS) plan, overwrite all MPS entries outside the planning time fence. For an MRP, overwrite all planned orders and firm planned orders outside the planning time fence.

None: Do not overwrite any firm planned order for MPS or MRP plans.

6. Select the Append Planned Orders check box to append new planned orders.
For information regarding situations that cause new planned orders to append, see: *Reviewing or Adding Plan Options, Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide.*

7. Select the Net WIP check box to indicate that the planning process considers standard discrete jobs, nonstandard discrete jobs, or repetitive schedules when planning items during the last plan execution.
8. Select Net Reservations to indicate that the planning process considers stock designated for a specific work order when planning the items during the last execution of the plan.
9. Select Net Purchases to indicate that the planning process considers approved purchase requisitions when planning the items during the last execution of the plan.
10. Select Plan Capacity to indicate whether the planning process calculates safety stock for each item during the last plan execution.
 - Specify the Bill of Resource (for MPS plans) and optionally a Simulation Set.
See: Capacity Modifications and Simulation, *Oracle Capacity User's Guide* and Overview of Bills of Resources, *Oracle Capacity User's Guide*.

11. Select Pegging to calculate graphical pegging information.

The planning process then traces supply information for an item to its corresponding end demand details, which you then can view in a graphical display. See: Overview of Graphical Pegging, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

- If you are working in a project environment, set a Reservation Level and, Optionally a Hard Pegging Level. See: Reviewing or Adding Project MRP Plan Options, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.
12. Select a Material Scheduling Method:
 - *Operation Start Date*: Schedule material to arrive in inventory for availability on the start date of a specific operation.
 - *Order Start Date*: Schedule material to arrive in Inventory for availability on maintenance work order start date.
 13. Specify which planned items you want included.
 - *All planned items*: Include all planned items in the planning process.

You would choose this option to be certain that all items are planned, including those you add to a work order or schedule, that are not components on any bill of material. Use this option to avoid missing items you want to plan. For items you do not want to plan, define them with an MRP planning method of Not Planned when defining an item in Inventory.

- *Demand schedule items only*
- *Supply schedule items only*
- *Demand and supply schedule items*

14. Save your work.

Related Topics

Launching the Planning Process, page 6-3

Viewing Suggested Demand, *Oracle Enterprise Asset Management User's Guide*

Reviewing or Adding Supply Chain Plan Options, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Quality Integration Setup

A maintenance work order goes through various steps in its lifecycle (See: eAM Work Order Statuses, page 4-24). One of the steps in the lifecycle is Completion. When completing a maintenance work order, if the asset number has associated, mandatory quality collection plans, you need to enter quality results for the work order. A list of quality collection plans associated with the completion transaction appears during the completion process.

While creating a collection plan, you have the option of adding collection triggers to the plan. Triggers are restrictions that you define for a collection plan. For example, work orders for assets that belong to the TRUCK Asset Group require the entry of quality results for the collection plan. Data collection is initiated if all collection trigger conditions are satisfied.

You can use EAM quality plans for assets, work orders, and work order operations.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and enforce signature flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

Quality setup tasks for EAM include the following:

- Creating Collection Elements, page 3-202
- Creating eAM Quality Collection Plans, page 3-206
- Creating Parent-Child Quality Collection Plans, page 3-210

- Creating eAM Quality Collection Plans for a Supplier, page 3-211

Creating Collection Elements

Collection elements are the basic building blocks of collection plans, the data structures that you use to collect Quality results. Before you can collect quality data, you must first create a collection plan. Begin by creating collection elements, which define the characteristics of the product or process that you want to monitor, record, and analyze. See: Overview of Collection Elements, *Oracle Quality User's Guide*.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and enforce signature flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

When you define collection elements, you are creating data fields that you can use in collection plans to collect quality results. After you create a collection element, it is available as a selection on a list of values that you can choose from when you set up collection plans. You can create an unlimited number of user-defined collection elements, or you can use any of Quality's predefined collection elements (See: Predefined Collection Elements, *Oracle Quality User's Guide*) in your collection plans; for example, Asset Num, Asset Serial Number, Asset Group, Activity, Work Order, and Maintenance WorkOrder. The Maintenance WorkOrder collection element must be used when you define a parent-child collection plan relationship to track the relationship between the source work order and the quality action triggered work order or work request. See Creating Parent-Child Collection Plans, page 3-210 for more information.

You can also create collection elements by copying them from one collection plan to another.

To define collection elements:

1. Navigate to the Collection Elements window.

Collection Elements

Collection Element: Asset Serial Number

Element Type: Reference Information

☒ Enabled

Label

Prompt: Asset Serial Number

Hint:

Data

Data Type: Character

Reporting Length: 15

Decimal Precision:

UOM:

Default Value:

SQL Validation Statement: SELECT serial_number, descriptive_text from (SELECT distinct msn.
serial_number, msn.descriptive_text FROM mtl_serial_numbers msn,

Sequence Spec Limits Values Actions

Note: The steps listed below describe how to define collection elements one-at-a-time in the Collection Elements window. You can also define several collection elements simultaneously using the Collection Elements Summary window. See: Combination Blocks, *Oracle Applications User's Guide*.

Note: The following Collection Elements are included with Oracle Enterprise Asset Management; you do not need to define them: Asset Group, Asset Num, Asset Serial Number (the asset's Inventory Serial Number), Activity, Maintenance Work Order, Maintenance Operation Sequence.

2. Select the Collection Element name.

The collection element can contain alphanumeric characters, spaces, underscores, and single quotation marks. You cannot use words that are reserved for column names, such as NAME, OCCURRENCE, and ORGANIZATION_ID. See: Reserved Words, *Oracle Quality User's Guide*.

3. Select the Enabled check box to enable the collection element. You can add enabled collection elements to collection plans.
4. Select its collection Element Type. See: Collection Element Types, *Oracle Quality*

5. Enter text for the data entry Prompt. The prompt is the label for the collection element field displayed in the Results region of the Enter Quality Results window. Prompts also become the column headings on reports and online inquiries. The default prompt is the name of the collection element, but you can overwrite it.

6. Optionally enter a Hint.

Hints are additional text that appears in the message line, as you enter quality results, to guide you during data entry. See: *Message Line, Oracle Applications User's Guide.*

7. Select the collection element's Data Type.

You can select any data type, however, you cannot change it after you define the collection element. The available data types are Character, Number, Date, Comment, and Sequence.

Important: Oracle eAM Self-Service Applications do not support the use of sequence data type collection elements.

8. Optionally select the Mandatory check box to indicate that a value must always be entered for this collection element, when entering quality results. A mandatory collection element can be redefined as non-mandatory when added to a collection plan.

9. Enter the Reporting Length.

The reporting length specifies how much space is allocated for this collection element's quality results values on reports, inquiries, and in the Enter Quality Results window.

Note: The reporting length does not determine the amount of space used to store quality results values in the quality data repository. Results values can be up to 150 characters in length.

10. If the Data Type is Number, enter the Decimal Precision.

If you define specification limits for this collection element, entering the decimal precision (refers to the number of places after the decimal point) here controls the decimal precision of the specification limit values that you can define.

11. Optionally select a UOM. See: *Overview of Units of Measure, Oracle Inventory User's Guide.* Units of measure can be entered for any collection element, regardless of data type.

12. Optionally enter a Default Value for the collection element.

When you set a default value for the collection element (generally, the most commonly used value for the collection element), it is automatically entered when you enter quality results. You can overwrite this value. See: Default Value Assignment Rules, *Oracle Quality User's Guide*.

13. Optionally enter the SQL Validation Statement.

This statement is used for validation when you enter quality data. You can base a collection element's data validation on any table in the Oracle database. To do this, you can define a SQL validation statement that Quality uses for validation when you collect quality data. This SQL statement must be a SELECT statement in which you select two columns. For example, if you have entered machine numbers in the database table, you can cross-validate machine numbers entered as you collect quality results against the numbers. See: *SQL*Plus User's Guide and Reference*.

For example, to validate machine numbers from a table called 'machine_numbers' stored in the database, enter the following SQL validation statement:

```
SELECT machine_number, machine_description
FROM machine_numbers
WHERE NVL(disable_date, SYSDATE+1) > SYSDATE
AND organization_id=:parameter.org_id
ORDER BY custom_machine_number
```

Note: To constrain the SQL Statement to the current organization, you can use the variable, ':parameter.org_id' for the current organization id. To constrain the SQL Statement to the current user's id, you can use the variable, ':parameter.user_id' for the current user's id.

If you define both a SQL validation statement and a list of collection element values, the list of values is used for validation; the SQL validation statement is ignored.

Related Topics

Overview of Collection Elements, *Oracle Quality User's Guide*

Collection Element Types, *Oracle Quality User's Guide*

Predefined Collection Elements, *Oracle Quality User's Guide*

Collection Element Values, *Oracle Quality User's Guide*

Defining Collection Element Actions, *Oracle Quality User's Guide*

Defining Collection Element Alert Actions, *Oracle Quality User's Guide*

Viewing Collection Elements, *Oracle Quality User's Guide*

Creating eAM Quality Collection Plans

You create collection plans to identify the data that you want to collect, and what actions you want to take based on the quality results that you collect. You can use collection plans to model your test or inspection plans, and you can create an unlimited number of plans to support your enterprise-wide quality data collection and analysis needs. Collection plans are invoked manually for direct results entry, or automatically as you complete a work order.

To collect quality data, you must set up a data collection structure called a collection plan. Collection plans are composed of collection elements, their values and specifications, and any actions that you want to initiate in response to quality results. There are some considerations that you must make before you set up collection plans. You first must create collection element types, then the individual collection elements that comprise the plan.

You can attach illustrative or explanatory files to collection plans, in the form of text, images, word processing documents, spreadsheets, or video. Attachments are used to document instructions and corrective action procedures. They are viewed by operations personnel during quality data collection. See: *Attachments for Collection Plans, Specifications, and Result Lines, Oracle Quality User's Guide* and *Viewing Attachments Associated with Quality Results, Oracle Quality User's Guide*.

To review a collection plan:

1. Navigate to the Collection Plans window.

Collection Plans

Collection Plan: TIRE WEAR INSPECTION EM1

Description: Tire tread Depth Wear Inspection Plan - EAM

Effective: 11-AUG-2004

Plan Type: Maintenance Inspection

Buttons: Views..., Copy Elements..., Transactions, Specifications...

Quality Collection Elements

Name	Seq	Prompt	Mandatory	Enabled	Read-Only	Displayed
Asset Group	10	Asset Group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Asset Serial Number	20	Asset Serial Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Maintenance WorkOrder	30	Work Order	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DriverFront Tread Depth mm	40	DSF Tread Depth mm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DriverRear Tread Depth mm	50	DSR Tread Depth mm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Buttons: Values, Actions

Note: To assist you as you create collection plans, you can select the Summary/Detail option from the View Menu, and run a query to view existing collection plans in summary format. See: Combination Blocks, *Oracle Applications User's Guide*.

2. Select a valid Collection Plan.

To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.

3. Choose Transactions.

You can create collection plans that are specifically used to collect quality data during transactions performed in other applications (See: Collection Plans for Transactions, *Oracle Quality User's Guide*).

Collection Transactions

Transaction Description	Workbench Layout	Mandatory	Background	Enabled
EAM Work Order Completions (Oracle Enterprise Asset Manag		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
EAM Asset Query (Oracle Enterprise Asset Management)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EAM Asset Check In Transaction (Oracle Enterprise Asset Mar		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EAM Asset Check Out Transaction (Oracle Enterprise Asset M		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Trigger Name	Condition	From	To
Asset Group	equals (=)	Vehicles	
Asset Serial Number	equals (=)	DTF35000	
Asset Activity	equals (=)	Wheel Replacement	

4. Select EAM Work Order Completion or Asset Query from the Transaction Description list of values.
 - *EAM Asset Query*: Enables quality results collection for an asset, independent from any transaction on the asset.
 - *EAM Operation Completions*: Enables quality results collection for a work order's operation pertaining to operation completion or during operation completion (See: Operation Completion, page 4-59).
 - *EAM Work Order Completions*: Enables quality results collection for a work order pertaining to work order completion or during work order completion (See: Work Order Completion, page 4-60).
 - *EAM Asset Check In Transaction*: Enables you to record quality information, describing the condition of the asset, during a Check In procedure (See: Asset Tracking, page 21-27).
 - *EAM Asset Check Out Transaction*: Enables you to record quality information, describing the condition of the asset, during a Check Out procedure (See: Asset Tracking, page 21-27).
5. Select a Workbench Layout. You can choose Single Row or Multiple Row. The Multiple Row option enables you to set up data entry for multiple rows of results. The default value is Single Row.
6. Optionally indicate whether this collection plan requires the entry of quality results at work order completion. If you select the Mandatory check box, you must save at

least one quality data record before saving the work order completion transaction.

Note: eAM supports Quality collection during operation completion transactions, as well as Standalone Asset Query. Valid Transaction Description values are EAM Operation Completions and EAM Asset Query, respectively.

7. Optionally select the Background check box.

If you select this check box, you can collect quality results for context reference elements (See: Reference Information Collection Element Type, *Oracle Quality User's Guide*).

Note: The following Collection Elements are included with Oracle Enterprise Asset Management; you do not need to define them: Asset Group, Asset Number, Activity, Maintenance Work Order, Maintenance Operation Sequence.

Without invoking the Enter Quality Results window, background data collection is initiated when you save the work order completion transaction.

The system then finds, selects, and initiates the appropriate collection plan or plans.

If collection triggers are defined for background data collection, data collection is initiated if all collection trigger conditions are satisfied (you define triggers for transactional data collection in the Collection Transactions window).

Several collection plans can collect data in the background during the same transaction.

When this is the case, the results for context elements on all of these collection plans are automatically saved when the parent transaction is saved.

8. Select the Enabled check box.

9. Optionally select a Trigger Name. Values are Activity, Asset Group, Asset Number, Asset Serial Number, Work Order, and Maintenance WorkOrder. Triggers are restrictions that you define for this collection plan. In the above example, work orders for the JP1 asset require the entry of quality results for the collection plan.

Note: If a trigger is not defined, then all work orders will require quality collection results; the collection plan is applicable to all assets.

10. If you selected a Trigger Name, select a Condition.

11. Select a From value.

For example, if you selected Asset Group as the Trigger Name, Asset Groups are available. Optionally you can enter a To value to create a range condition. For example, if the trigger is work order, you might enter a range of work order numbers.

12. Save your work.

Creating EAM Parent-Child Collection Plans:

You can create child collection plans in EAM to capture quality information.

Important: Creating a parent-child relationship does not automatically establish a relationship between collection plans for existing data.

Prerequisites

1. Set up a collection plan relationship indicating whether the child data entry will be immediate, automatic, historical, or delayed. See *Defining Parent-Child Collection Plans*, *Oracle Quality User's Guide* for more information.
2. Add the Maintenance WorkOrder collection element to the EAM child quality collection plan.

This step ensures that the source work order name is passed down from the parent collection plan to the child collection plan so that you can use EAM parent-child collection plans (Enterprise Asset Management, Quality, Setup, Define Parent Child Plan Relationship).

To set up and use EAM parent-child collection plans, see *Parent-Child Collection Plans* in the *Oracle Quality User's Guide* for information regarding the following:

- Define Parent-Child Collection Plans
- Update Parent-Child Collection Plans
- Execute Parent-Child Collection Plans
- Inquire on Parent-Child Collection Plans
- Inquire on Results

Related Topics

Adding Collection Plan Attachments, page 14-3

Triggering a Work Request, page 14-4

Collection Plans for Transactions, *Oracle Quality User's Guide*

Overview of Collection Plans, *Oracle Quality User's Guide*

Overview of Quality Self-Service, *Oracle Quality User's Guide*

Collection Plan Types, *Oracle Quality User's Guide*

Collection Plan and Import Results Database Views, *Oracle Quality User's Guide*

Collection Elements in Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Values, *Oracle Quality User's Guide*

Associating Specification Types with Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Actions, *Oracle Quality User's Guide*

Updating and Deleting Collection Plans, *Oracle Quality User's Guide*

Viewing Collection Plans, *Oracle Quality User's Guide*

Creating eAM Quality Collection Plans for a Supplier

eAM enables you to create Quality collection plans that are optionally mandatory for a supplier to enter crucial Quality data, via iSupplier Portal, before the supplier can complete an Outside Service Processing operation.

To create and eAM quality collection plan for a supplier:

1. Navigate to the Collection Plans window.

Collection Plans

The screenshot shows the 'Collection Plans (EM1)' window. The 'Collection Plan' is 'FORK LIFT FAILURE ANALYSIS'. The 'Description' is 'Fork Lift Failure Analysis'. The 'Effective' dates are '13-NOV-2002' to '01-DEC-2006'. The 'Plan Type' is 'Failure', and the 'Failure Analysis' is 'Failure Analysis'. There is a checkbox for 'Display Multiple Rows in Workbench' which is unchecked. The 'Record Option' is a dropdown menu. There are buttons for 'Copy Elements...', 'Transactions', 'Specifications...', 'Views...', 'Values', and 'Actions'.

Quality Collection Elements

Name	Seq	Prompt	Mandatory	Enabled	Read-Only	Displayed
Fork Lift Failure	10	Failure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fork Lift Failure Cause	20	Cause	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fork Lift Failure Remedy	30	Remedy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fork Lift Failure Comment	40	Comment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Asset Serial Number	50	Asset Serial Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: To assist you as you create collection plans, you can select the Summary/Detail option from the View Menu, and run a query to view existing collection plans in summary format. See: Combination Blocks, *Oracle Applications User's Guide*.

2. Select a valid Collection Plan.

To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.

3. Choose Transactions.

You can create collection plans that are specifically used to collect quality data during transactions performed in other applications (See: Collection Plans for Transactions, *Oracle Quality User's Guide*).

Collection Transactions

Transaction Description	Workbench Layout	Mandatory	Background	Enabled
EAM Asset Check In Transaction (Oracle Enterprise Asset Mar		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EAM Asset Check Out Transaction (Oracle Enterprise Asset M		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Trigger Name	Condition	From	To

4. Select EAM Operation Completions from the Transaction Description list of values.
5. Optionally select the Mandatory check box to indicate that this collection plan requires the entry of quality results at the operation completion.

If this check box is selected, the supplier must enter quality data before completing the Outside Services operation.
6. Save your work.

Related Topics

Creating eAM Quality Collection Plans, page 3-206

Adding Collection Plan Attachments, page 14-3

Triggering a Work Request, page 14-4

Overview of Collection Plans, *Oracle Quality User's Guide*

Overview of Quality Self-Service, *Oracle Quality User's Guide*

Collection Plan Types, *Oracle Quality User's Guide*

Collection Plan and Import Results Database Views, *Oracle Quality User's Guide*

Collection Elements in Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Values, *Oracle Quality User's Guide*

Associating Specification Types with Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Actions, *Oracle Quality User's Guide*

Outside Processing Integration Setup

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, a contractor service is a painting service. It is also important to associate the purchasing transactions, such as the requisition and purchase order, to the work order. In order for this to execute, you must complete the appropriate steps in Purchasing and Enterprise Asset Management.

Outside Service Processing provides the functionality to create items that are contractor services, such as landscaping, include these items on a work order, and execute the related purchasing transactions as the work order is released. By creating a contract service as an Outside Service Processing item, the purchasing requisition is created when the work order is Released. The additional purchasing transaction, including the creation of the purchase order, the approval, and invoicing process, are then managed by Purchasing. This optional process ensures that the actual charges are applied to the work order. The supplier accesses the purchase order and maintenance work order via iSupplier Portal. Within iSupplier Portal, the supplier can view all open and closed outside service operations and their associated maintenance work orders. The supplier can enter mandatory collection plan results, before completing the outside operation (See: Oracle iSupplier Portal, *Oracle iSupplier Portal User's Guide*).

The other option is to enable Standard Rate. This applies predetermined standard rates, for contractor services, to the work order.

Outside Processing Setup tasks for Enterprise Asset Management include the following:

- Setting Up Outside Service Processing, page 3-214
- Setting Up Direct Items, page 3-223

Setting Up Outside Service Processing

Purchasing recognizes items, while eAM recognizes resources. As a result, you must link the contractor service item to a resource, for the purchase order to link to the work order. This is associated via the Resources window. Additionally, the resource must associate with a department. The department must specify the location where the services are to deliver. This must be a valid location for the organization.

For each contractor service resource, you can determine whether the rate charged to the work order is a standard rate or the actual amount, based on the purchase order price. This is set up within the Resources window, and may vary for each resource.

To set up purchasing information:

1. Navigate to the Financials Options page.
2. Select the Supplier-Purchasing tab.

The screenshot shows a web application window titled "Financials Options (Enterprise Asset Management, Vision Operations)". The "Operating Unit" is set to "Vision Operations". The "Supplier - Purchasing" tab is selected, showing a form with the following fields:

- ☐ RFQ Only Site
- Ship-To Location: M1- Seattle Mfg
- Bill-To Location: V1- New York City
- Inventory Organization: V1 - Vision Operations (highlighted in yellow)
- Ship Via:
- FOB: Vendor's responsibility ceases upon transfer to c:
- Freight Terms: Due

3. The options you define in this region, except for Inventory organization, are used as default values for the Purchasing region of the Suppliers window (See: Suppliers, *Oracle Payables User's Guide*).

The supplier values default to new supplier sites for the supplier, which default to new purchasing documents for the supplier site.

4. Select Ship-To and Bill-To Locations.

These are the names of the ship-to/bill-to location for the system default values. If the name you want is not available, use the Location window to select a new location (See: Setting Up Locations, *Using Oracle HRMS - The Fundamentals*).

5. Select an Inventory Organization.

You can associate each of your purchasing operating units with one inventory item master organization. Your eAM Organization (See: Enabling Organizations for Enterprise Asset Management, page 3-8) should point to this item master. When you associate your purchasing operating unit with an inventory organization, items you define in this organization become available in Purchasing. You can choose an inventory organization that uses the same set of books as your Purchasing operating unit. Do not change the inventory organization after you have already assigned on to Purchasing.

6. Optionally select a Ship Via code.

This is the freight carrier you use with suppliers. If the type of freight carrier you want is not available, use the Freight Carriers window to define a new shipping method. The value you enter here is the value in the Description field of the Freight Carriers window in Purchasing.

7. Select a FOB.

If the type of FOB you want is not available, use the Oracle Purchasing Lookups window to define a new FOB.

8. Select a Freight Terms code.

The freight terms for a supplier identify whether you or your supplier pays for freight charges on goods you receive. You can define new freight terms in the Oracle Purchasing Lookups window.

9. Save your work.

To set up outside services as items:

Create an item for each outside service such as landscaping services.

1. Navigate to the Master Item window.

Master Item

Master Item (V1)

Organization: V1 Vision Operations

Item: TM Rebuild

Description: OSP Truck Motor Rebuild Services [-]

Display Attributes: ☐ Master ☐ Org ☒ All

Main | Inventory | Bills of Material | Asset Management | Costing | Purchasing | Receiving | Physical Attributes

Unit of Measure

Primary: Each

Tracking: Primary

Pricing: Primary

Secondary:

Defaulting:

Deviation Factor +: 0 %

Deviation Factor -: 0 %

Conversions

☐ Standard

☐ Item specific

☒ Both

User Item Type: Outside Process

Item Status: Active

Long Description

2. Enter the item Name for the contractor service. For example, Landscape Service.
3. Select Copy From within the Tools menu.
4. Select @Outside Processing Item from the Template list of values.
5. Choose Apply.
6. Choose Done.
7. Within the Purchasing tab, ensure that the Outside Processing Item check box is selected.
8. Select the Resource Unit Type.
Resource costs are based on the resource standard rate.
9. Select a Default Buyer.
10. Enter a List Price for this contractor service.
11. Select Each for the Unit of Issue.
This is the unit of measure you use to issue the item from inventory.

12. Within the Receiving tab, select Direct from the Receipt Routing list of values.
13. Save your work.
14. Select the Organization Assignment tab on the left side of the window, then assign this item to the eAM organization.
15. Save your work.

To link outside service items to resources:

You must define outside resources and link them to outside items in order to automatically generate purchase requisitions for outside services. When you assign outside resources to a department, you also specify a usage rate or amount that determines the quantity you are requisitioning and/or charging to work orders.

1. Navigate to the Resources page.

Resources

The screenshot shows the 'Resources (VP1)' form in Oracle. The form is divided into several sections. At the top, there are fields for 'Resource' (ANODIZE), 'Inactive On' (14-AUG-1997), 'Description' (Anodize Outside Process), 'Type' (Miscellaneous), 'Charge Type' (PO Move), 'Basis' (Item), 'UOM' (USD), 'Expenditure Type', 'Supply Subinventory', and 'Supply Locator'. Below these are two main sections: 'Outside Processing' and 'Costed'. The 'Outside Processing' section has a checked checkbox, an 'Item' field (OP98997), and a text field 'Anodizing Outside Process'. The 'Costed' section has a checked checkbox, an 'Activity' field, a checked 'Standard Rate' checkbox, an 'Absorption Account' field (01-520-5810-0000-000), and a 'Variance Account' field (01-520-5380-0000-000). There are buttons for 'Overheads' and 'Rates' between these sections. To the right of the 'Costed' section is a 'Skills' section with fields for 'Competence', 'Skill Level', and 'Qualification'. At the bottom, there is a 'Batchable' section with a unchecked checkbox, 'Minimum Batch Capacity', 'Maximum Batch Capacity', 'Batch Capacity UOM', 'Batching Window', and 'UOM' fields. At the very bottom, there are buttons for 'Machine Down Codes', 'Employees', 'Equipment', and 'Setups'.

2. Select a unit of measure (UOM).

This value is the default unit of measure for all transactions, for the current resource.

3. Verify that the Enabled check box is enabled for outside processing.
4. Enter the outside services Item that was entered in Inventory and associate it with the eAM resource.
5. Select the Costed check box to include this outside resource in your work order cost.

When you define a resource with a charge type of PO Receipt, Cost Management automatically defaults Outside Processing as the cost element.

6. Enter an Absorption Account.

You must define an absorption account for each outside resource. The absorption account defaults from the organization's receiving account, which is debited when an outside processing item is received and is subsequently credited when the item is delivered to eAM. The debit goes to the outside processing account associated with the accounting class of the work order when the item is delivered to eAM.

7. Optionally enter a Variance Account.

You must define a purchase price variance account for each outside resource you define. This account defaults from the organization's purchase price variance account. If you select the Standard Rate check box while performing the next step, the Variance Account is mandatory.

8. Optionally select the Standard Rate check box to charge the standard, non-purchase order amount to the work order.

Clear the Standard Rate check box to charge the work order with the actual purchase order amount.

1. If you selected the Standard Rate check box, choose Rates to enter your standard rates.

Resource Costs

Cost Type	Description	Resource Unit Cost
Frozen	Frozen Standard Cost Type	1.50000
Pending	Pending Standard Cost Type	1.50000

2. Enter a Cost Type of Value. This is dependent on the costing method defined for your eAM organization.
3. Enter a Resource Unit Cost.
4. Save your work and close the window.

To link the outside service resource to a department:

1. Navigate to the Departments window.

Departments

The screenshot shows a software window titled "Departments (EM1)". It contains several input fields and buttons. The fields are labeled as follows:

- Department: F-Maint
- Description: Fleet Services Maintenance
- Cost Category: Maintenance
- Class: Maint Dept
- Location: EM1 - Seattle
- Project Expenditure Org: (empty)
- Inactive On: (empty)

At the bottom right, there are two buttons: "Rates" and "Resurces".

2. Select the Department to associate with the outside service resource.

3. Select a Cost Category for this department.

If this is left blank, then the costs related to this department are charged, based on the eAM parameter settings (See: Defining eAM Parameters, page 3-13).

4. Select a valid Location. This is mandatory.

5. Choose Resources.

Department Resources

Owned	
Resource	Description
ATTK	Automotive Tool
Mechanic1	Fleet Services Me
TMREBUILD	Truck Motor Rebu

Available 24 Hours	
Share	UOM
<input type="checkbox"/>	HR
<input type="checkbox"/>	HR
<input type="checkbox"/>	Ea
<input type="checkbox"/>	
<input type="checkbox"/>	

Units	
Units	Group
3	
3	
1	

Check CTP	
Check CTP	Group
<input checked="" type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Schedule by Instance	
Schedule by Instance	Group
<input checked="" type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Borrowed Resource	
Description	Owning Department

UOM	
UOM	Units

Check CTP	
Check CTP	Group
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

6. Select the outside service Resource.
7. Optionally indicate whether this resource is Available 24 Hours a day.
You cannot assign shifts to a resource that is available 24 hours a day.
8. Optionally indicate whether this department can share this resource and capacity with other departments.
9. Enter the number of capacity Units (resource units) available for this department.
10. Save your work.

For information on all remaining fields, See: Defining a Resource, *Oracle Bills of Material User's Guide*.

To define WIP parameters:

1. Navigate to the Work in Process Parameters page.

Work in Process Parameters

The screenshot shows the 'Work in Process Parameters (EM1)' window with the 'Outside Processing' tab selected. The window contains several configuration options:

- Shop Floor Status for PO Move Resources:** A text input field with a dropdown arrow.
- Requisition Creation Time:** A dropdown menu currently set to 'At Job/Schedule Release'.
- Job Roles for Notifications:** A group box containing two text input fields: 'Production Scheduler' and 'Shipping Manager'.
- Job Change Controls for Purchasing Documents:** A group box containing:
 - Propagate Job Change to Purchasing:** A dropdown menu currently set to 'Automatic'.
 - Need-By Date Tolerance:** A group box containing two text input fields: 'Days Early' (set to '1000') and 'Days Late' (set to '1000').

A small icon is visible in the bottom right corner of the main content area.

2. Select the Outside Processing tab.
3. Select a value for Requisition Creation Time.
 - *At Job/Schedule Release* - This enables automatic creation of a purchase order requisition, for contractor services, when the work order is Released.
 - *Manual* - Choose Manual to manually create requisitions.
With this selection, requisitions are not automatically created.
 - *At Operation* - Oracle recommends that you do not select At Operation.
Within eAM, At Operation is equivalent to selecting Manual.
4. Save your work.

Related Topics

Supplier - Purchasing Financials Options, *Oracle Payables User's Guide*

Setting Up Direct Items

You can add direct items to a maintenance BOM (See: Setting Up Maintenance Bills of Material, page 3-134). When the maintenance BOM is associated with a work order, you

can add more direct items to its material requirements list before it is released (See: Defining Inventory Material Requirements, page 4-38). The system automatically creates requisitions and purchase orders (if the Auto Request Material check box is selected within the maintenance BOM), for the associated direct items, when the work order is released for execution. The supplier can view the maintenance work order detail information within Work Order Details page through the iSupplier Portal.

To set up purchasing information:

1. Navigate to the Financials Options window.
2. Select the Supplier-Purchasing tab.

Financials Options

Financials Options (Enterprise Asset Management, Vision Operations)

Operating Unit: Vision Operations

Accounting | **Supplier - Purchasing** | Encumbrance | Tax | Human Resources

☐ RFQ Only Site

Ship-To Location: M1- Seattle Mfg

Bill-To Location: V1- New York City

Inventory Organization: V1 - Vision Operations

Ship Via:

FOB: Vendor's responsibility ceases upon transfer to c:

Freight Terms: Due

The options you define in this region, except for Inventory organization, are used as default values for the Purchasing region of the Suppliers window (See: Suppliers, *Oracle Payables User's Guide*).

The supplier values default to new supplier sites for the supplier, which default to new purchasing documents for the supplier site.

3. Select Ship-To and Bill-To Locations.

These are the names of the ship-to and bill-to location for the system default values. If the name you want is not available, use the Location window to select a new location (See: Setting Up Locations, *Using Oracle HRMS - The Fundamentals*).

4. Select an Inventory Organization.

You can associate each of your purchasing operating units with one inventory item master organization. Your eAM Organization (See: Enabling Organizations for Enterprise Asset Management, page 3-8) should point to this item master. When you associate your purchasing operating unit with an inventory organization, items you define in this organization become available in Purchasing. You can choose an inventory organization that uses the same set of books as your Purchasing operating unit. Do not change the inventory organization after you have already assigned it within Purchasing.

5. Optionally select a Ship Via code.

This is the freight carrier you use with suppliers. If the type of freight carrier you want is not available, use the Freight Carriers window to define a new shipping method. This value is used as the default value for the Description field in the Freight Carriers window in Purchasing.

6. Select a FOB.

If the type of FOB you want is not available, use the Oracle Purchasing Lookups window to define a new FOB.

7. Select a Freight Terms code.

The freight terms for a supplier identify whether you or your supplier pays for freight charges on goods you receive. You can define new freight terms in the Oracle Purchasing Lookups window.

8. Save your work.

Related Topics

Non-Stock Direct Item Setup, page 3-153

Setting Up Asset Bills of Material, page 3-103

Setting Up Maintenance Bills of Material, page 3-134

Defining Rebuildable Bills of Material, page 3-152

Supplier - Purchasing Financials Options, *Oracle Payables User's Guide*

iSupplier Portal User's Guide

Cost Management Integration Setup

Costs are generated as maintenance work is executed and completed. These costs roll up through the parent and child hierarchies defined within Enterprise Asset Management, and can roll up to any level within an asset hierarchy. Labor, Material, and Equipment charges can further classify into several maintenance cost categories.

All work is captured and retained by Enterprise Asset Management. You can reference

work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed.

This section includes the following topics:

- eAM Costing Methods and Mappings, page 3-226
- Setting Up Cost Categories, page 3-228
- Setting Up Purchase Order Category Associations for Direct Items, page 3-230
- Setting Up eAM Cost Management, page 3-231
- Setting Up Zero Cost Rebuild Item Issue, page 3-233

eAM Costing Methods and Mappings

eAM supports four perpetual costing methods: standard, average, FIFO, and LIFO. As a foundation, eAM uses the following five basic cost elements provided by Cost Management (See: Cost Elements, *Oracle Cost Management User's Guide*):

- Material
- Material Overhead
- Resource
- Resource Overhead
- Outside Processing

Asset management requires different cost classifications. eAM provides these cost classifications, while maintaining the integrity of the basic costing rules. The five cost elements above are translated into cost elements that are familiar to maintenance managers.

eAM classifies work done on maintenance work orders into cost categories. By default, eAM has defined three cost categories: Contract, Operations, and Maintenance.

You can define additional cost categories, if needed. Each cost category is further classified into three cost elements: Equipment, Labor, and Material.

- *Material* - Costs from material transactions.
- *Labor* - Costs from labor resource transactions.
- *Equipment* - Costs from equipment resource transactions.

Material charges are classified as Material cost elements. Resource charge of type

person is classified as a Labor cost element. Resource charge of type machine is classified as Equipment cost element. All other resource types are classified by the default cost element in the eAM Parameters (See: Defining eAM Parameters, page 3-13).

For each department, a maintenance cost classification is identified to reflect the above breakdown. The cost category for the Material cost element is the cost category of the department assigned to the routing of the operation. For the Labor cost element, it is the cost category of the resource's owning department. For the Equipment cost element, it is the cost category of the asset's owning department.

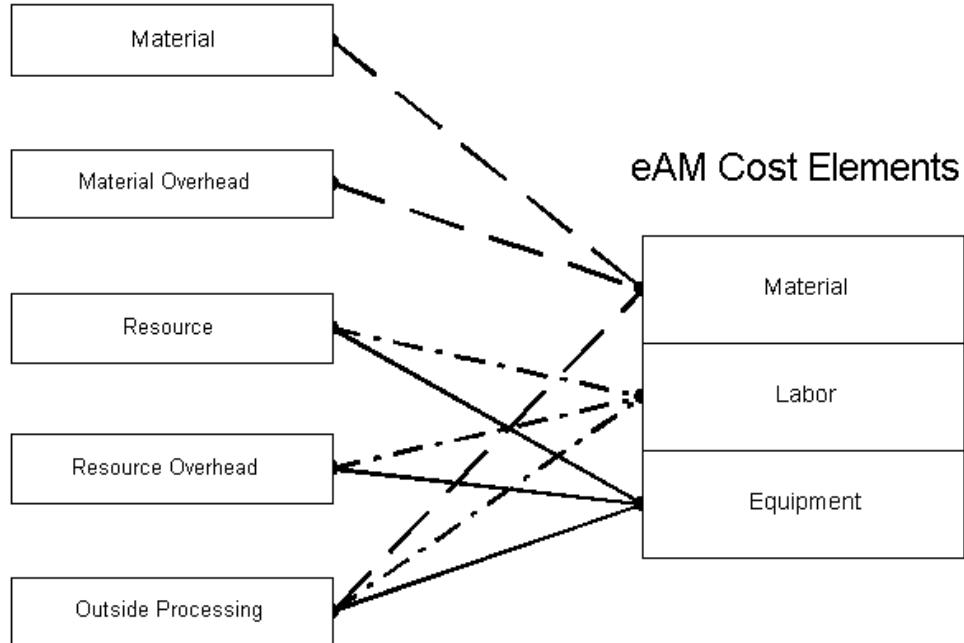
eAM Mappings

The three cost elements (Material, Labor, and Equipment) are mapped to the five basic cost elements (Material, Material Overhead, Resource, Resource Overhead, and Outside Processing) provided by Cost Management.

The following diagram illustrates that the eAM Material cost classifications are mapped to Material, Material Overhead, and Outside Processing. Labor and Equipment cost classifications are mapped to Resource, Resource Overhead, and Outside Processing.

Cost Element Mappings

Cost Management Cost Elements



Setting Up Cost Categories

Cost category codes are used as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost elements. Values include Maintenance, Operations, Contract, and any other values that you might have added within this extensible lookup table. See: Overview of eAM Cost Management, *Oracle Enterprise Asset Management User's Guide*.

By default, eAM has defined three cost categories: Contract, Operations, and Maintenance. However, you can define additional cost categories, if needed. After you have added the cost categories, they are available in the Cost Category list of values, within the Enterprise Asset Management Parameters window (See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*).

To define additional cost categories:

1. Navigate to the Oracle Manufacturing Lookups window.

Cost Category Lookups

Manufacturing Lookups

Type: BOM_EAM_COST_CATEGORY
Meaning: BOM_EAM_COST_CATEGORY
Application: Bills of Material
Description: Enterprise Asset Management Cost Category

Access Level:
☐ User
☒ Extensible
☐ System

Code	Meaning	Description	Tag	Effective Dates		Enabled
				From	To	
1	Maintenance	Maintenance				<input checked="" type="checkbox"/>
2	Operations	Operations				<input checked="" type="checkbox"/>
3	Contract	Contract				<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. Select BOM_EAM_COST_CATEGORY from the Type list of values.

3. Enter a numeric value in the Code field.

Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is informational.

7. The Effective From Date defaults as the system date, but you can update this.
Optionally enter a Effective To Date to indicate an expiration date for the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Setting Up Purchase Order Category Associations for Direct Items

You can specify whether direct items are material, labor, or equipment charges on a work order, based on the user-specified Purchasing Category on the requisition or purchasing line. Purchasing Categories are associated with a maintenance cost element and its respective valuation account. If an association is not set up, direct items are charged as material on the work order.

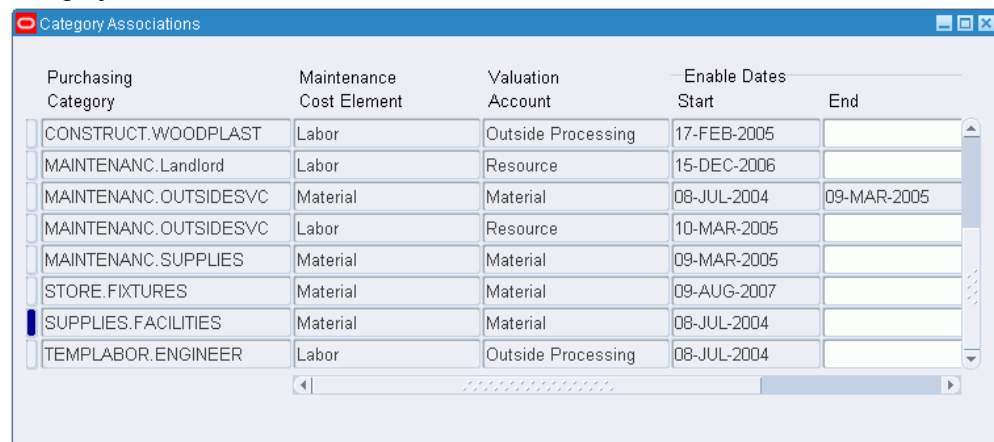
Direct items may be Non-Stock or Description-based. Non-Stock Direct Items are defined within Oracle Inventory (See: Non-Stock Direct Item Setup, *Oracle Enterprise Asset Management User's Guide*), and the Purchasing Category for this type of direct item defaults from the Purchasing category set's item assignments.

For projects, you can assign direct items to a Direct Item Expenditure Type, other than the one assigned at the organization level. This is performed based on the Direct Item Expenditure Type associated with the Purchasing Categories used on the requisition or purchasing line.

To set up associations for purchasing categories used for direct items:

1. Navigate to the Find Category Associations page.
2. Choose New.

Category Associations



Purchasing Category	Maintenance Cost Element	Valuation Account	Enable Dates Start	End
CONSTRUCT.WOODPLAST	Labor	Outside Processing	17-FEB-2005	
MAINTENANC.Landlord	Labor	Resource	15-DEC-2006	
MAINTENANC.OUTSIDESVC	Material	Material	08-JUL-2004	09-MAR-2005
MAINTENANC.OUTSIDESVC	Labor	Resource	10-MAR-2005	
MAINTENANC.SUPPLIES	Material	Material	09-MAR-2005	
STORE.FIXTURES	Material	Material	09-AUG-2007	
SUPPLIES.FACILITIES	Material	Material	08-JUL-2004	
TEMLABOR.ENGINEER	Labor	Outside Processing	08-JUL-2004	

3. Select a Purchasing Category.
4. Select a Maintenance Cost Element.
5. Select a Valuation Account.

If the Maintenance Cost Element is Material, you can choose the Material Valuation

Account. If the Maintenance Cost Element is Labor or Equipment, you can select the Resource or Outside Processing Valuation Accounts.

6. Select a Start Date.

7. Optionally select an End Date.

A Purchasing Category may have one existing association at a time. If you want to assign a different association for a category, select an End Date.

8. Select a Direct Item Expenditure Type if your organization uses Oracle Projects.

This is a required step.

9. Save your work.

Related Topics

Defining Items, *Oracle Inventory User's Guide*

Defining Categories, *Oracle Inventory User's Guide*

Defining Category Sets, *Oracle Inventory User's Guide*

Setting Up eAM Cost Management

You can reference work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed. To capture costs for all work within eAM, some key setups must be in place:

1. Define a default cost element.
2. Define a default cost category.

Follow these steps to define these key setups.

1. Define a default cost element (Material, Labor, or Equipment) when setting up the eAM parameters. See: Defining eAM Parameters, page 3-13. This is used when no predefined mapping exists to the cost elements in eAM. For example, department overheads are not linked to a particular eAM cost element for cost analysis. Therefore, the default cost element carries the cost for analysis. Also, outside processing types of Currency, Amount, and Miscellaneous are not linked to a particular eAM cost element. When one of these types is used in outside processing, the costs are allocated to the default cost element (See: eAM Costing Methods and Mappings, page 3-226).
2. Define a default cost category when setting up the eAM Parameters. This defaulted cost category is used if there is no cost category defined for the departments.

To define a default cost element and cost category:

1. Navigate to the Enterprise Asset Management Parameters page.

Enterprise Asset Management Parameters

Enterprise Asset Management Parameters (EM1)

Asset Number Defaults

☒ Asset Number Auto Generation

Event Log Controls

Cost Defaults

Cost Element: Equipment

Cost Category: Maintenance

Preventive Maintenance

☐ Implement From Horizon Start Date

Work Request

☒ Auto Approve

☒ Extended Log

☐ Default Asset from Employee Location

☒ Asset Number Mandatory

Work Order Defaults

WIP Accounting Class: MaintWAC

Work Order Prefix: WO

Default Department:

☐ Enable Workflow for Workorders

☒ Invoice Billable Items Only

☒ Enable Material Issue Requests

☒ Auto Firm on Release

☒ Value Rebuildables At Zero Cost

☐ Auto Firm On Create

Account Defaults

Maintenance Offset: 01-520-7530-0000-000

2. In the Cost Defaults region, select an eAM Cost Element to indicate how to capture cost overheads, and any miscellaneous resource costs.

Values are Equipment, Labor, and Material.

3. Select a Cost Category to use as the default for departments that do not have a cost category defined.

Department costs are then posted to the appropriate cost classification.

To define a cost category by department:

1. Navigate to the Departments page.

Departments

Departments (EM1)

Department: F-Maint

Description: Fleet Services Maintenance

Cost Category: Maintenance

Class: Maint Dept

Location: EM1 - Seattle

Project Expenditure Org:

Inactive On:

Rates Resurces

2. Select a Cost Category.

Note: It is not required to provide a cost category for a department (crew). However, if you do not provide a cost category for a department (crew), costs for that crew are allocated to the defaulted cost category specified in the eAM parameters (See: Defining eAM Parameters, page 3-13). Each time costs for that element are charged to a work order, this default cost category is used for reporting and analysis.

Related Topics

Defining Departments and Resources, page 3-24

eAM Cost Estimation, page 7-2

Viewing Cost Information, page 7-4

Transferring Invoice Variances, page 7-14

Setting Up Zero Cost Rebuild Item Issue

Oracle EAM work order costing supports both WIP component issues and the return of rebuildables from and to expense subinventories at their current or zero cost. You can issue rebuildable components from the Expense Subinventory to the maintenance work order at zero cost and/or return rebuildable components to the Expense Subinventory at zero cost.

Oracle EAM parameters determine organization level defaults for individual transactions. Set up work order default information to establish how rebuildables are

valued in the current organization.

To set up zero cost rebuild item issue:

1. Navigate to the Enterprise Asset Management Parameters page.

Enterprise Asset Management Parameters

Enterprise Asset Management Parameters (EM1)

Asset Number Defaults

☒ Asset Number Auto Generation

Event Log Controls

Cost Defaults

Cost Element **Equipment** Cost Category **Maintenance**

Preventive Maintenance

☐ Implement From Horizon Start Date

Work Request

☒ Auto Approve ☒ Extended Log

☐ Default Asset from Employee Location ☒ Asset Number Mandatory

Work Order Defaults

WIP Accounting Class **MaintWAC** Maintenance Wip Accounting Class

Work Order Prefix **WO**

Default Department

☐ Enable Workflow for Workorders ☒ Invoice Billable Items Only

☒ Enable Material Issue Requests ☒ Auto Firm on Release

☒ Value Rebuildables At Zero Cost ☐ Auto Firm On Create

Account Defaults

Maintenance Offset **01-520-7530-0000-000**

2. Within the Work Order Defaults region, select the Value Rebuildables at Zero Cost to indicate that rebuildable components charge at zero cost.
3. Save your work.

Related Topics

Defining eAM Parameters, page 3-13

Process and Discrete Manufacturing Integration Setup

Oracle Enterprise Asset Management integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify eAM asset relationships with production equipment. This feature associates assets to the production equipment located in a discrete or process manufacturing organization. After establishing, you can view the resource usage (maintenance work orders, batches, or FPOs) originating from production, associated with a maintainable asset. In discrete manufacturing organizations, you can view maintenance equipment downtime requirements and their affect on capacity during production planning and scheduling.

This section includes the following topics:

- Organization Setup, page 3-235
- Associating Assets with Production Equipment, page 3-236

Process or Discrete Organization Setup

To integrate eAM with process or discrete manufacturing, determine which process or discrete manufacturing organization is associated with your eAM organization.

Process Manufacturing organizations are never the same as eAM organizations; they are mutually exclusive. Although it is possible, Oracle does not recommend commingling eAM and discrete manufacturing organizations. They should have separate organization codes.

To associate a process or discrete manufacturing organization with an eAM organization:

1. Navigate to the Organization Parameters page, and select a valid process enabled or discrete manufacturing organization from the Organization Code list of values.

Organization Parameters

Organization Parameters (EM1)

Inventory Parameters | Costing Information | Revision, Lot, Serial And LPN | ATP, Pick, Item-Sourcing

Organization Code: EM1

Item Master Organization: Vision Operations

Calendar: Vision01

Demand Class:

Move Order Timeout Period:

Move Order Timeout Action: Approve automatically

Locator Control: Determined at Subinventory level

Default On-Hand Material Status:

☐ Enforce Locator Alias Uniqueness

☒ Quality Skipping Inspection Control

☒ Allow Negative Balances

☐ Auto Delete Allocations at Move Order Cancel

Enabled Products & Features

☐ Manufacturing Partner Organization

Type:

☐ Process Manufacturing Enabled

☒ EAM Enabled

☐ WMS Enabled

☐ WCS Enabled

☐ LCM Enabled

EAM Organization: EM1 Seattle Maintenance

Capacity

Load Weight:

Volume:

UOM:

UOM:

2. Enter an EAM organization to associate with the current organization code.
This eAM organization is now linked to the organization code you selected.

Related Topics

Creating an Organization, *Oracle Human Resources User's Guide*

Associating Assets with Production Equipment

You can link an asset to production equipment defined within a process or discrete organization, as well as asset equipment defined within an eAM organization. This relationship is defined while defining or updating assets within eAM.

To associate an asset with production equipment:

1. Navigate to the Define Asset Number page.

Define Asset Number

Asset Number MDE-PO-100 MDE-PO-100

Asset Group MDE-POS-ASSET MDE Positional Asset group

Asset Serial Number MDE-PO-100

Asset Category

Organization EM1 Asset Type Capital []

Main Location Safety Others

Owning Department W-Maint Area

Criticality

WIP Accounting Class

Parent

Asset Type Capital

Asset Number

Asset Group

Warranty Expiration

Checked Out

Attributes Resource Usage Meters Associate Activity

2. Select an Asset Number that you want to link to production equipment.

3. In the Production tab, select a valid Production Organization.

The list of values displays those process and discrete organizations that have the current eAM organization selected as their maintenance organization (See: Organization Setup, page 3-235).

4. Select an Equipment Item.

This is mandatory if you populated the Production Organization field. Items that were defined with an equipment template (See: Item Templates, *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: Physical Attributes, *Oracle Inventory User's Guide*), are available.

5. Enter an Equipment Serial Number. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above.

Related Topics

Defining Asset Numbers, page 3-85

Viewing Resource Usage, page 11-2

Encumbrance Accounting

Enterprise Asset Management enables you to use encumbrance accounting for purchase requisitions and purchase orders associated with work orders with a destination type of shop floor.

Prerequisites

You must perform the following setup tasks before you can use encumbrance accounting:

1. Ensure that your eAM organization is associated with an operating unit that allows encumbrance accounting.
2. Select the **Reverse Encumbrance** option on the Organization Parameters - Costing Information tab.
3. Include a budget account in the maintenance WIP accounting class for encumbrance accounting.

Related Topics

See Encumbrance Accounting, page 3-238

Project Manufacturing Integration Setup

Enterprise Asset Management supports a variety of ways to define work breakdown structures. The methods include, using third party project management systems (with on-line integration), project templates, Seiban number wizard, copy, and manual entry. Work breakdown structures are commonly needed for program management. To support financial project management and reporting, the combination of Oracle Projects and Oracle Project Manufacturing enables budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-currency and tax regulations.

To support project supply chain management and execution, Project Manufacturing provides functionality for project sales management, project advanced supply chain planning, project procurement, project execution, and project quality management.

The following diagram illustrates the eAM Project Manufacturing process:

1. A maintenance work order is linked to a project or task.
If a requisition or purchase order is created for that work order, the work order commitments for the associated project or tasks are updated.
2. The Project Cost Collector process (See: Project Cost Collector, *Oracle Cost*

Management User's Guide) passes the costs to the work order associated project WIP accounting class accounts, rather than the WIP accounting class associated with the eAM asset or eAM organization.

3. Resources and material are charged against a work order.
4. The work order is associated with a project.

The charges are transferred to the project expenditures using the Cost Collector process.

eAM Project Manufacturing



This section includes the following topics:

- Project Definition, page 3-239

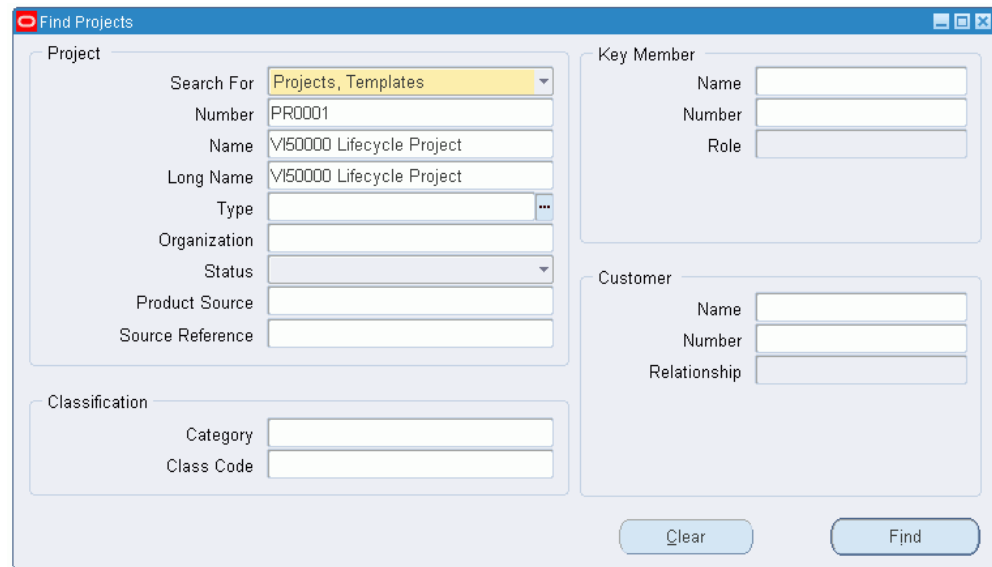
Project Definition

You can inquire on an existing, or copy a new project from a template or existing project. To create a new project, See: Project Definition (Assigning Project Parameters), *Oracle Project Manufacturing User's Guide*. Associate this project number with a planning group, a cost group, and a default WIP accounting class.

To inquire on an existing project:

1. Navigate to the Find Projects page.

Find Projects



The 'Find Projects' dialog box is a window with a blue title bar and standard window controls. It is divided into several sections for searching and identifying projects. The 'Project' section on the left contains a 'Search For' dropdown menu (set to 'Projects, Templates'), and text input fields for 'Number' (containing 'PR0001'), 'Name' (containing 'V150000 Lifecycle Project'), 'Long Name' (containing 'V150000 Lifecycle Project'), 'Type' (with a dropdown arrow), 'Organization', 'Status' (with a dropdown arrow), 'Product Source', and 'Source Reference'. Below this is a 'Classification' section with 'Category' and 'Class Code' input fields. On the right, the 'Key Member' section has 'Name', 'Number', and 'Role' input fields. The 'Customer' section below it has 'Name', 'Number', and 'Relationship' input fields. At the bottom right are 'Clear' and 'Find' buttons.

Project	
Search For	Projects, Templates
Number	PR0001
Name	V150000 Lifecycle Project
Long Name	V150000 Lifecycle Project
Type	
Organization	
Status	
Product Source	
Source Reference	

Classification	
Category	
Class Code	

Key Member	
Name	
Number	
Role	

Customer	
Name	
Number	
Relationship	

Clear Find

2. Select a project Number.
3. Choose Find.
4. Choose Open.

Projects, Templates

The screenshot shows a software window titled "Projects, Templates". It contains a form for entering project information. The fields are as follows:

Operating Unit	Vision Operations	Name	VI50000 Lifecycle Project
Number	PR0001	Organization	Vision Operations
Type	Product Development		
Long Name	VI50000 Lifecycle Project		
Trans Duration	31-MAR-2005 -	Status	Approved
Description	Motherboard VI50000 Development Lifecyc		
	<input type="checkbox"/> Public Sector	<input type="checkbox"/> Workflow in Process	
		<input type="checkbox"/> Template	[]

Below the form is a section labeled "Options" with a list of checkboxes:

- ☒ Structures
- ☐ Tasks
- ☐ Workplan Information
- ☐ Classifications
- ☐ Customers and Contacts
- ☐ Currency
- ☐ Cross Charge
- ☐ Budgetary Control

At the bottom right of the window is a button labeled "Detail".

5. Optionally you can view detailed task information by choosing Detail (See: Viewing Project Details, *Oracle Project Manufacturing User's Guide*).

To assign project parameters:

1. Navigate to the Project Parameters page.

Project Parameters

Project Parameters

Project Number PR0001 Project Name V150000 Lifecycle Project

Planning Group

General Invoice Transfer Task AutoAssignment Other

Default WIP Classes

Organization	Planning Group	Cost Group	Standard	Maintena
Vision Project Mfg				

WIP Classes by Task

2. Select a valid Project Number.
3. Optionally select a Planning Group.
4. Select a Cost Group.

If the current organization has selected Average as its primary costing method in the Organization Parameters window, the Cost Group field is required. The list of values includes the Common Cost Group and the user defined cost groups. The list of user defined cost groups includes those cost groups with valid accounts and with Project selected in the Cost Group window (See: Project Cost Groups, *Oracle Cost Management User's Guide*). You must assign the project to its own Cost Group to keep weighted average costing at the project level.

Associate a Maintenance type WIP Accounting Class to this Cost Group. See: Project Cost Groups, *Oracle Cost Management User's Guide*.

5. Optionally assign a Maintenance WIP Accounting Class to the current project.
You can select any Maintenance type WIP Accounting Class that is associated with the selected Cost Group.
6. Optionally select the name of the Planning Group with which you want to associate your project.

If you plan material requirements by a group of projects, rather than by each

individual project, you need to define a planning group and to assign all the projects to this planning group. If you plan material requirements by a single project, you do not need to associate the project with any planning group (See: *Defining Planning Group Lookups, Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

7. Select the Other tab.
8. Select Maintenance from the Direct Item Expenditure Type list of values.
This expenditure type enables the Cost Collector process to pass costs for direct items to project maintenance work orders. This is a required step.
9. Save your work.

Related Topics

Associating a Work Order with a Project, page 12-6
Creating Purchase Orders from Requisitions, page 12-7
Updating the Commitments for a Project, page 12-12
Viewing Commitments, page 12-13
Project Definition, *Oracle Project Manufacturing User's Guide*
Assigning Project Parameters, *Oracle Project Manufacturing User's Guide*
Project Cost Groups, *Oracle Cost Management User's Guide*
Defining Project Cost Groups, *Oracle Cost Management User's Guide*
WIP Accounting Classes, *Oracle Work in Process User's Guide*
Project Manufacturing Parameters, *Oracle Project Manufacturing User's Guide*

Property Manager Integration Setup

The eAM and Property Manager integration enables eAM assets to correspond with locations defined in Property Manager. The information transferred from Property Manager are the three-level land or building hierarchies, and the associated Location Codes within Property Manager. eAM also provides user-defined Area codes, enabling you to logically sort assets by where they are physically located. However, Area codes in eAM do not equal locations in Property Manager. See: *Setting Up Areas*, page 3-21.

This section includes the following topics:

- *Setting Up eAM Prerequisites*, page 3-244
- *Executing the Export Process, Oracle Enterprise Asset Management Implementation Guide*

- Executing the Asset Number Interface, *Oracle Enterprise Asset Management Implementation Guide*

Setting Up eAM Prerequisites

The following must be defined within eAM before the Export Locations to Enterprise Asset Management concurrent request process can export locations into eAM:

- Asset Group (See: Defining Asset Groups, *Oracle Enterprise Asset Management Implementation Guide*)
- Organization (See: Organization Setup, *Oracle Enterprise Asset Management Implementation Guide*)
- Owning Department (See: Defining Departments and Resources, *Oracle Enterprise Asset Management Implementation Guide*)

Executing the Export Process

Locations from Property Manager are always exported as a hierarchy. The first time that you execute the process, the starting node of the hierarchy is specified as the top level of building or land hierarchies. Thereafter, any level within the building or land hierarchy is specified.

After the process has executed, any changes within Property Manager's building or land hierarchies are automatically changed within eAM's corresponding asset hierarchies.

The Export Locations to Enterprise Asset Management process executes from the Property Manager responsibility. This process can execute in both create and update modes.

To execute the Export Locations to Enterprise Asset Management process:

1. Navigate to the Submit Request page.

Submit Request

The screenshot shows the 'Submit Request' dialog box. The main dialog has a 'Run this Request...' section with a 'Copy...' button. Below this, the 'Name' field is set to 'Export Locations to Enterprise Asset Management' and the 'Operating Unit' is set to 'Vision Operations'. The 'Parameters' field is also visible. A sub-dialog titled 'Parameters' is open, showing several input fields: 'Batch Name' (text), 'Location Code Low' (text with a dropdown arrow), 'Location Code High' (text), 'Location Type' (text), 'Default Organization' (text), 'Default Asset Group Item' (text), 'Default Owning Department' (text), and 'Maintainable' (text). At the bottom of the 'Parameters' dialog are 'OK', 'Cancel', 'Clear', and 'Help' buttons.

2. Select Export Locations to Enterprise Asset Management.

3. Enter the following parameters:

- *Batch Name:* The Batch Name identifies each export process by name.
- *Location Code Low:* This code, defined in Property Manager, is the starting node of the building or land hierarchies. This code reflects the Enterprise Asset Management Asset, and is normally entered into one Enterprise Asset Management Asset Group per transfer.
- *Location Code High:* This code, defined in Property Manager, is the ending node of the building or land hierarchies. This code reflects the Enterprise Asset Management Asset, and is entered into one eAM Asset Group per transfer.
- *Default Organization:* Select the eAM enabled organization. This code is defined within eAM. See: *Organization Setup, Oracle Enterprise Asset Management Implementation Guide*.
- *Default Asset Group Item:* Select the asset group (defined within eAM). The eAM assets are created in this asset group. See: *Defining Asset Groups, Oracle Enterprise Asset Management Implementation Guide*.
- *Owning Default Owning Department:* This is the designated maintenance department to associate with the exported asset/location within eAM.
- *Maintainable:* Select whether the asset/location is maintainable within eAM.

4. Choose OK.
5. Choose Submit.

Related Topics

Property Manager Integration, page 10-2

Submitting a Request, *Oracle Applications User's Guide*

Executing the Asset Number Interface

Locations are set up in Property and are exported to Enterprise Asset Management (eAM) with a two-step process. This allows you the opportunity to modify data before it is exported to eAM. First, push the location records from Property Management to eAM (See: Executing the Export Process). After submission of the concurrent process, the Property Management Location information are entered into the EAM Asset Interface table and are accessed via the Pending Asset Number window within eAM. You can update all relevant information, including Asset Group, Asset Number, Owning Department, and WIP Accounting Class, for this information, before submitting the interface process.

To view pending asset numbers:

1. Navigate to the Pending Asset Number page.

Pending Asset Number

Asset Group	Serial Number	Asset Number	Supplier Warranty Expiration Date
AM-AG1	VOS1-SFL-OP	VOS1-SFL-OP	
AM-AG1	VOS1-SFL-HA	VOS1-SFL-HA	
AM-AG1	HQ	HQ	
AM-AG1	HQ-1	HQ-1	
AM-AG1	HQ-1-1000	HQ-1-1000	
AM-AG1	HQ-1-1001	HQ-1-1001	
AM-AG1	HQ-1-1002	HQ-1-1002	
AM-AG1	HQ-1-1003	HQ-1-1003	
AM-AG1	HQ-1-1004	HQ-1-1004	
AM-AG1	HQ-1-1005	HQ-1-1005	
AM-AG1	WL	WL	
AM-AG1	WL-1	WL-1	

Submit

2. Update the information, as necessary.
3. Choose Submit to update your changes.

Related Topics

Executing the Export Process, *Oracle Enterprise Asset Management Implementation Guide*

Service Integration Setup

Use service requests to report and request maintenance service for unplanned maintenance demand on internal assets and rebuildable items. Service requests that are classified as type Maintenance are used to identify requests for eAM maintenance. For example, when personnel notice that a printer is broken, the person can create a service request, even though a technician is scheduled to regularly check the printer monthly. You can create both service and work requests for capital assets and rebuildables, simultaneously, within one eAM organization.

If a valid asset or rebuildable serial number is entered on the service request, the owning department for the serial number defaults. (See: Defining Asset Numbers, *Oracle Enterprise Asset Management Implementation Guide*), and the service request is visible within the eAM Maintenance Workbench. The Owning Department can then approve the service request and create a work order, or reject the service request and notify the service request owner to cancel it. However, customers or persons who report problems are often not aware of the asset or rebuildable's serial number requiring maintenance. In this situation, a default department is used as the Owning Department.

You may customize an eAM Workflow process to identify appropriate default owning departments and department approvers. Within Oracle Service, an agent can create a request for maintenance, provide a problem summary, and provide any additional information, such as an incident address or notes.

A planner creates a work order and then releases it to execute. The planner can choose to create one or multiple work orders for a single service request. When a work order is complete, the service request owner updates the service request status to Closed.

A support agent can view all work order information for each work order created for a service request. You can create eAM work orders for service and work requests, or associate requests to existing work orders.

You can customize a workflow process that creates notifications to eAM personnel that indicate service requests requiring work and approval.

Note: Oracle Service must be installed to utilize service request functionality.

This section includes the following topics:

- Creating Maintenance Service Request Types, page 3-248
- Enabling Service Requests for Assets and Rebuildables, page 3-249
- Enabling eAM Specific Fields, *Oracle Enterprise Asset Management Implementation Guide*

Creating Maintenance Service Request Types

Within Oracle Service, create at least one Maintenance Service Request Type. You can define multiple Service Request Types, if necessary.

To create a Maintenance service request type:

1. Navigate to the Service Request Type window.

Service Request Types

Type	Business Process	Status Group Name	Start Date	End Date	Asset Maintenance	Complex Maintenance	Image File Name
KBSRType	Customer Support	KBGrp			<input type="checkbox"/>	<input type="checkbox"/>	
Maintenance Request	Customer Support	Maintenance Reques	14-JUL-2004		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Network Service Request	Field Service		01-JAN-1952		<input type="checkbox"/>	<input type="checkbox"/>	
Patient Related	Customer Support	Patient Related	01-JAN-2003		<input type="checkbox"/>	<input type="checkbox"/>	
Pilot Log	Customer Support		05-MAY-2005		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pothole Repair	Customer Support		04-JUL-2003		<input type="checkbox"/>	<input type="checkbox"/>	CS_Pothole.jpg
Preventive Maintenance	Field Service	Field Service	11-JUN-2003		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Preventive Maintenance Report	Field Service	Field Service	11-JUN-2003		<input type="checkbox"/>	<input type="checkbox"/>	

Description: Preventive Maintenance

Workflow:

☐ Auto Launch Workflow
 ☐ Abort Workflow on Final Status without Warning
 ☐ Web Entry
 ☐ Detail ERES Record

2. Enter the name of the Service Request Type.
3. Select Customer Support, from the Business Process list of values.
4. Optionally select effective dates for this request type.
5. Select the Asset Maintenance check box to indicate that this Service Request Type is of type Maintenance (viewable in eAM). Maintenance Type Service Requests are viewable in eAM.
6. Save your work.

Enabling Service Requests for Assets and Rebuildables

To set up Service Request functionality for Asset and Rebuildable Serial Numbers, enable Asset Groups and Rebuildable Items for Service Requests, respectively.

To enable Service Requests for asset groups and rebuildable items:

1. Navigate to the Master Item window.

Master Item

Master Item (V1)

Organization: V1 Vision Operations

Item: EAM Service

Description: EAM Service

Display Attributes: ☐ Master ☐ Org ☒ All

Lead Times | Work In Process | Order Management | Invoicing | Process Manufacturing | **Service** | Web Option

Service

Service Request: Enabled

☐ Enable Contract Coverage

☐ Enable Defect Tracking

☐ Enable Provisioning

Installed Base

☐ Track in Installed Base

☐ Create Fixed Asset

Instance Class:

Service Contracts

Contract Item Type:

Duration:

Duration Period:

Template:

Starting Delay (Days):

Debrief and Charges

Recovered Part Disposition:

☐ Enable Service Billing

Billing Type:

2. Select an Asset Group or Rebuildable Item.
3. Select the Service tab.
4. Select Enabled from the Service Request list of values.
5. Save your work.

Enabling eAM Specific Fields

The Service Request page enables a customer support agent to view pertinent information for an entered service request, such as associated work orders and their statuses. It is necessary to have this important information visible at all times within the Service Request page. You can customize which fields and records appear (See: *Customizing the Presentation of Data in a Folder, Oracle Applications User's Guide*).

Use Oracle's folders functionality to ensure that key eAM-specific fields are visible for maintenance service requests. By default, eAM specific fields are hidden. This folders feature provides you a user-defined display of retrieved information, such as:

- Columns displayed
- Width of columns displayed

- Sequence of columns
- Prompts associated with columns
- Sequence of records

You can prevent users from creating or modifying folders with profile option, FLEXVIEW: ALLOW_CUSTOMIZATION.

To display eAM-specific fields in the Service Request page:

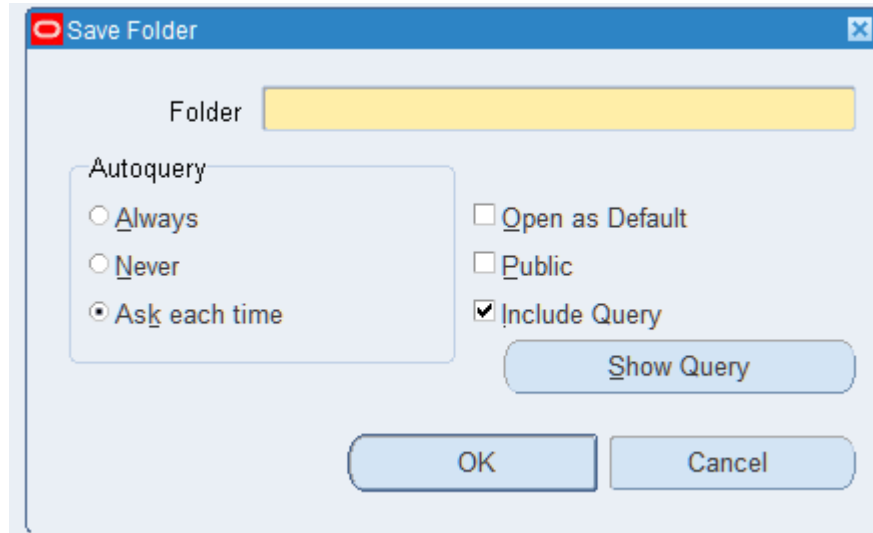
1. Navigate to the Service Request page from the Create Service Request or Find Service Request pages. (Service > Service Requests).

Service Request

The screenshot displays the 'Service Request' page for a specific request (56782 - service problem). The interface is divided into several sections:

- Top Section:** Contains fields for Contact Type, Customer Type (Organization), Operating Unit, Vision Operation, Number (56782), Reported (20-MAR-2013 01:5), Type (Customer Call), Status (Open), Severity (Low), Group (Support Agents), and Owner (Jackson, Mr. M).
- Middle Section:** Contains fields for Problem Summary (service problem), Problem Code, Urgency (Respond - 24), Resolution Summary, Resolution Code, Respond By (22-MAR-2013 16:0), and Resolve By (05-APR-2013 12:0).
- Bottom Section:** Contains a table for Solutions with columns for Outcome, Title, Type, Number, and Visibility. The table has two rows with data.
- Right Side:** Contains a Notes section with a View By dropdown (Service Request Notes : 56782), a Print Friendly button, and a Refresh button.
- Bottom Buttons:** Search Knowledge, Unlink Solution, Refresh, New, Note Details, and Log and Notes.

2. From the Folder menu, select an existing, or create a new Folder definition.



3. Save your work.

Related Topics

Customizing the Presentation of Data in a Folder, *Oracle Applications User's Guide*

Oracle Applications 12 Workflow

Oracle Time and Labor Integration Setup

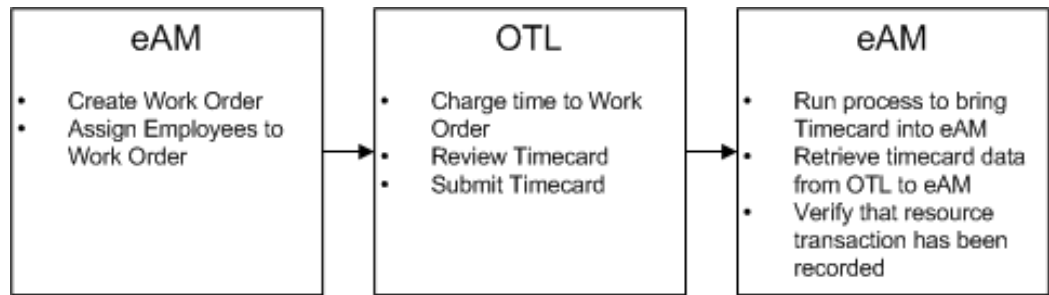
Oracle Time and Labor (OTL) is the repository in which time is entered by personnel, including contingent workers, working in a particular organization. Personnel working on Oracle Enterprise Asset Management (eAM) work orders enter their time using OTL Self-Service. Information collected is stored in OTL Time Store, and is composed of a series of business rules and processes. eAM extracts information from the Time Store and charges eAM work orders for the time spent by personnel that work on them.

There are multiple steps within the integration flow:

1. Timecard information is entered for a specific work order, within Oracle Time Store (part of Oracle Time and Labor).
2. Information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management.
3. The Cost Manager process is executed, and the resource transactions are charged.
4. View the actual costs within the work order for the period that you charged.

The process is as follows:

OTL Process Flow



This section contains the following topics:

- Setting Up Overview, page 3-253

Setting Up Overview

There are two required setup procedures for this integration:

1. Establish personnel needing to use this functionality as Persons within Oracle Human Resources (See: *People Management, Oracle HRMS Workforce Sourcing, Deployment, and Talent Management Guide*).

After established, those persons are assigned to respective users within Enterprise Asset Management.

2. Create Preference Values, and then link those values to eligibility criteria.

Preferences provide you the opportunity to assign rules and options to your workers. It also lists the values that are predefined as default preferences. You can override the defaults by creating new preferences hierarchies. In the Preferences window, you can view the Default Preferences by expanding the Preference Tree node.

See Enterprise Asset Management Preferences in Oracle Time & Labor in the *Oracle Time and Labor Implementation and User Guide* for more information regarding the preference values.

This section contains the following topics:

- Defining Persons as Users, page 3-253
- Creating Eligibility Criteria, page 3-254

Defining Persons as Users

Establish personnel needing to use this functionality as Persons within Oracle Human Resources (See: *Oracle Human Resources User's Guide*). After established, those Persons

must be assigned to the respective users, within Oracle Enterprise Asset Management (eAM).

To define Persons as Users within eAM:

1. Navigate to the Users window.

Users

User Name

Password

Description

Status

Password Expiration

☐ Days

☐ Accesses

☒ None

Person

Customer

Supplier

E-Mail

Fax

Effective Dates

From

To

Direct Responsibilities Indirect Responsibilities Securing Attributes

Responsibility	Application	Description	Security Group	From	To
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

2. Enter a User Name.
3. Select the Person that was created in Oracle Human Resources.
4. Enter a Password.
5. Within the Responsibilities tab, select the appropriate Responsibilities to assign to this User.

The responsibilities, US OTL Administrator and Self Service Time and Expenses, are seeded but the Administrator must manually assign them to the person/user.
6. Save your work.

Creating Eligibility Criteria

You must create Preference Values, and then link those values to eligibility criteria.

Note: Preferences are seeded, but the preferences must be assigned to the user.

To create eligibility criteria:

1. Navigate to the Preferences page.

Preferences

Preferences Eligibility Criteria People

Preference Tree

- Change And Late Audit (Cla)
- Default Preferences
 - Default Preferences - Eam
 - Eam Application Sets
 - Eam Approval Periods
 - Eam Approval Styles
 - Eam Evaluate Rules**
 - Eam Retrieval Rules Groups
 - Default Preferences - Projects
 - Default Preferences - Projects - Pur
 - Default Preferences - Purchasing
 - Sr Payroll
 - Sr Projects
 - Sr Projects & Payroll

Name in Tree
EAM Self-Service Timecard

Preference
Self Service Timecard, Review and Confirmation Layout Pages

Preference Values
EAM Timecard Layout.EAM Review Layout.E

☐ Editable by user? ☐ Displayed to user?

Rules

Rule Name	Link by	Linked to	Precedence

2. Select the Preference Tree node, then choose New.
3. Enter the name of your tree.
4. Select the *Self-Service timecard, review and confirmation layout pages* Preference.
5. Within the OTL Preferences window, select EAM Timecard Layout from the Timecard Layout list of values.

OTL Preferences

The screenshot shows the 'OTL Preferences' dialog box. It has a title bar with the text 'OTL Preferences' and a close button. The main area contains a list of layout preferences, each with a text label and a corresponding value field. The first three items are highlighted in yellow: 'Timecard Layout' with 'EAM Timecard Layout', 'Review Layout' with 'EAM Review Layout', and 'Confirmation Layout' with 'EAM Confirmation Layout'. The remaining four items are 'Detail Layout', 'Export Layout', 'Audit Layout', and 'Approval Fragment Layout', all with empty value fields. The 'Notification Layout' is also empty. To the right of the 'Detail Layout' field is a small button with three dots. At the bottom of the dialog are four buttons: 'OK', 'Cancel', 'Clear', and 'Help'.

6. Select EAM Review Layout from the Review Layout list of values.
7. Select EAM Confirmation Layout from the Confirmation Layout list of values.
8. Choose OK.
9. Save your work.

After saved, you have created a new node on the Preference Tree. Expand this new node, and select EAM Self-Service Timecard.

10. To create eligibility criteria for timecard entry, select the Eligibility Criteria tab.
11. Enter the Name of the rule.

You can have one rule for everyone, or multiple rules to create different eligibility criteria for different groups.

12. Select EAM Self-Service Timecard from the Name of Branch list of values.
13. Select Person, Organization, or All People from the Link by list of values.

If you are creating one rule for all users, select All People.

14. Enter a Precedence value.

Values are all positive numbers. If you have multiple rules, the rule with the highest precedence is displayed first, and so on. For example, an employee can view the time card with a rule precedence value of 95, versus the timecard with a rule precedence value of 94.

15. Save your work.

Related Topics

Time and Expenses, page 13-2

Work Order Billing Setup

While maintaining an asset or servicing a customer request, you can bill a third party customer for the work that they performed. The cost of the work performed is based on the material and resource requirements (bill of material) of the work order, or the cost of the activity associated with the work order.

This section includes the following topics:

- Setting Up Parameters, page 3-257
- Setting Up Item Costs and Prices, page 3-257
- Service Attribute Setup, page 3-262
- Setting Up Billable Material, page 3-263
- Setting Up a Billable Resource, page 3-264
- Setting Up a Billable Activity, page 3-266

Setting Up Item Costs and Prices

The Billing Basis is either Cost Plus or Price List. The Billing Basis affects your item setup procedures. If you want the flexibility of using both billing basis types for an item, you need to set up both costs and prices for that item. An item is an Activity, Material, or Resource.

This section includes the following topics:

- Setting up Costs for the Cost Plus Billing Basis, page 3-259
- Setting up Prices for the Price List Billing Basis, page 3-260

Setting Up Parameters

You can optionally create the ability to change the billable material on a work order at the time a bill is created.

To enable the change of billable material functionality:

1. Navigate to the Enterprise Asset Management Parameters window.

Enterprise Asset Management Parameters

Enterprise Asset Management Parameters (EM1)

Asset Number Defaults

☒ Asset Number Auto Generation

Event Log Controls

Cost Defaults

Cost Element: Equipment

Cost Category: Maintenance

Preventive Maintenance

☐ Implement From Horizon Start Date

Work Request

☒ Auto Approve

☒ Extended Log

☐ Default Asset from Employee Location

☒ Asset Number Mandatory

Work Order Defaults

WIP Accounting Class: MaintWAC

Maintenance Wip Accounting Class

Work Order Prefix: WO

Default Department

☐ Enable Workflow for Workorders

☒ Invoice Billable Items Only

☒ Enable Material Issue Requests

☒ Auto Firm on Release

☒ Value Rebuildables At Zero Cost

☐ Auto Firm On Create

Account Defaults

Maintenance Offset: 01-520-7530-0000-000

2. Optionally select the Invoice Billable Items Only check box. If selected, you can change the billable material at the time the bill is created.

If selected, this check box indicates that you want to invoice only billable items. Billable items are those that have a populated value within the Billing Type field, within the Service Tab, of the Master Item window. Billing Type is relevant only if you have this check box selected. Also, selecting this check box means that you can choose a different item to bill. See: *Service Attribute Setup, Oracle Enterprise Asset Management Implementation Guide*.

3. Save your work.

Setting Up Costs for the Cost Plus Billing Basis

The cost plus method utilizes costs associated with an item. The item should have a cost defined for it. First, you need to ensure that the appropriate item attributes are set up correctly for the item.

To set up an item's attributes:

1. Navigate to the Master Item page.

Master Item

Master Item (V1)

Organization: V1 Vision Operations

Item: AS18947

Description: Sentinel Deluxe Desktop [-]

Display Attributes: ☐ Master ☐ Org ☒ All

Main Inventory Bills of Material Asset Management **Costing** Purchasing Receiving Physical Attributes

☒ Costing Enabled

☒ Inventory Asset Value

☒ Include In Rollup

Cost of Goods Sold Account: 01-510-5110-0000-000

Standard Lot Size: []

2. Optionally select the Costing Enabled check box to report, value, and account for any item costs.

You must select this check box if you are using the Cost Plus Billing method.

3. Optionally select the Inventory Asset Value check box.

You must select this check box if you are using the Cost Plus Billing method.

4. Save your work.

To set up costs for an item:

1. Navigate to the Item Costs Summary page.

2. Choose Costs.
3. Enter cost information for your item.
4. Save your work.

Related Topics

Costing Attribute Group, *Oracle Inventory User's Guide*

Defining Item Costs, *Oracle Cost Management User's Guide*

Setting Up Prices for the Price List Billing Basis

The Price List method uses a specified price list. The specified item should have at least one entry in the price list. You must begin by setting up the appropriate item attributes.

To set up an item's attributes:

1. Navigate to the Master Item window.
2. Select an existing item or create a new one.
3. Select the Order Management tab.

Master Item - Order Management tab

The screenshot shows the 'Master Item (V1)' window with the 'Order Management' tab selected. The window has a sidebar with icons for various functions. The main area contains several sections of controls:

- Organization:** V1, Vision Operations
- Item:** Doc_Billable
- Description:** EAM Doc Billable Resource
- Display Attributes:** Master (selected), Org, All
- Tabs:** MPS/MRP Planning, Lead Times, Work In Process, **Order Management**, Invoicing, Process Manufacturing, Service
- Checkboxes:**
 - ☒ Customer Ordered
 - ☐ Internal Ordered
 - ☐ Pick Components
 - ☐ Assemble to Order
 - ☐ Ship Model Complete (K)
 - ☒ Returnable
 - ☐ RMA Inspection Required
 - ☐ Financing Allowed
- Customer Orders Enabled:**
 - ☒ Customer Orders Enabled
 - ☐ Internal Orders Enabled (G)
- Shipping Options:**
 - ☒ Shippable
 - ☒ OE Transactable (J)
- Fields:**
 - Check ATP: None
 - ATP Rule:
 - ATP Components: None
 - Picking Rule:
 - Default Shipping Organization:
 - Default SO Source Type: Internal
 - Shipping SubInventory:
 - Charge Periodicity:
- Tolerances:**
 - Over Shipment:
 - Under Shipment:
 - Over Return:
 - Under Return:

4. Optionally select the Customer Ordered check box to create a price within the price list.

You must select this check box if you are using the Price List billing method.

5. Save your work.

To set up prices for an item:

1. Navigate to the Advanced Pricing - Price Lists window (Order Management > Pricing > Price Lists > Price List Setup).

Advanced Pricing - Price Lists

Advanced Pricing - Price Lists

Main **Other**

Name: Corporate ☒ Mobile Download ☒ Active

Description: Corporate Price List

Currency: USD Multi-Currency Conversion: Corporate Pricelist Conver: Round To: -2

Effective Dates: 01-JAN-1996 - ☒ Global Operating Unit:

Freight Terms: Prepay & Add Payment Terms: 30 NET Freight Carriers:

Comments: []

List Lines **Secondary Price List** **Qualifiers**

PK-01

Product	Product Attribute	Product Value	Product Description	UOM	Primary	Value	C
Item	Item Number	#80000	Sentinal Multimedia	Ea	<input type="checkbox"/>	10,000.00	
Item	Item Number	#81000	One Year Maintenance - revenue	Ea	<input type="checkbox"/>	12,000.00	
Item	Item Number	#82000	Consulting/Training	Ea	<input type="checkbox"/>	1,100.00	
Item	Item Number	CM31556	Monitor - 19" Flat	Ea	<input type="checkbox"/>	801.00	
Item	Item Number	CM28287	Optiball Wireless Mouse	Ea	<input type="checkbox"/>	43.00	

Price Breaks Pricing Attributes

2. Enter price information for your item.

The same item can repeat multiple times in the price list, with varying values for Start Date, End Date, and Precedence. For example, it is invalid to have overlapping date ranges, if the Precedence is the same.

3. Save your work.

Related Topics

Order Entry Attribute Group, *Oracle Inventory User's Guide*

Service Attribute Setup

Set the Billing Type for each item that you want billable. The Billing Type field within the Master Item window must be populated if you have selected the Invoice Billable Items Only check box, within the Enterprise Asset Management Parameters window. See: Setting Up Parameters, *Oracle Enterprise Asset Management User's Guide*.

To set up the Billing Type attribute:

1. Navigate to the Master Item window.

2. Select the Service tab.
3. Optionally select a Billing Type of Expense, Labor, or Material. This field must be populated if you have selected the Invoice Billable Items Only check box, within the Enterprise Asset Management Parameters window. See: Setting Up Parameters, *Oracle Enterprise Asset Management User's Guide*.
4. Save your work.

Setting Up Billable Material

To create billable material:

1. Set specific attributes within the Master Item window.
2. Assign the resource item to your organization.
3. Decide whether you are pricing this item using the Cost Plus or Price List method, or both, and perform the additional setup for those methods (See: Setting Up Item Costs and Prices, *Oracle Enterprise Asset Management User's Guide*
4. Define costs and prices for your item.

To set up billable material:

1. Navigate to the Master Item window.
2. Select the Invoicing tab.
3. Optionally select the Invoiceable Item check box to indicate that the current material item can invoice.

You can select this attribute at the Master Organization level.

4. Optionally select the Invoice Enabled check box to indicate that invoices are enabled for the current material item.

Note: For the current material item, you need to ensure the Billing Type is populated with Material, within the Service tab. See: Service Attribute Setup, *Oracle Enterprise Asset Management User's Guide*.

5. Assign the current item to your organization.
6. Save your work.

Setting Up a Billable Resource

To create a billable resource:

1. Create a resource item by setting specific attributes within the Master Item page.
2. Assign the resource item to your organization.
3. Decide whether you are pricing this item using the Cost Plus or Price List method, or both, and perform the additional setup for those methods (See: Setting Up Item Costs and Prices, *Oracle Enterprise Asset Management User's Guide*).
4. Define a resource and associate the resource item to the resource.
5. Assign the resource to a department.

To set up a billable resource:

1. Navigate to the Master Item page.

Master Item

Master Item (V1)

Organization: V1 Vision Operations

Item: EAM Billable Resource

Description: EAM Billable Resource []

Display Attributes: ☐ Master ☐ Org ☒ All

Lead Times | Work In Process | Order Management | **Invoicing** | Process Manufacturing | Service | Web Option

☐ Invoiceable Item

☐ Invoice Enabled

Accounting Rule: []

Invoicing Rule: []

Output Tax Classification Code: []

Sales Account: 01-510-4110-0000-000

Payment Terms: []

2. Select the Invoicing tab.
3. Optionally select the Invoiceable Item check box to indicate that the current resource item can invoice.

You can select this attribute at the Master Organization level.

4. Optionally select the Invoice Enabled check box to indicate that invoices are enabled for the current resource item.

Note: For the current resource item, you need to ensure the Billing Type is populated with Labor, within the Service tab. See: Service Attribute Setup, *Oracle Enterprise Asset Management User's Guide*.

5. Assign the current item to your organization.
6. Save your work and close the window.
7. Navigate to the Resources window.

Resources

The screenshot shows the 'Resources (EM1)' window. The 'Resource' field is set to 'FliftMech'. The 'Description' is 'Fork Lift Mechanic'. The 'Type' is 'Person', 'Charge Type' is 'Manual', 'Basis' is 'Item', and 'UOM' is 'HR'. The 'Inactive On' field is empty. The 'Expenditure Type' and 'Supply Subinventory' fields are empty. The 'Supply Locator' field is empty. The 'Outside Processing' checkbox is unchecked. The 'Billing' section shows 'Item' as 'WB-FliftMech' and 'Fork Lift Mechanic'. The 'Costed' checkbox is checked, with 'Activity' set to 'Standard Rate', 'Absorption Account' as '01-000-5810-0000-000', and 'Variance Account' as '01-000-5360-0000-000'. The 'Skills' section has 'Competence', 'Skill Level', and 'Qualification' fields. The 'Batchable' checkbox is unchecked, with 'Minimum Batch Capacity', 'Maximum Batch Capacity', and 'Batch Capacity UOM' fields. The 'Batching Window' and 'UOM' fields are also present. At the bottom, there are buttons for 'Machine Down Codes', 'Employees', 'Equipment', and 'Setups'.

8. Enter the name of the Resource within the Resource field.
9. Within the Billing region, select the resource item you created within the Master Item window to ensure that the resource is available for billing.

Note: Rates defined in the Resources window are not used for billing. For billing rates for the resource item, See: Setting Up Item Costs and Prices, *Oracle Enterprise Asset Management User's Guide*.

10. Save your work.
11. Assign the current resource to a department. See: Defining Departments and Resources, *Oracle Enterprise Asset Management User's Guide*.
12. Save your work.

Setting Up a Billable Activity

To create a billable activity, first set specific attributes within the Master Item window. Next, decide whether you are pricing this item using the Cost Plus or Price List method,

or both, and perform the additional setup for those methods. (See: Setting Up Item Costs and Prices, *Oracle Enterprise Asset Management User's Guide*). Finally, associate the activity to the asset group or asset number that is used to create the work order.

To set up a billable activity:

1. Navigate to the Master Item window.
2. Select the Invoicing tab.
3. Optionally select the Invoiceable Item check box to indicate that the current activity item can be invoiced. You can select this attribute at the Master Organization level.
4. Optionally select the Invoice Enabled check box to indicate that invoices are enabled for the current activity item.
5. Assign the current item to your organization.
6. Save your work.

Related Topics

Initiating Billing, *Oracle Enterprise Asset Management User's Guide*

Enterprise Asset Management Command Center Configuration

Setting Up Enterprise Asset Management Command Center

The Enterprise Asset Management Command Center configuration setup must be completed after the installation and common configurations are completed as described in My Oracle Support Knowledge Document 2495053.1, *Installing Oracle Enterprise Command Center Framework*, 12.2.

Setup and Configuration Steps

To complete setup of the Oracle Enterprise Asset Management Command Center, you must perform the following:

1. Enterprise Asset Management Profile Options, page 3-268
2. Configuring Descriptive Flexfields for Search, page 3-269
3. Loading Enterprise Asset Management Data, page 3-270

Enterprise Asset Management Profile Options

You must set the following profile option for calculating work order schedule delays:

Profile Option Name	Description
EAM: ECC WO Schedule Delay Alert	The EAM: ECC WO Schedule Delay Alert profile option calculates the schedule delay of work orders that are in Open status with schedule delays. Values for this profile option include Yes , No , or Blank (null). This calculation and the resulting update to ECC occurs once each day to ensure the schedule delay is updated accurately. If the user chooses not to have the details updated during incremental load, then the profile option value should be updated to No .

Profile Option Name	Description
EAM: ECC Is Employee Assignment Enabled	The EAM: ECC Is Employee Assignment Enabled profile option captures information on whether or not the Employee Assignment page is enabled for a user. Values for this profile option include Yes , No , or Blank (null). A Blank or Yes value opens the Employee Assignment page for customers on release 12.2.10 and above. For customers below release 12.2.10, a Yes value navigates the user to the Employee Assignment menu but does not display any information. A No value opens the Crew Schedule page for customers on release 12.2.4 and above.
EAM: ECC Enable WO Dashboard Deeplink	The EAM: ECC Enable WO Dashboard Deeplink profile option allows users to enable or disable the deeplink filter Last 21 to Next 21 Days in the Open Work Orders dashboard. Values for this profile option include Yes , No , or Blank (null). A Blank or Yes value enables deeplink for Last 21 to Next 21 Days in the Open Work Orders Dashboard. A No value disables deeplink Last 21 to Next 21 Days in the Open Work Orders Dashboard.
EAM: ECC Debug Profile Option	The EAM: ECC Debug Profile Option enables data load logging. Select Yes to enable data load logging, and select No to disable data load logging.

Configuring Descriptive Flexfields for Search

Enterprise command centers support Descriptive Flexfields (DFFs) that enable you to search on DFF attributes. After you configure DFFs, you must run the data load process, which ensures that the DFF attributes are available in the command center.

Note: You must initially run the Metadata Load concurrent program to load the DFF setup information to Enterprise Command Center. After the DFF setup is initially loaded, running Incremental or Full Load concurrent programs on a regular basis will maintain the DFF attributes.

For additional information on configuring and customizing flexfields, see the *Oracle E-*

Business Suite Flexfields Guide and My Oracle Support Knowledge Document 2495053.1, *Installing Oracle Enterprise Command Center Framework, Release 12.2.*

The following table describes the DFFs available in the Enterprise Asset Management dashboards:

Dashboard	Data Set	DFF Title	DFF Name	DFF Attribute Group Name
Open Work Orders Dashboard	eam-wo	Discrete Job Operation Information	WIP_DISCRETE_JOBS	Additional Details
Open Work Orders Dashboard	eam-wo-op	Work Order Operations	OPERATIONS	Additional Operation Details
Open Work Orders Dashboard	eam-wo-op	Work Order Resources	OPERATION_RESOURCES	Additional Resource Details
Assets Dashboard	eam-asset-attrs	Asset Attributes	MTL_EAM_ASSET_ATTRIBUTES	Asset Attributes (Asset Attribute Dataset)
Assets Dashboard	eam-asset-details	Item Instance Flexfield Details	CSI_ITEM_INSTANCES	Additional Details
Materials Dashboard	eam-store-wo	Component Information	BOM_INVENTORY_COMPONENTS	Additional Details

Loading Enterprise Asset Management Data

Run the concurrent program **Enterprise Asset Management Command Center Data Load** to load Oracle E-Business Suite data into the Enterprise Asset Management Command Center. You can find this concurrent program from the **Reports** tab in the Asset Management page.

Note: Before you load data from Oracle E-Business Suite into the Enterprise Asset Management Command Center, ensure that your EBS data is accurate and current by running any concurrent programs that impact attributes used in the command center.

To load Enterprise Asset Management data:

1. Select the **Reports** tab in the Asset Management page. The Request Submission page appears.
2. In the **Program Name** field, enter **Enterprise Asset Management Command Center Data Load**.

The screenshot shows the 'Schedule Request: Define' window. It has tabs for 'NLS Settings', 'Parameters', 'Layout', 'Notification', 'Print Options', 'Delivery Options', and 'ScheduleOptions'. The 'Parameters' tab is active. A 'Table Diagnostics' button is visible. A sub-dialog titled 'Search and Select: Program Name' is open, showing a search interface. The search criteria is 'Program Name' with the value '%data Load%'. The results table shows one entry: 'Enterprise Asset Management Command Center Data Load' with the application name 'Enterprise Asset Management'.

Schedule Request: Define

* Indicates required field

☒ New Request
☐ Copy Request

Program Name %data Load%

Request Name The name can later be used to search for this request

NLS Settings Parameters Layout Notification Print Options Delivery Options ScheduleOptions

Table Diagnostics

Search and Select: Program Name

Search

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search By Program Name %data Load% Go

Results

Quick Select	Program Name	Application Name
<input checked="" type="radio"/>	Enterprise Asset Management Command Center Data Load	Enterprise Asset Management

About this Page Table Diagnostics

Cancel Select

3. Select the **Parameters** tab and then select the appropriate load type:
 - **Full Load:** Loads all eAM data and is required to be run for the first data load. If you select and run full load for subsequent requests, then this program clears all eAM from ECC and loads fresh data.
 - **Incremental Load:** Loads the data modified and updated from the previous load only. Incremental load should be scheduled to run as often as required to keep the ECC dashboard current.
 - **Metadata Load:** You must initially run the Metadata Load concurrent program to load Descriptive Flexfield (DFF) setup information to Enterprise Command Center. After the DFF setup is initially loaded, running Incremental or Full Load concurrent programs on a regular basis will maintain the DFF attributes. In this process, the application waits for other tasks such as consolidation, data entry, or other load processes to finish before proceeding to load the files.

Schedule Request: Define

Manage ScheduleCancelContinue

* Indicates required field

☒ New Request
☐ Copy Request

Program NameEnterprise Asset Management Command Center Data Load

Request Name

The name can later be used to search for this request

NLS SettingsParametersNotificationPrint OptionsDelivery OptionsScheduleOptions

* System NameEBS

* Load Type

DashboardsAll

All Dashboard Datasets

Organization Code

Reset Dataset

Languages

* Log LevelERROR

Error

Trace Enabled

Search and Select: Load Type

X

Search

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search ByLoad Type%Go

Results

Quick Select	Load Type	Description
<input checked="" type="radio"/>	FULL_LOAD	Full data load
<input type="radio"/>	INCREMENTAL_LOAD	Incremental data load
<input type="radio"/>	METADATA_LOAD	Metadata load

About this Page
Table Diagnostics

Cancel

Select

4. Select the **Dashboards** for loading full load or incremental load data. Data loading will be processed for the selected dashboard only. To load all dashboard data, select the **All** option.

Search and Select: Dashboards





×

Search

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search By Dashboards

Results

	Quick Select	Dashboards	Description
<input type="radio"/>		All	All Dashboard Datasets
<input type="radio"/>		Assets	Assets Dashboard Datasets
<input type="radio"/>		Stores	Stores Dashboard Datasets
<input type="radio"/>		Work Orders	Work Order Dashboard Datasets

5. Enter one or more language codes in the **Languages** field for the output. For multiple language codes, use the format AA,BB,NN. For example, enter US,AR,KO. If the field is blank, then the data will be loaded for the base language only (usually US).
6. Enter the **Organization Code**. You can specify one or multiple organizations for sequential data loading. Full and incremental data loading can be sequentially scheduled by organization.
7. Select the **Log Level** that you want the program to report. The default value is **Error**.
8. **Reset Dataset** is applicable only for Full Load when ran sequentially for organization code(s). When set to **True**, data in all datasets related to that dashboard is cleared. Fresh data related only to the organization code(s) is loaded into the dataset and is visible on the dashboard.
9. Select **True** to enable **SQL trace**. Otherwise, select **False**.

Schedule Request: Define Manage Schedule Cancel Continue

* Indicates required field

☒ New Request
☐ Copy Request

Program Name

Request Name

The name can later be used to search for this request

Parameters | NLS Settings | Notification | Print Options | Delivery Options | ScheduleOptions

* System Name

* Load Type
Full data load

Dashboards
All Dashboard Datasets

Organization Code

Reset Dataset

Languages

* Log Level
Error

Trace Enabled
true

10. Select **Continue**. The **Schedule Request: Review** page appears.
11. **Submit** the concurrent request.

To review request details:

1. From the **Reports** tab (Schedule Request: Define page), select the **View Requests** sub tab. The **Requests** page appears and displays all of your requests.
2. In the row that contains your request, click the **Details** icon. The **Request Details** page appears and displays the ECC- Run Data Load information.

Enabling Data Load for Work Order Operation Data Set:

An optional **eam-wo-op** data set loads work order operation data to ECC. If you require work order operational data to be loaded, then add this data set name to the lookup types **EAM_ECC_DATA_SET_KEYS** and **EAM_ECC_WO_DATASET_KEYS**.

If the eam-wo-op data set is added to the lookup **EAM_ECC_DATA_SET_KEYS**, then the eam-wo-op data load will run if the data load is submitted for **All** dashboards.

Additional Information: For adding a lookup to a lookup type details, refer to the section *Application Utilities Lookups and Oracle Application Object Library Lookups* in the *Oracle E-Business Suite Developer's Guide*.

Debugging Data Loads:

You can enable debug logging of all data loading. The process creates log files for all data loads that can be used to help in debugging issues with data loading. In order to generate the log files, the following settings are required:

1. The following profile option enables debug logging for all eAM Enterprise Command Center data load packages:
 - **EAM: ECC Debug Profile Option** - This profile option enables data load logging if the value is **Yes**, and disables data load logging if the value is **No**.
2. A writable directory in v\$parameter. These log files will be generated in the first writable directory specified in v\$parameter. Run the following query to determine the path:

```
select value from v$parameter where name='utl_file_dir';
```

Once data load logging is enabled, the application generates a log file in the first writable directory specified in v\$parameter using the file name:

EAMECC<Dataset_Short_Code><DDMMYYYYHH24MISS>.log

Publishing Quality Collection Metadata to Enterprise Command Center

To publish EBS data to the Enterprise Command Center, run the **Publish Quality Collection Metadata to Enterprise Command Center** concurrent program. You can find this concurrent program under Reports in the Oracle Quality application.

Note: The Publish Quality Collection Metadata to Enterprise Command Center program should be run only after the patching window is complete. Avoid running the program during patching windows to ensure that the Publish Quality Collection Metadata to Enterprise Command Center program completes successfully and without errors.

Run the concurrent program from the **Submit Requests** window.

(N) **Quality >Reports >Submit Requests**

To publish quality collection metadata:

1. Choose **Single Request** and click **OK**.
2. In the **Name** field on the **Submit Requests** window, select **Publish Quality Collection Metadata to Enterprise Command Center**.
3. Use the **Parameters** window to enter the parameters information.
4. In the **Plans List** field, select the default value **ALL**, or enter a list of plan names, separated by commas, upto a maximum of 150 characters.
5. In the **Create Plan Attribute Groups** field, you can select the default value **No**, or select **Yes** to create plan attribute groups.

6. In **Publish/Reset** field, you can select the default value **Publish**, or select **Reset**.
7. In the **Publish Quality Data From Date** field, enter a valid date in the DD-MON-YYYY format.

The image shows two overlapping windows from an Oracle application. The top window is titled 'Submit Request (M1)' and contains sections for 'Run this Request...', 'At these Times...', and 'Upon Completion...'. The 'Run this Request...' section has a 'Copy...' button and a 'Name' field with the text 'Publish Quality Collection Metadata to Enterprise Command Center'. Below this are 'Operating Unit', 'Parameters', and 'Language' (set to 'American English') fields. The 'At these Times...' section has a 'Run the Job' dropdown set to 'As Soon as Possible' and a 'Schedule...' button. The 'Upon Completion...' section has a checked 'Save all Output Files' checkbox and an unchecked 'Byrst Output' checkbox. The bottom window is titled 'Parameters' and contains fields for 'Plans List' (set to 'ALL'), 'Create Plan Attribute Groups' (set to 'No'), 'Publish/Reset' (set to 'Publish'), and 'Publish Quality Data From Date' (set to '03-03-2020'). At the bottom of the 'Parameters' window are 'OK', 'Cancel', 'Clear', and 'Help' buttons.

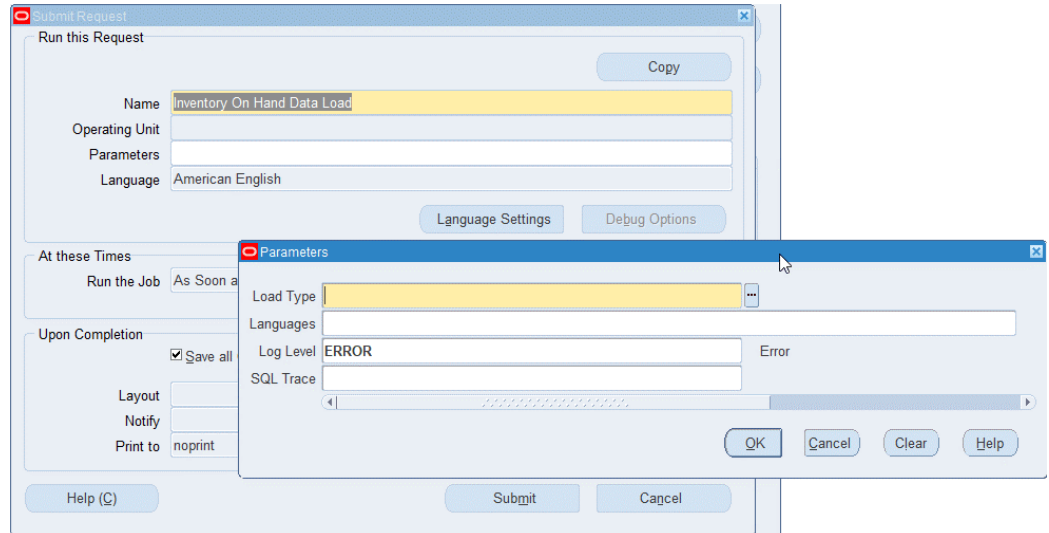
8. Click **OK** on the **Parameters** window.
9. Click **Submit**.
10. Review your request using the **Requests** page.
11. Run the full data load.

See: Loading Oracle Quality Data, .

Loading Inventory Management Data - Inventory On-Hand

The **Materials** dashboard displays on-hand inventory information in the **Material Details** table using the inv-onhand data set from the **Inventory Management** Enterprise Command Center application. To process and load on-hand inventory data from Oracle E-Business Suite (EBS) to the **Materials** dashboard, you must run the **Inventory On Hand Data Load** concurrent program. Run this program from the **Submit Request** window.

(N) **Manufacturing and Distribution Manager >Material Planning >Others >Request**



To run the Inventory On Hand Data Load:

1. In the **Name** field, select **Inventory On Hand Data Load**.
2. Select **Full Load** as the load type to load all on-hand data from EBS.
3. In the **Languages** field, enter one or more language codes for the output. For multiple language codes, use the format AA,BB,NN. If the field is blank, then the data will be loaded for the base language only (usually US).
4. Select the log level that you want the program to report. The default value is ERROR.
5. Select **TRUE** to enable SQL trace. Otherwise, select **FALSE**.
6. Submit the concurrent request.
7. Review your request using the **Requests** page.
8. Monitor data loading using the **Data Load Tracking** page of the ECC Developer responsibility.

Note: Running the **Enterprise Asset Management Command Center Data Load** does not load on-hand inventory information in the **Material Details** table in the **Materials Dashboard**.

Loading Oracle Quality Data

To load Oracle E-Business Suite Quality data into the Enterprise Asset Management

Command Center, run the concurrent program **Quality Command Center Data Load**. You can find this concurrent program under Reports in the Oracle Quality application.

Note: The Quality Command Center Data Load program should be run only after the patching window is complete. Avoid running this program for any of the available data load types during patching windows to ensure that the Quality Command Center Data Load program completes successfully and without errors.

Run the concurrent program from the **Submit Request** window.

(N) **Quality >Reports >Submit Requests**

To load Oracle Quality data:

1. Choose **Single Request** and click **OK**.
2. In the **Name** field on the **Submit Request** window, select **Quality Command Center Data Load**.
3. Use the **Parameters** window to enter the parameters information.
4. The **System Name** field defaults to **EBS**.
5. Select the appropriate load type:
 - **Full data load** - This process loads all Oracle Quality data and is required to be run for the first data load. The full data load process also includes metadata load. If you select and run full load for subsequent requests, then this program clears all Oracle Quality data from ECC and loads fresh data.
 - **Incremental data load** - This process loads the data modified and updated from the previous load only. Incremental load should be scheduled to run as often as required to keep the ECC dashboard current.
 - **Metadata load** - This process ensures the application waits for other tasks such as consolidation, data entry, or other load processes to finish before it loads the files. Note that the full data load process includes metadata load.
6. Enter one or more language codes in the **Languages** field for the output. For multiple language codes, use the format AA,BB,NN. For example, enter US,AR,KO. If the field is blank, then the data will be loaded for the base language only (usually US).
7. In the **Enable SQL Trace** field, select **True** to enable the SQL trace. Otherwise, select **False**.

8. In the **Log Level** field, select the program you want to report. The default value is **Error**.

The image shows two overlapping windows from a software application. The top window is titled 'Submit Request (M1)' and contains a 'Run this Request...' section with a 'Copy...' button. Below this are input fields for 'Name' (containing 'Quality Command Center Data Load'), 'Operating Unit', 'Parameters', and 'Language' (set to 'American English'). There are also 'Language Settings...' and 'Debug Options' buttons. The bottom window is titled 'Parameters' and contains fields for 'System Name' (EBS), 'Load Type' (FULL_LOAD), 'Languages', 'Enable SQL Trace' (TRUE), and 'Log Level' (ERROR). The 'Log Level' field has a dropdown menu showing 'Error' as the selected option. At the bottom of the 'Parameters' window are 'OK', 'Cancel', 'Clear', and 'Help' buttons.

9. Click **OK** on the **Parameters** window.
10. Click **Submit**.
11. Review your request using the **Requests** page.
12. Monitor data loading using the **Data Load Tracking** page of the ECC Developer responsibility.

To review request details:

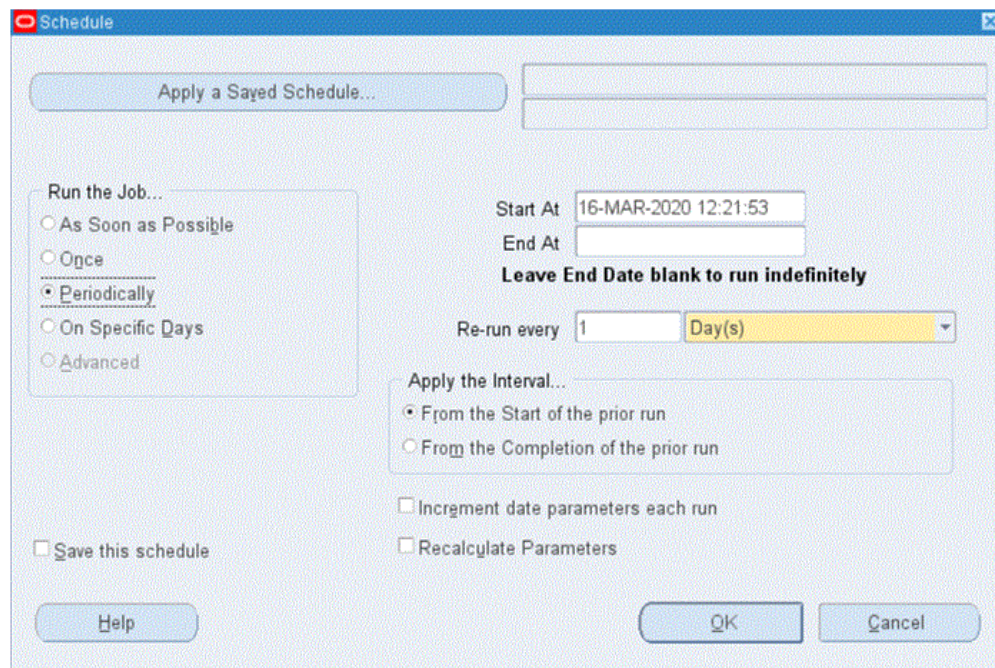
1. From the menu, click **Requests**. The **Find Requests** window appears.
2. Select the **All My Requests** radio button and click **Find**. The **Requests** window appears and displays all of your requests.
3. In the **Requests** window, select the row that contains your request and then click **View Details**. The **Request Detail** window appears and displays the ECC- Run Data Load information.
4. Click **OK** to exit and close the window.

Concurrent Program Scheduling

You can schedule the **Enterprise Asset Management Command Center Data Load** and **Quality Command Center Data Load** concurrent programs as you can with any other concurrent program in the standard Oracle E-Business Suite.

To schedule the Enterprise Asset Management Command Center Data Load concurrent program:

1. Navigate to the **Schedule** window:
(N) Enterprise Asset Management responsibility > Reports
2. Search or enter **Enterprise Asset Management Command Center Data Load** concurrent program in the **Name** field.
3. Enter the report **Parameters**.
4. Click the **Schedule** button. The **Schedule** window appears.



The screenshot shows the 'Schedule' window for a concurrent program. The window has a title bar with a red 'X' icon and the text 'Schedule'. Inside, there is a button labeled 'Apply a Saved Schedule...' at the top left. Below it, on the left side, is a group box 'Run the Job...' containing five radio buttons: 'As Soon as Possible', 'Once', 'Periodically' (which is selected), 'On Specific Days', and 'Advanced'. To the right of this group box are two text fields: 'Start At' with the value '16-MAR-2020 12:21:53' and 'End At' which is empty. Below these fields is the text 'Leave End Date blank to run indefinitely'. Further right is a 'Re-run every' field with the value '1' and a dropdown menu showing 'Day(s)'. Below this is another group box 'Apply the Interval...' containing two radio buttons: 'From the Start of the prior run' (selected) and 'From the Completion of the prior run'. At the bottom of the window, there are two checkboxes: 'Save this schedule' and 'Increment date parameters each run', both of which are unchecked. Below these checkboxes is a 'Recalculate Parameters' checkbox, also unchecked. At the very bottom of the window are three buttons: 'Help', 'OK', and 'Cancel'.

5. Enter your preferred schedule parameters.
6. Click **OK** to save the schedule.

Results Tables Actions

Assets Dashboard Actions:

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Assets	Update	Update Asset	Allows asset update actions such as adding and updating asset attributes, DFF updates, and so on.
Assets	Create Work Order	Create Work Order	Asset number defaults to the Create Work Order page.
Assets	Create Work Request	Create Work Request	Asset number defaults to the Create Work Request page.
Work Orders	Update	Update Work Order	Allows work order update actions for selected records.
Work Orders	Update Maintenance Routing	Maintenance Routing	<p>Update Maintenance Routing form for the activity appears and allows updates.</p> <p>(Suggested use-case: Identify activities with the highest deviation by using the Schedule Delay by Activity chart refinement. Review the schedule deviation hours from the results table and update the Maintenance Routing From form to optimize planned hours.)</p>

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders	Create Activity	Create New Asset Activity	<p>The Create Activity form appears with work order requirements defaults.</p> <p>(Suggested use-case: Identify recurring failures using the Failures chart. Select a suitable work order from the results table and convert it into an activity from the Create New Asset Activity page.)</p>
Work Orders	Export	Parameters selection	Exports selected work orders from the results table to a csv file.
Work Orders	Print Work Order Report	Work Order Report	Runs the Work Order Report for selected work orders in the results table.
Work Orders	Export Work Orders	Export Work Orders	Generates a xml file for selected work orders in the result table.

Open Work Orders Dashboard Actions:

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders	Update	Update Work Order	Resolve work order alerts. You can review and update work order schedule dates, resource assignments to resolve schedule delay alert, or review failure alert and plan the appropriate resources for work orders with issues.
Work Orders	Quick Update	Pop-up	<p>Updates the work order in real time for the following key attributes:</p> <ul style="list-style-type: none"> • Work Order Type • Work Order Status • Work Order Priority • Work Order Scheduled Start Date • Work Order Scheduled Completion Date
Work Order Cost Estimate Details	Update	Update Work Order	Review and update the resource and material information for high-cost work orders.

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders and Work Order Cost Estimate Details	Export	Parameters	Selected work orders from the result table are exported to a csv file.
Work Orders and Work Order Cost Estimate Details	Print Work Order Report	Work Order Report	Runs the Work Order Report for selected work orders in the results table.
Work Orders and Work Order Cost Estimate Details	Export Work Orders	Export Work Orders	Generates a xml file for selected work orders in the result table.
Work Requests	Create Work Order	Create Work Order	A new work order is created with defaults from work request details. Clicking on Apply navigates back to the Open Work Order dashboard.
Work Requests	Assign Work Order	Assign Work Order	A Work Request will be assigned to the work order.

Materials Dashboard Actions:

Note: The Materials Details results table and refinements data is available only when 'inv_ecc.zip' Inventory Management Command Center is imported into the ECC framework.

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders Materials	Update	Update Work Order	Resolve work order alerts. You can review and update material requirements by adding new materials, or increasing and decreasing required quantity to the existing materials in the work order.

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders Materials	Delete Material Allocation	Material Issue	<p>Refines data with the material shortage alert. The result table is refined with work orders containing material shortage.</p> <p>Verify if the shortage material is allocated to other work orders that can be prioritized for later dates (By Schedule Date or Work Order Priority).</p> <p>The Delete Material Allocation action is enabled for material lines containing allocated quantity of the shortage material. Select this action to navigate to the Material Issue page, Update Material Allocation to resolve the shortage for work orders with critical and immediate requirements.</p> <p>Run the Component Pick Release concurrent program to allocate the materials to the priority work order.</p>

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders Materials	Copy to Asset BOM	Work Order Details	<p>When reviewing the unplanned material usage alert, the result table data is refined to display work orders containing more quantity issued than quantity required.</p> <p>The Copy to Asset BOM action opens the Work Order page and defaults to Copy to Asset BOM under the Materials tab.</p> <p>Use work order standard action to add the material to the Asset BOM.</p>
Work Orders Materials	Update Activity BOM	n/a	<p>Review unplanned material usage for work orders and verify the material usage pattern to check if it is asset related or activity related. Use the Update Activity BOM action that is enabled for the work orders with activity association. The Maintenance BOM page appears for the selected activity to update the material required quantity.</p>
Work Orders and Work Order Cost Estimate Details	Export	Parameters selection	Exports selected work orders from the results table to a csv file.

Results Table Name	Results Table Action	Page Navigation	Actions Performed
Work Orders and Work Order Cost Estimate Details	Print Work Order Report	Work Order Report	Runs the Work Order Report for selected work orders in the results table.
Work Orders and Work Order Cost Estimate Details	Export Work Orders	Export Work Orders	Generates a xml file for selected work orders in the result table.

Part 3

Enterprise Asset Management User

The Enterprise Asset Management User is anyone in an organization who may access eAM. This may include a person who uses work requests to report problems, a plant manager who accesses eAM to review high cost assets and their work history, as well as a maintenance user, such as a technician who accesses the Maintenance User Workbench to review daily work assignments.

This part contains the following chapters:

- eAM Work Management, page 4-1
- Preventive Maintenance, page 5-1
- eAM Planning and Scheduling, page 6-1
- eAM Cost Management, page 7-1
- Direct Item Procurement for eAM Work Orders, page 8-1
- Contractor Services, page 9-1
- eAM Property Manager, page 10-1
- Process and Discrete Manufacturing Integration, page 11-1
- eAM Project Manufacturing, page 12-1
- Integration with Oracle Time and Labor, page 13-1
- eAM Quality, page 14-xx
- Work Order Billing, page 15-1
- Oracle Service Integration, page 16-1

eAM Work Management

This chapter covers the following topics:

- Overview eAM Work Management
- eAM Work Orders
- Routine Work Orders
- Using Encumbrance Accounting with Maintenance Work Orders
- Express Work Orders
- Preventive Maintenance Work Orders
- Rebuild Work Orders
- Easy Work Orders
- eAM Work Order Statuses
- Defining Work Order Documents
- eAM Operations and Tasks
- Defining Asset Shutdown Statuses
- Preparing Work Order Operations
- Viewing Work Order Operations
- Defining Inventory Material Requirements
- Defining Direct Item Material Requirements
- Viewing Material Requirements
- Defining Resource Requirements
- Viewing Resource Requirements
- Work Order Relationships
- Parent-Child Relationship
- End to Start Dependency

- Cost Relationships
- Follow-up Work Relationships
- eAM Work Order Transactions
- Operation Completion
- Work Order Completion
- Rebuild Work Order Completion
- Transacting Material
- Viewing Resources Transactions
- Closing Work Orders
- eAM Work Order Planning
- Using the Maintenance Workbench
- Capitalizing Work Orders

Overview eAM Work Management

The work order is the foundation for all maintenance organizations. Work orders define the resources and items that are needed to conduct work. They can automatically generate through the use of Preventive Maintenance Schedules, the issue of an inventoried rebuild able, breach of quality results, or manually generated as a routine work order. These work orders are then reviewed and shared with Operations to produce an estimated schedule.

Oracle Enterprise Asset Management integrates with Oracle Quality. Use Quality collection plans to predefine required feedback information that must be entered into Oracle Enterprise Asset Management, upon a work order's completion. For example, data to collect may include inspection points for asset number and downtime variables. If a variance is recorded to the quality plan, a work request or work order is created. You can define quality collection plans directly on the work order, or define them as attributes of an activity to ultimately default into future work orders that are generated for specific asset number and activity combinations.

For each work order, the estimated costs aggregate, from the associated BOM and resources, to develop a costing profile for the current work order. You can use Costing Profiles for future Budgeting and Forecasting.

For each work order, the actual costs aggregate during the work order's life cycle. These costs roll up, based on the hierarchy of the current work order's associated asset number. View these actual costs by period at a transaction level or at a summary level. Costs can roll up, based on the hierarchy of work orders. You can view the costs (both actual and estimates) by period, at a transaction or summary level.

This chapter is divided into the following sections:

- eAM Work Orders, page 4-3
- eAM Operations and Tasks, page 4-29
- Work Order Relationships, page 4-52
- eAM Work Order Transactions, page 4-58
- eAM Work Order Planning, page 4-69

eAM Work Orders

Oracle Enterprise Asset Management work orders are created for assets and rebuildable inventory items. They are defined manually, or generated automatically based on a scheduled activity. If you attach an activity to a manually created work order (normally the role of a Planner), the work order inherits the activity's attributes, such as the maintenance BOM, maintenance route (operations), attachments, quality plans, cost information, and scheduling rules. When preplanned work orders are created for assets, the activity information associated with the work order's current asset number automatically attaches material and resource requirement information to the work order.

You can print work packets (work orders with attachments) through an AutoVue server using the Enterprise Asset Management or Maintenance Super User responsibility.

See Maintenance Work Order Package Print with AutoVue, page 31-13 or Printing Work Packets Using AutoVue, page 21-104.

This section includes the following topics:

- Routine Work Orders, page 4-4
- Using Encumbrance Accounting with Maintenance Work Orders, page 4-13
- Express Work Orders, page 4-13
- Preventive Maintenance Work Orders, page 4-13
- Rebuild Work Orders, page 4-14
- Easy Work Orders, page 4-24
- eAM Work Order Statuses, page 4-24
- Defining Work Order Documents, page 4-28

Routine Work Orders

Routine work orders are normally created by a planner from the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70), and are also created using a menu option. Material and resource planning (See: Overview of Planning and Scheduling, page 6-1) is used at each status of the routine work order (See: eAM Work Order Statuses, page 4-24).

To manually create a work order:

1. Navigate to the Find Work Orders window (Work Orders > Work Orders).

Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

2. Choose New.

Work Order

Work Order (EM1)

Work Order: WO207620
 Asset Number: LX0002
 Asset Group: Lexus ES300
 Asset Activity: 15000 Miles Lexus Service
 Class: MaintWAC
 Status: Draft
 Parent Work Order:
 Relationship Type:

15000 Miles Scheduled Maintenance

Scheduled Dates
 Start Date: 11-AUG-2006 02:43:17
 Completion Date:
 Duration(hours):

Actual Dates
 Start Date:
 Completion Date:

Main Activity Project Rebuild Request Approval History

Department: Lexus Shop
 Priority:
 Work Order Type:
 Shutdown Type: Required
 Warranty Status:
 Failure Information:
 Failure: Mechanical
 Cause: Lub System Failure
 Resolution: Auto-Lub Correction
 Material Shortage:
 Material Shortage: As Of Date: Check Shortage

☐ Firm
☐ Tagout Required
☒ Enable Material Issue Requests
 PM Suggested Start Date:
 PM Suggested End Date:
☒ Failure Entry Required
 Failure Date: 10-AUG-2006
 Comments:

Operations Materials Resources Relationships Asset Route Costs

The header information displays general information about the asset number and the type of work required.

3. The Work Order number is assigned, but you can update it.
4. Enter an asset number requiring maintenance. The asset group defaults (See: Defining Asset Numbers, page 3-85).
5. Select an Asset Activity. Only asset activities associated with this asset number are available.

Note: If this work order was previously created, you can add an asset activity, as long as the work order is at an Unreleased or Draft status, or an asset activity was not previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an asset activity to an existing work order.

After selecting an asset activity, the associated maintenance BOM (material) (See: Setting Up Maintenance Bills of Material, page 3-134) and maintenance route (resources), associated with the activity (See: Defining Maintenance Routes, page 3-139), attach to the work order. After an asset activity is saved to a work order, you

can no longer change or delete it.

6. Enter a Class code to represent the charge (expense) accounts associated with the asset number. This defaults from the asset number, but you can update it.

Select a maintenance WIP Accounting Class that contains an encumbrance account if you want to use encumbrance accounting.

7. Enter the status, for example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: eAM Work Order Statuses, page 4-24).

In addition, you can update the work order Status to a different user defined status assigned to your organization.

Note: User defined work order statuses are defined upon system statuses and are assigned to organizations. For example, you can define a work order status of "Ready to Start" based on the Released system status. You can also have a work order status of Ready to Start based on the system status of Draft. Both statuses can then be assigned to your organization for use.

8. The Pending check box value determines whether the work order has reached the status above or is still pending, due to work flow. This value is set by the Work Order Work flow Approval process. If the check box is clear, the Status reflects the current state. If the check box is selected, the Status reflects a desired target state that is not yet reached due to pending activity, such as a work flow approval that is still in progress.
9. If this is a child work order in a work order network and Parent Child is populated in the Relationship Type field, the parent work order is populated in this field.
10. The Relationship Type field indicates the type of relationship associated with the work order. Valid relationships are Parent Child, End to Start Dependency, Cost, and Follow-up Work. Manage complex maintenance jobs through these four types of work order relationships. See: Work Order Relationships, page 4-52.
 - *Parent Child:* This relationship enables a network of work orders, which includes one top level work order that defines the time line of all its children work orders. The start and end dates of the children work orders are within the start and end dates of the parent work order. A child work order can be parent to another work order. One parent can have multiple children, but one child can have a single parent. There can be an infinite number of parent-child work order levels, within the Parent-Child relationship.
 - *End to Start Dependency:* You can create work orders with scheduling dependency relationships (including child sibling work orders). For example,

one work order's scheduled start date is dependent on another work order's completion. With this relationship, the next work order cannot start until the prior work order is completed.

- *Cost:* You can roll the child work order costs into the parent work order, for reporting purposes. You can base the cost roll up, within a hierarchy, on scheduling relationships. Scheduling relationships are not required to roll up costs within a hierarchy. You can create a cost reporting hierarchy that is different from the scheduling hierarchy.
 - *Follow-up Work:* You can create a work order for the current capital asset number or Rebuildable Item, while executing work for the asset on another work order. For example, a second problem with the asset is discovered while executing a work order. A follow-up work order, associated with the original work order, is created for the issue. This is independent of scheduling or cost relationships.
11. In the Scheduled Dates region, enter the work order's scheduled Start date if it is based on a forward schedule. The scheduling process uses this date as a starting point to calculate the scheduled end date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward.
 12. Enter a scheduled Completion date for backward scheduling. This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required end date.

Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Production Scheduling enabled (See: Overview of Setting Up, *Oracle Production Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

See eAM Scheduling, page 3-195 for more information.

13. Within the Main tab, the Department value defaults from the selected asset number. (See: Defining Asset Numbers, page 3-85). This indicates the persons or department responsible for this asset number.

You can change the department at the operation level if no transactions have been recorded for the work order.

14. Optionally select a Planner for this work order.

15. Optionally select a Priority, such as High, Medium, or Low.
16. Optionally select a Work Order Type. Work order types enable you to differentiate work orders, for example, Routine, Preventive, Rebuild, Emergency, or Facilities. Maintenance management can use this information to sort and monitor work activities for reporting and budgeting. Work order types are referenced in the work order. For information on how to create valid values within the available list of values, See: Work Order Types, page 3-61.
17. The Shutdown Type defaults from the activity. This helps the planner group work orders that may require shutdowns, so that they are planned together.
18. If the Firm check box is selected, planning and scheduling does not automatically adjust the schedule, regardless of material or resource availability Overview of eAM Planning and Scheduling, page 6-1. This check box defaults as selected or cleared, depending on the Auto Firm on Release and Auto Firm on Create check box settings, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 3-13). This defaults after the work order is Released, if you select the Auto Firm on Release check box, and defaults immediately if you selected the Auto Firm on Create check box.

If the check box is selected, the end date is calculated, based on the work order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the work order. You can update this check box for work orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 4-24).

If the Firm check box is selected, you can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.
19. Optionally select the Notification Required check box.
20. Optionally select the Tagout Required check box to indicate that the Area must be secured for operations required to execute this work order. Tags are generally printed and placed on an asset, warning the plant that it is shutdown and should not be started. This check box helps the planner isolate those jobs that require a tagout.

Select the paperclip Attachments icon to attach relevant tagout documents. You can attach URL, file, or text attachments. See: Defining Work Order Documents, page 4-28.
21. The Planned check box is selected if the current work order was created from forecasted work orders (See: Preventive Maintenance Work Orders, page 4-13).
22. Optionally select the Enable Material Issue Requests check box to enable eAM to manage material availability for the current work order. Material is physically

available to a work order via the material request and verification process. This check box is selected by default if it is selected on the eAM Parameters window.

23. The Construction Estimate field will display if the work order was created by using the Construction Estimate Workbench. The field is display only.
24. Optionally enter Failure Information (See: Failure Analysis Overview, page 28-1). The Failure Information region appears if the *Failure Code Required* value is set to *Yes*, within the Failure Set definition (See: Defining Failure Codes and Sets, page 28-2).

If the Failure Entry Required check box is selected, Failure Code entry is mandatory during work order completion.

25. The Material Shortage region enables you to view material availability. This region populates, after you have saved the work order.

The Material Shortage field displays whether there is a shortage of the material (at that moment in time) that is needed to complete the work order's operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the work order's associated BOM is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within the work order's associated BOM are received into Inventory. This process should be set to automatically execute periodically, but you can execute it from the menu at any time.

You can choose Check Shortage to view the shortage details.

26. Select the Activity tab to select alternate, predefined BOMs and Routings. See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Maintenance Routes, page 3-139.

After the alternate BOM and Routing are selected, the system uses the associated items and assigns the associated resources needed to execute the work order.

27. Optionally select an Activity Type. This code indicates the type of maintenance for this activity and is used when defining a job or a standard job, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the activity (See: Defining Activities, page 3-69).
28. Optionally select an Activity Cause to specify what situation caused this work to generate, for example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the activity.
29. Optionally select an Activity Source to specify reasons that activities require execution, for example, Warranty Compliance, OSHA Compliance, or Military

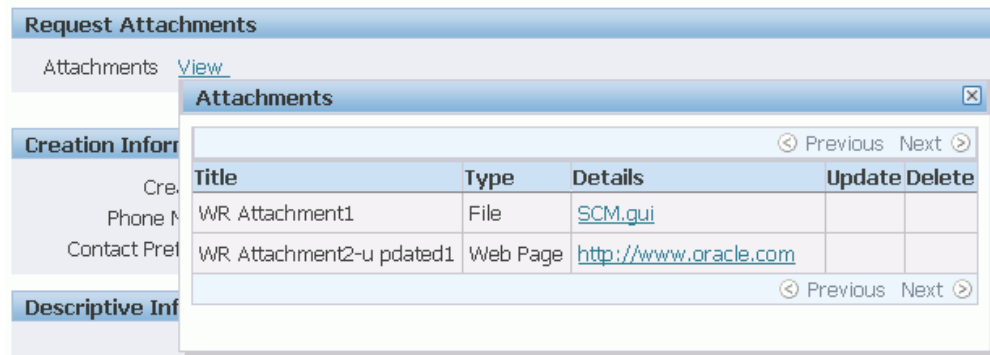
Specification Requirements.

This value defaults from the activity.

30. Optionally select the Project tab. This tab is enabled only if Project Manufacturing is installed and enabled.
 1. Optionally select a Project.
 2. Optionally select a Task.
31. You can select the Rebuild tab if this work order is created for a rebuild able item. See: Rebuild Work Orders, page 4-14.
32. Optionally select the Request tab to display service and work requests associated with this work order.

You can add service or work requests to a work order by selecting a service request or request number, respectively. Only work requests at an Awaiting Work Order status and Maintenance Type service requests at an Open status are available for association. You may associate multiple work requests to a single work order, but only one work order can associate with a service request. You can associate a service request to multiple work orders. You can dissociate a work request from a work order.

If you want to view a work request attachment, highlight the work request and then select View, Attachments. If there are any attachments associated with the work request, you will be able to view them.



The screenshot shows a software interface with a 'Request Attachments' window. The window has a title bar and a menu bar with 'Attachments' and 'View'. Below the menu bar is a table with the following data:

Title	Type	Details	Update	Delete
WR Attachment1	File	SCM.gui		
WR Attachment2-updated1	Web Page	http://www.oracle.com		

The table has navigation buttons 'Previous' and 'Next' at the top and bottom right. The background shows parts of other tabs like 'Creation Information' and 'Descriptive Information'.

To delete a work request:

1. Highlight the work request.
 2. Choose Delete.
33. Optionally select the Approval History tab to view the work order's approval history. A work order might require approvals or notifications at different stages of

its life cycle. For example, organizations typically want an approval process in place before a work order is released. Work flow automates this process. You can initiate Work flow to generate notifications, approvals, transactions, and update a work order status. You can enable Work flow for Work Orders within the eAM Parameters (See: Defining eAM Parameters, page 3-13). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Work flow to indicate what events trigger Work flow. Seeded events that you can enable to trigger Work flow are Work Order creation, Work Order release approval, Work Order completion, Work Order status change, Operation completion. See: Setting Up Oracle Work flow, *Oracle Workflow User's Guide*, Setting Up the Business Event System, *Oracle Workflow User's Guide*, and Defining Work Order Statuses, page 4-24).

34. Optionally choose Operations to prepare necessary operations. These operations default from the maintenance route (See: Defining Maintenance Routes, page 3-139) associated with the current activity, but you can update and add to them (See: Preparing Work Order Operations, page 4-31).

You can change the operations if no transactions have been recorded for the work order.

35. Optionally choose Materials to view or add items from the associated asset number's items list (See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Material Requirements, page 4-38). From the Material Requirements window, you can optionally choose Select Materials to add materials from this Asset BOM to the material requirements for the current work order.
36. Optionally choose Resources to view, add, or update the resources assigned to each operation. See: Defining Resource Requirements, page 4-47.
37. Optionally choose Relationships to manage work order schedules and view work order details. See: Work Order Relationships, page 4-52.
38. Optionally choose Asset Route to view the asset route associated with the current work order's asset group. You may need to perform one activity on multiple asset numbers. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. See: Defining Asset Routes, page 3-101.

You can choose Asset Route if an asset route is associated with the current asset number.

39. Optionally choose Costs to view the costs of work orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: Defining Period Types, *Oracle General Ledger User's Guide* and Defining Calendars, *Oracle General*

Ledger User's Guide.

1. Optionally select a work order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current work order.
 - *Actual Costs:* This is the accumulation of all costs for material and resource transactions for the asset number's associated maintenance work orders, based on a specified period.
 - *Estimates:* A BOM (material parts list) and routing (resources) can associate with a work order.

When you select the Estimates tab, the estimated costs of all material and resources associated with a work order appear, enabling you to budget costs.
 - *Variances:* The difference between the actual costs recorded and estimated costs.
 - *Material:* All material and material overhead transaction costs.
 - *Labor:* All resource and resource overhead transaction costs associated with personnel.
 - *Equipment:* All material resource and resource overhead transaction costs.
2. Optionally choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and material for specific operations of the current work order.

40. Optionally select a work order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current work order.

41. Save your work.

After saving a work order, you can optionally associate asset attachments: (M)
Tools > Copy Asset Attachments.

Related Topics

Defining Asset Documents, page 3-82

Overview of eAM Cost Management, page 7-1

Failure Analysis Overview, page 28-1

Using Encumbrance Accounting with Maintenance Work Orders

You must specify an encumbrance account for the WIP Accounting Class used for maintenance (shop floor) work orders.

To define a WIP Accounting Class to use encumbrance accounting:

1. Navigate to the WIP Accounting Class window (Enterprise Asset Management > WIP Accounting Classes).
2. Define all the required fields on the page.
See Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*).
3. Select the Encumbrance Accounting field, and enter the encumbrance account to be used to capture the expenses.
4. Save your work.

Express Work Orders

You can use the express work order feature to capture work that has been completed. These types of work orders are also known as *emergency work orders*.

You can create a new work order, charge time to it and complete it at the same time.

Related Topics

Creating Express Work Orders, page 21-57

Preventive Maintenance Work Orders

Oracle Enterprise Asset Management enables you to generate work orders automatically based on meter readings, runtime intervals, and calendar days. Preventive maintenance activities reduce the probability of failure or degradation of the assets' physical conditions. These activities are executed periodically, by usage, or based on the condition of an asset number (asset or rebuild able serial number). Meters are entered to measure any asset number that needs to be measured and periodically serviced, based on the measurement. For example, a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced (See: Meters, page 3-159).

Scheduling definitions are defined to create forecasted, scheduled work orders, based on meter readings. You can create a Preventive Maintenance scheduling definition (See: Preventive Maintenance Scheduling, page 3-173) for an asset number or rebuild able item and activity combination (See: Associating Asset Numbers with Activities, page 3-

136), or an asset route (See: Defining Asset Routes, page 3-101). After you have defined Preventive Maintenance scheduling definitions, the Preventive Maintenance scheduler process may execute. You can view these forecasted work orders using the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70). You can execute the Generate Preventive Maintenance Work Orders process. When this process executes, work orders are created with a status of Unreleased. (See: Generating Work Orders, page 5-6). You can choose the Implement button to change the status of the Unreleased work orders to Released work orders.

Forecasted Work Orders

Select	Action	Type	Asset Number	Activity	Suggested Start Date	Exp
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	17-FEB-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	04-MAR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	19-MAR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	03-APR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	18-APR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	15000 Mile Maint	18-APR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	03-MAY-2005 12:00:00	

Related Topics

Preventive Maintenance Overview, page 5-1

Rebuild Work Orders

Rebuild work orders are created as child work orders.

For example, a work order was issued for the inspection of a pump. During the pump inspection, you found that the motor, one of the components of the pump, is problematic. You have two options: You can repair and then reinstall this motor (rebuild able item), or you can replace the rebuild able item by issuing a new motor rebuild able item from inventory. If you choose to perform a material issue from inventory, the old motor rebuild able item attaches to the work order, automatically creating the child, the rebuild work order number associated to the parent work order. In this case, the asset number genealogy would automatically update to identify this new item number. See: Overview of Inventory Transactions, *Oracle Inventory User's Guide*.

If you choose to repair and then reinstall the problematic motor rebuild able item, you

can manually create the child rebuild work order for the old motor (rebuild able item).

The instructions below show you the option of creating a rebuild work order without issuing any new material. The rebuild able item is replaced back into the asset (motor placed back into the pump, for example), and does not go to a subinventory when the work order is completed. In this case, the asset number genealogy is not updated.

To create rebuild work orders:

1. Navigate to the Rebuild Work Orders window (Work Orders > Rebuildable Work Orders).

Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: *Implementing Function Security, Oracle Applications System Administrator's Guide - Security.*

2. Choose New.

Rebuild Work Order

Rebuild Work Order (EM1)

Work Order: WO220179

Asset Number: LXENG0001

Rebuild Item: Lexus ES Engine

Rebuild Activity: Multimeter Calibration

Class: MaintWAC

Status: Draft

☐ Pending

Parent Work Order: WO192903

Relationship Type: Parent Child

MDA Multimeter Calibration Activity

Lexus ES Engine

Scheduled Dates

Start Date: 01-SEP-2006 00:17:55

Completion Date:

Duration(hours):

Actual Dates

Start Date:

Completion Date:

Main Activity Project **Rebuild** Request Approval History

Rebuild Source: WO192903

Charge Asset: LX0002

Charge Asset Group: Lexus ES300

Operations Materials Resources Relationships Asset Route Costs

The header information displays general information about the rebuild able item and the type of work required.

3. A work order number is assigned, but you can update it.
4. Optionally enter a Description for this work order, up to 240 characters.
5. Optionally select an Asset Number (serial number) from the list of values (See: Defining Rebuildable Items, page 3-143 and Generating Serial Numbers, *Oracle Inventory User's Guide*).
6. Enter or select a Rebuild Item requiring maintenance.
7. Optionally select a Rebuild Activity.

Only activities associated with this Rebuildable Item are available (See: Rebuildable Item/Activity Association, page 3-150). If an activity does not exist, you can add operations, and material/resource requirements to this work order manually. See: Defining Material Requirements, page 4-38, Defining Resource Requirements, page 4-47, and Preparing Work Order Operations, page 4-31. If an activity does exist, you can update the material and resources by choosing the Materials or Resources buttons from this window or by utilizing the Maintenance Workbench (See: Using

the Maintenance Workbench, page 4-70).

8. Enter a Class code.

This represents the charge (expense) accounts associated with the asset number. This defaults from the asset number (See: Defining Asset Numbers, page 3-85) and can be updated.

9. Enter the Status, for example, Unreleased, Released, On Hold, and Draft.

Note: User defined work order statuses are defined upon system statuses. For example, you can define a work order status of "Ready to Start" based on the Released system status. You can also have a work order status of Ready to Start based on the system status of Draft.

You can update the default value for the work order Status to a different status assigned to your organization.

Certain transactions update this status automatically, including Work Order Completion, for example (See: eAM Work Order Statuses, page 4-24).

10. The Pending check box value determines whether the work order has reached the status above or is still pending, due to work flow. If the check box is clear, the Status reflects the current state. If the check box is selected, the Status reflects a desired target state that is not yet reached due to pending activity, such as a work flow approval that is still in progress.

11. If this is a child work order in a work order network and Parent Child is populated in the Relationship Type field, the Parent work order is populated in this field.

This field is also populated if you selected a Rebuild Source work order, within the Rebuild tab.

12. The Relationship Type field indicates the type of Relationship associated with the work order.

Valid relationships are Parent Child, End to Start Dependency, Cost, and Follow-up Work. Manage complex maintenance jobs through these four types of work order relationships. See: Work Order Relationships, page 4-52.

- *Parent Child:* This relationship enables a network of work orders, which includes one top level work order that defines the time line of all its child work orders.

The start and end dates of the child work orders are within the start and end dates of the parent work order. A child work order can be parent to another work order. One parent can have multiple children, but one child can have a single parent.

- *End to Start Dependency:* You can create work orders with scheduling dependency relationships (including child sibling work orders). For example, one work order's scheduled start date is dependent on another work order's completion. With this relationship, the next work order cannot be created until the prior work order for the current asset is completed.
- *Cost:* You can roll the child work order costs into the parent work order, for reporting purposes.

You can base the cost roll up, within a hierarchy, on scheduling relationships. Scheduling relationships are not required to roll up costs within a hierarchy. You can create a cost reporting hierarchy that is different from the scheduling hierarchy.

- *Follow-up Work:* You can create a work order for the current capital asset number or Rebuildable Item, while executing work for the asset on another work order. For example, a second problem with the asset is discovered while executing a work order. A follow-up work order, associated with the original work order, is created for the issue. This is independent of scheduling or cost relationships.

13. In the Scheduled Dates region, enter the work order's scheduled Start date if it is based on a forward schedule.

The scheduling process uses this date as a starting point to calculate the scheduled end date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 3-195).

Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Production Scheduling enabled (See: Overview of Setting Up, *Oracle Production Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

14. Enter a scheduled Completion date for backward scheduling. This date indicates the requested end by date for the work.

The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required end date (See: eAM Scheduling, page 3-195).

Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset

Management scheduler if you have Oracle Production Scheduling enabled (See: Overview of Setting Up, *Oracle Production Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

15. Within the Main tab, the Department defaults from the selected asset number (See: Defining Asset Numbers, page 3-85). This indicates the persons or department responsible for this asset number.

16. Optionally select a Priority. For example, High, Medium, or Low.

17. Optionally select a Work Order Type. Work order types enable you to differentiate work orders, for example, Routine, Preventive, Emergency, or Facilities.

Maintenance management can use this information to sort and monitor work activity for reporting and budgeting. Work Order Types are referenced in the work order. For information on how to create valid values within the available list of values, See: Work Order Types, page 3-61.

18. The Shutdown Type defaults from the Rebuild Activity. This helps the planner group work orders that may require shutdowns, so that they are planned together.

19. If the Firm check box is selected, planning and scheduling does not adjust the schedule, regardless of material or resource availability (See: Overview of Planning and Scheduling).

This check box defaults as selected or cleared, depending on the Auto Firm on Release and Auto Firm on Create check box settings, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 3-13). This defaults after the work order is Released, if you select the Auto Firm on Release check box, and defaults immediately if you selected the Auto Firm on Create check box.

If the check box is selected, the end date is calculated, based on the work order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the work order. You can update this check box for work orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 4-24).

If the Firm check box is selected, you can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

20. Optionally select the Notification Required check box.

21. Optionally select the Tagout Required check box to indicate that the area must be secured for operations required to execute this work order.

Tags are generally printed and placed on an asset, warning the plant that it is

shutdown and should not be started. This check box helps the planner isolate those jobs that require a tagout.

- Select the paperclip Attachments icon to attach relevant tagout documents. You can attach URL, file, or text attachments. See: Defining Work Order Documents, page 4-28.

22. The Planned check box is selected if the current work order was created from forecasted work orders (See: Preventive Maintenance Work Orders, page 4-13).

23. Optionally select the Enable Material Issue Requests check box to enable eAM to manage material availability for the current work order.

Material is physically available to a work order via the material request and verification process.

24. Optionally enter Failure Information (See: Failure Analysis Overview, page 28-1).

The Failure Information region appears if the *Failure Code Required* value is set to *Yes*, within the Failure Set definition (See: Defining Failure Codes and Sets, page 28-2).

If the Failure Entry Required check box is selected, Failure Code entry is mandatory during work order completion.

25. The Material Shortage region enables you to view material availability. This region populates, after you have saved the work order.

The Material Shortage field displays whether there is a shortage of the material (at that moment in time) that is needed to complete the work order's operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the work order's associated BOM is available to transact (ATP is excluded). For direct items, the work order Material Shortage process determines if all of the direct items that are included within the work order's associated BOM are received into Inventory. This process should be set to automatically execute periodically, but you can execute it from the menu at any time.

You can choose Check Shortage to view the shortage details.

26. Optionally select the Activity tab to select alternate, predefined BOMs and Routings. See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Maintenance Routes, page 3-139.

After the alternate BOM and Routing are selected, the system uses the associated items and assigns the associated resources needed to execute the work order.

1. Optionally select an Activity Type. This code indicates the type of maintenance

for this activity and is used when defining a job or a standard job, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the activity (See: Defining Activities, page 3-69).

2. Optionally select an Activity Cause to specify what situation caused this work to generate, for example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the activity (See: Defining Activities, page 3-69).
 3. Optionally select an Activity Source to specify reasons activities need execution, for example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. This value defaults from the activity (See: Defining Activities, page 3-69).
27. Optionally select the Project tab. This tab is enabled if Project Manufacturing is installed and enabled.
1. Optionally select a Project.
 2. Optionally select a Task.
28. You can select the Rebuild tab to select a *Rebuild Source* work order. This work order is the parent to the current child work order. The *Charge Asset* field is populated with the parent work order's associated asset.
29. Optionally select the Request tab to display service and work requests associated with this work order. You can add service or work requests to a work order by selecting a service request or request number. Work requests at an Awaiting Work Order status and Maintenance Type service requests are available for association. You may associate multiple work requests to a single work order, but one work order can associate with a service request. You can associate a service request to multiple work orders. You can dissociate a work request from a work order.
1. Highlight the Work Request.
 2. Choose Delete.
30. Optionally select the Approval History tab to view the work order's approval history. A work order might require approvals or notifications at different stages of its life cycle. For example, organizations typically want an approval process in place before a work order is released. Work flow automates this process. You can initiate Work flow to generate notifications, approvals, transactions, and update a work order status. You can enable the Work flow for Work Orders option within the eAM Parameters (See: Defining eAM Parameters, page 3-13). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Work flow to indicate what events trigger Work flow. Seeded events that you can enable to trigger Work flow are: Work Order creation, Work Order release

approval, Work Order completion, Work Order status change, Operation completion. See: Setting Up Oracle Work flow, *Oracle Workflow User's Guide*, Setting Up the Business Event System, *Oracle Workflow User's Guide*, and Defining Work Order Statuses, page 4-24).

31. Optionally choose Operations to prepare necessary operations. These operations default from the maintenance route (See: Defining Maintenance Routes, page 3-139) associated with the current activity, but you can add or update them (See: Preparing Work Order Operations, page 4-31).
32. Optionally choose Materials to view, add, or update the associated asset number's items list (See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Material Requirements, page 4-38). From the Material Requirements window, you can optionally choose Select Materials to add Materials from the Asset BOM to the material requirements for the current work order.
33. Optionally choose Resources to view, add, or update the resources assigned to each operation. See: Defining Resource Requirements, page 4-47.
34. Optionally choose Relationships to manage work order schedules and view work order details. This button is enabled if a Relationship Type was previously selected. See: Work Order Relationships, page 4-52
35. Optionally choose Asset Route to view the asset route associated with the asset group for the current work order. You might need to perform one activity on multiple asset numbers. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. See: Defining Asset Routes, page 3-101.

You can choose Asset Route if an asset route is associated with the current asset number.
36. Optionally choose Costs to view the costs of work orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: Defining Period Types, *Oracle General Ledger User's Guide* and Defining Calendars, *Oracle General Ledger User's Guide*.
 1. Optionally select a work order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current work order.

Maintenance Work Order Value Summary

Maintenance Work Order Value Summary (EM1) - WO220268

Period From: 01-AUG-2006 Period To: 31-AUG-2006 Refresh

Asset Group		Completion Date	01-SEP-2006 01:08:22
Asset Number		Work Order Status	Draft
Asset Activity	Multimeter Calibration	Parent Work Order	WO192903
Rebuild Item	Lexus ES Engine	Estimation Status	Complete
Rebuild Serial Number	LXENG0001	Last Estimate Id	-1
Owning Department	Lexus Shop	Last Estimate Date	01-SEP-2006 01:09:21

Actual Costs Estimates Variances

Cost Category	Total	Material	Labor	Equipment
Job Total				

Details

- *Actual Costs:* This is the accumulation of all costs for material and resource transactions for the asset number's associated maintenance work orders, based on a specified period.
- *Estimates:* A BOM (material parts list) and routing (resources) can associate with a work order.

When you select the Estimates tab, the estimated costs of all material and resources associated with a work order appear, enabling you to budget costs.

- *Variances:* The difference between the actual costs recorded and estimated costs.
- *Material:* All material and material overhead transaction costs.
- *Labor:* All resource and resource overhead transaction costs associated with personnel.
- *Equipment:* All material resource and resource overhead transaction costs.

2. Optionally choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and material for specific operations of the current work order.

37. Save your work.

- After saving a work order, you can optionally associate asset attachments: (M) Tools > Copy Asset Attachments

Note: A requirement for rebuild work orders that are created automatically via a material transaction is that the completion subinventory must be an expense subinventory (See: Subinventory General Ledger Account Fields, *Oracle Inventory User's Guide* and Work Order Completion, page 4-60).

Note: A rebuild work order's owning department defaults from the owning department of its parent work order. This is viewable when you select the Main tab.

Related Topics

Defining Asset Documents, page 3-82

Overview of eAM Cost Management, page 7-1

Failure Analysis Overview, page 28-1

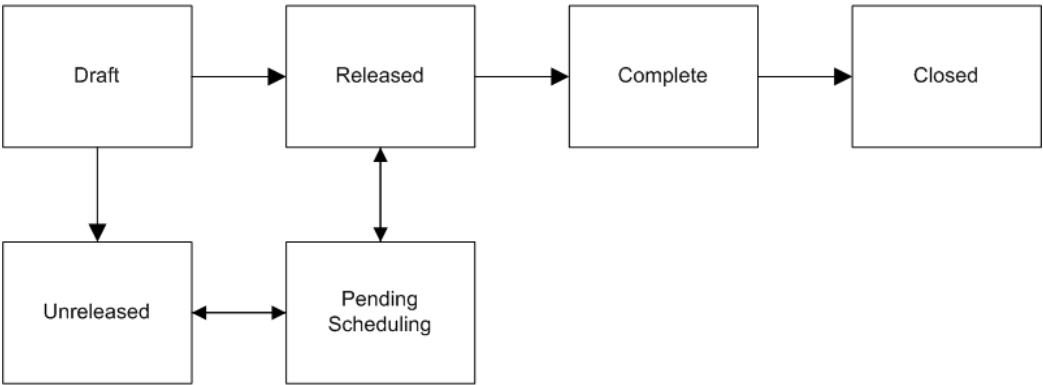
Easy Work Orders

Easy work orders are unplanned work orders, and enable you to avoid operation and resource planning. An activity does not default into the work order, based on the asset number and activity association as with planned work orders, however, you can add an activity to an easy work order. These work orders are only created in Maintenance User. Work orders can be created at any status, such as Released (See: eAM Work Order Statuses, page 4-24), enabling you to execute the work order by requesting material and charging labor.

eAM Work Order Statuses

An Enterprise Asset Management work order may progress through several statuses, throughout its life cycle duration. The diagram below illustrates how Enterprise Asset Management work orders might start at a Draft status, then move to Released, Complete, and finally Closed. These statuses can vary, depending on the type of work order that is created. For example, express work orders are automatically created in a Released status, bypassing the Draft status.

eAM Work Order Lifecycle



Status	Description
Draft	Infinite resource capacity scheduling of work orders at a Draft status may take place. You cannot charge labor, or request material for work orders at this status.

Status	Description
Released	<p>After a work order is Released, you can execute a work order. You can charge labor, request material, and scheduling for this work order takes place (See: eAM Scheduling, page 3-195) to create the scheduled start or end date. You can release a work order from the Work Orders window (See: Routine Work Orders, page 4-4), and the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70).</p> <p>If you create a work order with a future date and then release it, the release date is the system date. If you create a work order with a date in the past and then release it, the release date is the scheduled start date, since you can post transactions during any time after the scheduled start date (even if it is in past). The release date has a direct relationship with costing, and transactions for a work order cannot be posted before its release date. The release date might appear different from the start date, because of time zone conversions.</p>
Unreleased	<p>You can move an Enterprise Asset Management work order in Draft or Released status to Unreleased. Scheduling can take place for these work orders (See: eAM Scheduling, page 3-195) but you cannot charge labor or request material. An Unreleased work order cannot be changed to a Draft status.</p>
Pending Scheduling	<p>If the Scheduler is enabled, the work order status changes to Pending Scheduling, if a status of Released is chosen. After the Scheduler process finishes running, the status changes back to Released.</p>

Status	Description
Complete	<p>A Complete status for an Enterprise Asset Management work order does not require any completed operations. When a work order is completed, you can still charge labor, receive direct items, issue remaining material allocations and/or delete remaining material allocations. Demand will remain for unissued materials unless these are deleted. You can uncomplete a work order; this transitions it to a Released status. Uncompletion is performed within the work order complete/uncomplete pages in the Maintenance Super User responsibility (See Work Order Completion, page 4-60. You can close and uncomplete work orders with this status.</p>
Complete - No Charges	<p>A Complete - No Charges status for an Enterprise Asset Management work order does not require any completed operations. You cannot charge labor at this status nor issue materials. Remaining material allocations will be automatically deleted. Validation of open purchasing requirements will occur during work order update to 'complete-no-charges' status.</p> <p>You cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information on a work order that is at a Complete - No Charges status. Work orders in this status can be closed and can be updated to a Complete status. Applicable work orders in this status are eligible for Work Order Billing and Work Order Capitalization.</p>

Status	Description
Closed	<p>You cannot charge any accounts after an Enterprise Asset Management work order is closed. You can close and uncomplete work orders with this status. If a work order was at a Complete status at the time of closing it, you can uncomplete the work order to bring it back to a Complete status. For all other statuses during work order closing, the work order is transitioned to same status it had while closing. See: Closing Work Orders, page 4-66.</p> <p>You cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information on a work order that is at a Closed status.</p>
On-Hold	Enterprise Asset Management work orders at Released and Unreleased statuses can be put on hold. You cannot charge labor or request material for a work order at this status.
Cancel	<p>You can cancel an Enterprise Asset Management work order at any status in its life cycle.</p> <p>You cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information on a work order that is at a Cancel status.</p>

Defining Work Order Documents

You can attach existing documents to a work order, and create text to associate with a work order. You can attach text and files, such as spreadsheets, graphics, and OLE objects.

To define work order documents:

1. Navigate to the EAM Work Order Documents window.

EAM Work Order Documents

The screenshot shows the 'EAM Work Order Documents' form. The title bar is 'EAM Work Order Documents'. The form is divided into several sections. The 'Category' section has a dropdown menu set to 'Maintenance Job Attachme'. The 'Title' and 'Description' sections are text input fields. The 'Source' section contains a 'Data Type' dropdown set to 'File' and a 'File' text input field. The 'Security' section includes a 'Type' dropdown set to 'Organization', an 'Owner' dropdown set to 'Seattle Maintenance', and a 'Share' checkbox. The 'Usage' section has two radio buttons: 'Standard' (selected) and 'Template'. The 'Effective Dates' section has 'From' and 'To' text input fields. At the bottom of the form, there is a button labeled 'Open Document...' and a horizontal scrollbar.

2. Select a Data Type.

Related Topics

Working With Attachments, *Oracle Applications User's Guide*

eAM Operations and Tasks

Operations on a work order are the instructions or tasks to perform a repair. These operations are assigned resources, for example, trades people, outside service providers, and equipment.

This section includes the following topics:

- Defining Asset Shutdown Statuses, page 4-30
- Preparing Work Order Operations, page 4-31
- Viewing Work Order Operations, page 4-37
- Defining Inventory Material Requirements, page 4-38
- Defining Direct Item Material Requirements, page 4-43

- Viewing Material Requirements, page 4-45
- Defining Resource Requirements, page 4-47
- Viewing Resource Requirements, page 4-51

Defining Asset Shutdown Statuses

Shutdown of an asset is sometimes necessary to perform a maintenance activity. You can create new shutdown information associated with an asset, or view existing shutdown history information already recorded to an asset. Shutdown information consists of start and end dates, work order numbers requiring maintenance on the asset, and specific operation sequences. While completing a work order to its operations, you can view asset shutdown information in the Asset Status window.

All shutdown information entered within the Asset Status window is for information purposes only.

To view and define shutdown information for an asset:

1. Navigate to the Asset Status window.
2. Select an Asset Number, and click the **Find** button.

All shutdown information for the current asset appears in the Shutdown Details region.
3. Select a Start date to add new shutdown information for the current asset.
4. Select an End Date.
5. Optionally associate the shutdown information to a specific work order requiring maintenance on the current asset.

Only work orders created for the current asset are available.

Asset Status

The screenshot shows the 'Asset Status (EM1)' window. It has a search section at the top with fields for 'Asset Number' (FL1040), 'Asset Group' (Fork Lifts), 'Start Date', 'End Date', and a 'Fork Lift 1040' field. There is a 'Find' button and a checkbox for 'Show disabled shutdown details'. Below this is a 'Shutdown Details' section with a table of shutdown records.

Start Date	End Date	Work Order	Op Seq	St	Disable Flag
14-DEC-2006 10:44:00	14-DEC-2006 12:02:00	WO243865			<input type="checkbox"/>
07-DEC-2005 10:17:48	07-DEC-2005 11:35:48	207566			<input type="checkbox"/>
03-NOV-2005 13:14:21	03-NOV-2005 14:32:21	WO198962			<input type="checkbox"/>
16-APR-2005 09:15:06	16-APR-2005 10:15:06	WO166445			<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

6. Optionally associate shutdown information to the operation level of a work order by choosing a specific operation sequence.
7. Optionally enter a shutdown description.
8. Save your work.

Preparing Work Order Operations

Operations (also known as tasks) are the instructions to perform maintenance activities. Each operation is assigned to a department (See: Defining Departments and Resources, page 3-24), associated with assigned resources (trades people, outside service providers, and equipment). When you create a work order for an asset number, you can attach the asset number's associated activities and related maintenance route to work order. (See: Defining Maintenance Routes, page 3-139) and BOM. The maintenance route is comprised of operations necessary to complete the activity. You can view and update these operations from the work order.

To prepare operations:

1. Navigate to the Select work order window (work order Details > Operations).

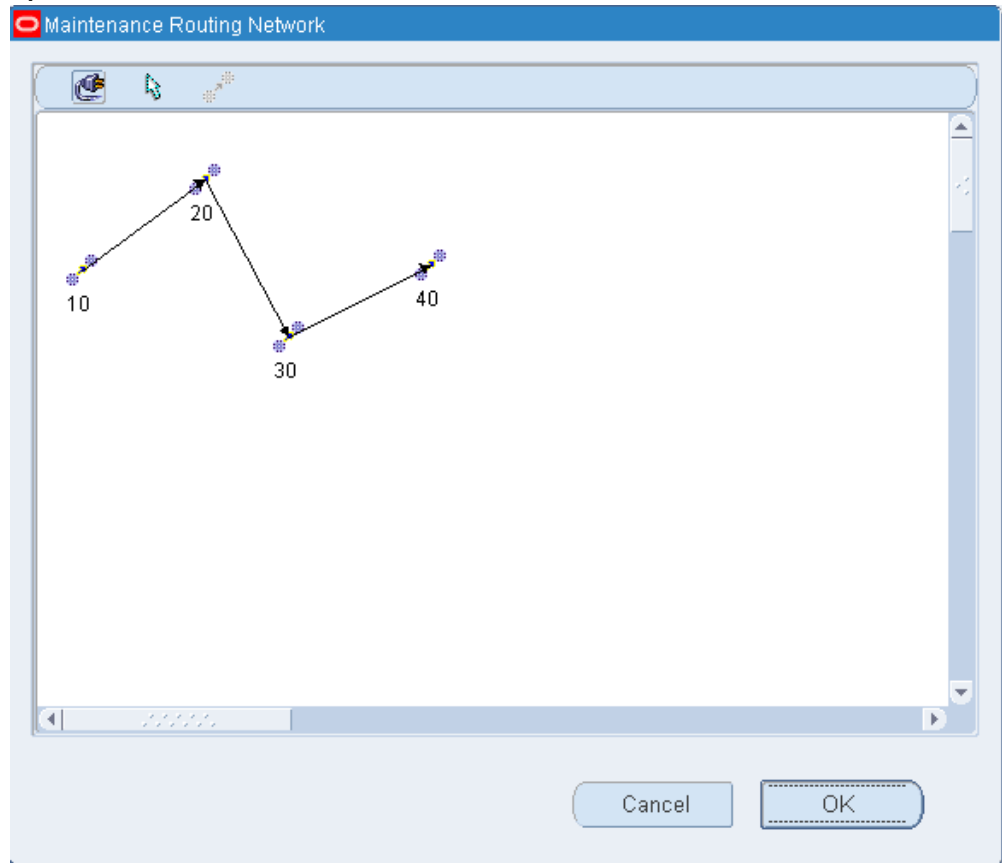
Note: This function is available for those users with responsibilities

and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: *Implementing Function Security, Oracle Applications System Administrator's Guide - Security*.

2. Select a work order.
3. Click the **Continue** button.

Operations can be scheduled to run in parallel, sequence, or through dependent steps. In the screen shot below, for example, Operation 20 is dependent on Operation 10, since there is a line connecting the operations; Operation 20 cannot be performed until Operation 10 is complete. Operations 30 and 40 run in parallel to each other. Operation 40 is independent; it can be performed at any time.

Operations



4. Choose the Operation icon, then click the header to display the New Operation window.
 1. Optionally enter or update an operation sequence, or let it generate for you, according to your profile setup (See: Item and Operation Sequence, *Oracle Bills of Material User's Guide*). Operations are generally assigned in increments of ten, enabling you to insert additional steps.
 2. Optionally enter a Description for this operation.
 3. Optionally to copy or reference standard operations into a routing, select an Operation Code. If you use a standard operation code, the operation information for that code is copied into the current operation. You can then update that information (See: Creating a Standard Operation, *Oracle Bills of Material User's Guide*).
 4. Select an Assigned Department.

The assigned department identifies the role responsible for performing the task.

5. Select a scheduled Start Date for this operation to base on a forward schedule.

The Enterprise Asset Management scheduling process uses the scheduled start date as a starting point to calculate the duration of the operation, based on the resources and material. If the material and resources are not available by this date, the scheduling process moves the start date of the work order forward. The planning process uses the scheduled start date to recommend creation of purchase orders for the material (See: Overview of Planning and Scheduling, page 6-1).

6. Select a scheduled Completion date for this operation to base on a backward schedule.

The Enterprise Asset Management scheduling process uses the scheduled end date as a starting point to calculate the duration of the operation, based on the resources and material. If the material and resources are not available by this date, the scheduling process moves the completion date of the work order backward. The planning process uses the scheduled completion date to recommend creation of purchase orders for the material (See: Overview of Planning and Scheduling, page 6-1).

Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Production Scheduling enabled (See: Overview of Setting Up, *Oracle Production Scheduling User's Guide*). Otherwise, the WIP scheduler calculates the dates.

7. Optionally select a Shutdown Type to help the planner group work orders that may require shutdowns.

When the work orders are grouped, they are planned together.

8. Click the **OK** button to return to the Operations window.

The operations entered in the previous window appear at the bottom of this window. Scroll over to the far right field.

The Duration identifies the duration of the operation and is measured in hours. You can manually enter this, or let it calculate as the difference between the estimated Start Date and estimated End Date.

5. After all necessary operations are entered, you can create dependencies as necessary.

Optionally choose the Connect icon to connect dependent operations. After chosen, you can draw a line between dependent operations.

You might need to move operations around. Optionally choose the Drag icon to

move an operation.

6. Optionally choose Dependencies to set dependencies between operations.
For example, Operation 30 is dependent on Operation 10 completing.

Dependent Operations

The screenshot shows a software window titled "Operations (EM1) - WO102907". The window has a toolbar with icons for a globe, a magnifying glass, and a network diagram. Below the toolbar is a large diagram area containing two small network icons labeled "1" and "2". Below the diagram area is a table with the following columns: "Operation", "Operation Code", "Assigned Department", "Completed", "Description", "Shutdown Type", and "Scheduled Start Date". The table contains two rows of data. Below the table are three buttons: "Dependencies", "Materials", and "Resources".

Operation	Operation Code	Assigned Department	Completed	Description	Shutdown Type	Scheduled Start Date
1	T100	F-Maint	<input type="checkbox"/>	Check Oil Filter Seal	Required	08-APR-2004 09:
2	T120	F-Maint	<input type="checkbox"/>	Check Oil Pressure	Required	08-APR-2004 09:
			<input type="checkbox"/>			
			<input type="checkbox"/>			
			<input type="checkbox"/>			

7. Optionally choose Materials to view or update the associated items list for the current operation (See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Inventory Material Requirements, page 4-38).

Material Requirements

Material Requirements (EM1) - WO102907, 1

Inventory Items ☒

Main Quantities Supply Comment ATP

	Material	Op	Department	Date Required	Material Description	Plai	[]
<input type="checkbox"/>	10-40W Oil	1	F-Maint	08-APR-2004 00:00	10-40W Vehicle Motor Oil	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	Oil Filter	1	F-Maint	08-APR-2004 00:00	Oil Filter	<input checked="" type="checkbox"/>	
<input type="checkbox"/>						<input type="checkbox"/>	
<input type="checkbox"/>						<input type="checkbox"/>	
<input type="checkbox"/>						<input type="checkbox"/>	

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

	Op	Item Type	Line Type	Item	Description	UOM	Required Qty	Purchasing Category	Need By Date
<input type="checkbox"/>	1	Description	Quantity		TEST	Ea	100	MISC.MISC	12-APR-2004
<input type="checkbox"/>									
<input type="checkbox"/>									

Select All Select Direct Items Copy To Asset

8. Optionally choose Resources to view or update the resources assigned to the current operation.

[illegible]

You can schedule at the resource level within an operation. See: [Defining Resource Requirements](#), page 4-47.

- Note:** You can view work order operations in a view-only mode. See: Viewing Work Order Operations, page 4-37.

You can view the operations required to perform a repair. These operations are assigned resources (trades people, outside service providers, and equipment), as well as material. The View Operations window does not enable you to update the operations. For instructions on updating operations, See: Preparing Work Order Operations, page 4-31.

1. Navigate to the View Operations window.

1. Within the Select Work Order window, select a work order.
2. Choose Continue.
2. Click the Details button on the Operations tab to view shutdown information.
3. Choose Dependencies to view operation dependency information.
4. Choose Materials to view material requirements. See: Defining Material Requirements, page 4-38.
5. Choose Resources to view resource assignment. See: Defining Resource Requirements, page 4-47.

Related Topics

Preparing Work Order Operations, page 4-31

Defining Inventory Material Requirements

When entering a work order for an asset number, the activity associated to the asset number attaches the required material and resources to complete its operations. However, you can update, add, view, and delete material requirements for a specific work order.

You can also specify a source subinventory and source locator at the BOM level or the work order material requirement level. If the Auto Request Material option is selected at the BOM level, material allocation will be initiated when the work order is released, and the source subinventory and source locator values you enter will override these values in the Inventory sourcing rules. If the Auto Request Material option is not selected, you can specify a source subinventory and source locator for your material when you perform a material request or a One-Step Material Issue.

To define work order material requirements:

1. Navigate to the Select Work Order page (Work Order Details > Material Requirements).

Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System*

2. Select a work order.
3. Click the **Continue** button.

Material Requirements

Material Requirements (EM1) - 207566

Inventory Items

Main Quantities Supply Comment ATP

	Material	Op	Department	Date Required	Material Description	Plan
<input type="checkbox"/>	Fork Lift Battery	10	W-Maint	07-DEC-2005 00:00	Batteries used for electric Fork Lift	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Shop Rags	10	W-Maint	07-DEC-2005 00:00	Shop Rags for Clean up	<input checked="" type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

	Op	Item Type	Line Type	Item	Description	UCM	Required Qty	Purchasing Category	Need By Date
<input type="checkbox"/>			Quantity				1		
<input type="checkbox"/>									
<input type="checkbox"/>									

Select All Select Direct Items Copy To Asset

4. Optionally, within the Inventory Items region, you can view or update the item list associated with the asset number. (See: Setting Up Asset Bills of Material, page 3-103) by placing your cursor in the Material field or by choosing Select Materials. When you choose Select Materials, the current asset numbers associated Asset Bill of Material items are available to be added to the required material for the current work order.

Select Materials

Select Materials (EM1) - 207566

Asset Number: FL1040 Fork Lift 1040

Asset Group: Fork Lifts To Operation:

	Material Description	UOM	Quantity	Supply Type	
<input type="checkbox"/>	Motor - Electric For	Electric Fork Lift Motor	Ea	1	Push
<input type="checkbox"/>	Battery - Electric F	Power Battery For Electric Fork	Ea	1	Push
<input type="checkbox"/>	Trans Electric Fork	Transmission / Drive Train Electr	Ea	1	Push
<input type="checkbox"/>	Oil Filter Electric	Oil Filter Electric Fork Lifts	Ea	1	Push
<input type="checkbox"/>	Mast	All Lift Masts for All Fork Lifts	Ea	1	Push
<input type="checkbox"/>	Rear Wheels - Elec	Rear Wheels Electric Fork Lifts	Ea	2	Push
<input type="checkbox"/>	Front Wheels - Ele	Front Wheels Electric Fork Lifts	Ea	2	Push
<input type="checkbox"/>	Forks	Forks for all Fork Lifts	Ea	1	Push
<input type="checkbox"/>	Fork Lift Lubrication	Lubrication for Masts	Ea	1	Push
<input type="checkbox"/>					

Select All OK Cancel

5. Optionally select the Main tab to change operation sequence and the date required.

Note: If you are accessing the Select Materials page via the Operations page, you cannot change operation information. If you are accessing the Select Materials page using the Work Order page, you can change operation information.

6. Optionally select the Quantities tab to update the quantities Required.
7. Optionally select the Supply tab to select a supply Type. You can optionally specify a value for the Source Subinventory and Source Locator fields.

Supply

Material Requirements (EM1) - 207566

Inventory Items

Main Quantities **Supply** Comment ATP

Material	Type	Subinventory	Locator	MRP Net
<input type="checkbox"/> Fork Lift Battery	Push	Bat Rchrg		<input checked="" type="checkbox"/>
<input type="checkbox"/> Shop Rags	Push	FkflStore		<input checked="" type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

Op	Item Type	Line Type	Item	Description	UOM	Required Qty	Purchasing Category	Need By Date
<input type="checkbox"/>		Quantity				1		
<input type="checkbox"/>								
<input type="checkbox"/>								

Select All Select Direct Items Copy To Asset

8. Optionally select the Comment tab to enter information for the current Material.
9. Optionally choose the ATP tab to define available to promise information for the current material. If you select the ATP Allowed check box, available to promise information can be calculated for the current material.
10. Optionally choose Check ATP to check available to promise information for the selected material.

ATP Results

Calendar Organization: EM1 Demand Class:

View Results Group Available Date: 03-DEC-2015

Required and Projected ATP and Early ATP Description

Org	Item/Resource	Type	UOM	Required Quantity	Required Date	Available Quantity	Projected Transactable
EM1	Fork Lift Battery	Item	Ea	1	10-JUL-2014	0	

Request Item: Fork Lift Battery Description: Batteries used for electric Fork Lifts

Supply/Demand Period ATP Open

11. Optionally choose Direct Item to create requisitions for direct items, and add them to your items list. Oracle Self Service Purchasing defaults the Work Order Number and Operation Number, as well as the class code information for correct expensing. Direct Items are one time, non-inventoried items that are purchased directly from the supplier. After you choose Direct Item, the current work order and operation reference values are passed to the requisition created. If the work order is project related, the project and task information is captured in the purchase requisition (See: Overview of Direct Item Procurement for eAM Work Orders, page 6-1). You can exit Self Service Purchasing and return to the Material Requirements page by choosing Return To Portal.

Upon re-query of this work order, the Direct Items region reflects any requisition and purchase order details.

Note: You must have Oracle Self Service Purchasing installed for this functionality. You can purchase direct items from a Requisition or Purchase Order page if you have Oracle Purchasing installed (See: Entering Purchase Orders for Direct Items, page 8-20).

Note: You can procure direct items to work orders at Released statuses.

12. Choose Copy to Asset to dynamically update the BOM associated to the asset group

with any items list changes (See: Setting Up Asset Bills of Material, page 3-103).

13. Save your work.

Note: You can view work order material requirements in a view-only mode. See: Viewing Material Requirements, page 4-45.

Related Topics

Viewing ATP Information, *Oracle Inventory User's Guide*

Defining Direct Item Material Requirements

Direct items represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are considered as "one off", bought directly from a vendor for a specific work order and operation. These items are delivered directly to the shop floor for maintenance work order execution.

To set up non-stock direct items, access the Master Item window within Oracle Inventory, and set up the item with the Stockable check box cleared. See: Defining Items, *Oracle Inventory User's Guide*. Description-based direct items are not set up within Oracle Inventory.

You can add non-stock based direct items to asset, maintenance, and rebuildable BOMs. You can add non-stock and description-based direct items directly to the material requirements for an existing work order.

If direct items exist on an activity BOM, they appear as default material requirements when creating a work order for that activity. However, you can add additional direct item material requirements to an existing work order.

Setting Up Asset Bills of Material, page 3-103

Setting Up Maintenance Bills of Material, page 3-134

Defining Rebuildable Bills of Material, page 3-152

To add direct item material requirements:

1. Navigate to the Select Work Order window.
2. Choose a work order.
3. Choose Continue.

Material Requirements

Material Requirements (EM1) - 207566

Inventory Items

Main Quantities Supply Comment ATP

	Material	Op	Department	Date Required	Material Description	Plan
<input checked="" type="checkbox"/>	Fork Lift Battery	10	W-Maint	07-DEC-2005 00:00:00	Batteries used for electric Fork Lift	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Shop Rags	10	W-Maint	07-DEC-2005 00:00:00	Shop Rags for Clean up	<input checked="" type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

	Op	Item Type	Line Type	Item	Description	UOM	Required Qty	Purchasing Category	Need By Date
<input checked="" type="checkbox"/>	10	Non Stock Item	Quantity	Electrical Se	NonStock Dire	HR	1	MAINTENANC. OUTSID	07-DEC-2005
<input type="checkbox"/>									
<input type="checkbox"/>									

Select All Select Direct Items Copy To Asset

4. Within the Create Direct Items region, select an Operation.
5. Select an Item Type.
 - *Description Based Item*: This direct item type is not stored in Oracle Inventory.
 - *Non Stock Item*: This direct item type is stored in Oracle Inventory. Its Master Item record's Stockable check box is cleared.
6. If you selected a Non Stock Item Type, select an Item.
This field is disabled if a Description Based Item Type was previously selected.
7. Enter a Description, if you previously selected a Description Based Item Type.
8. Select a UOM. If you previously selected a Non Stock Item Type, this value defaults from the Master Item.
9. Select a Purchasing Category. See: Setting Up Purchase Order Category Associations for Direct Items, page 3-230.
10. Enter a Need By Date; the system date defaults.
11. Click the horizontal scrollbar.

12. Select or enter a value for the following fields:

- Supplier Contact
- Supplier Site
- Contact Phone

Suggested Supplier	Price	Currency	Supplier Site	Supplier Contact	Contact Phone	Supplier Item
<input type="checkbox"/> Allied Manufacturing	50	USD	LOS ANGELES		800-555-1212	
<input type="checkbox"/>						
<input type="checkbox"/>						

13. Save your work.

Viewing Material Requirements

When you enter a work order for an asset number, the activity associated with the work order attaches the required material (See: Setting Up Maintenance Bills of Material, page 3-134) and resources to complete its operations. You can view material requirements for a specific work order.

To view work order material requirements:

1. Navigate to the View Material Requirements window.
 1. From the Select Work Order window, select a work order.
 2. Click the **Continue** button.

View Material Requirements

Inventory Items

Main Quantities Supply Comment ATP

	Material	Op	Department	Date Required	Material Description	Plan	MRP Net
<input type="checkbox"/>	Fork Lift Battery	10	W-Maint	01-NOV-2002 00:1	Batteries used for electric Fork Lift	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Shop Rags	10	W-Maint	01-NOV-2002 00:1	Shop Rags for Clean up	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

	Op	Item Type	Line Type	Item	Description	UOM	Required Qty	Purchasing Category	Need By Date
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									

Select All Select Direct Items Copy To Asset

2. In the Inventory Items region, you can view inventoried items on this work order's required items.

You can view them by warehouse, and at the subinventory level.

1. In the Main tab, you can view operation sequence and the Date Required.
2. In the Quantities tab, you can view the quantities Required.
3. In the Supply tab, you can view supply Type information, such as material, subinventory and source locator, if applicable.

Supply

Material	Type	Subinventory	Locator	MRP Net
<input checked="" type="checkbox"/> Fork Lift Battery	Push	Bat Rchrg	FkltStore	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Shop Rags	Push	FkltStore	FkltStore	<input checked="" type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

4. In the Comment tab, you can view comment information.
5. In the ATP tab, you can view defined available to promise information.

Related Topics

Defining Material Requirements, page 4-38

Defining Subinventories, *Oracle Inventory User's Guide*

Defining Resource Requirements

You can view, update, add, or delete resource requirements for a work order. Resources are used to perform a task for a maintenance operation. A resource is a person, piece of equipment, or contractor service used to perform an operation. A resource and usage rate for all scheduled activities is required in a routing.

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work, based on an agreed upon contract or agreement. For example, within maintenance work environments, it is often important to include landscaping services within a work order. It is also important to relate the purchasing transactions, such as the requisition and purchase order to the work order. In order for this to execute, the appropriate steps are completed in Purchasing and Enterprise Asset Management.

When defining departments, available resources are assigned in each department and the shifts that each resource is available. For each operation defined, you specify a department and list of resources and usages. An operation can use any resource that is available in the department, but not all resources are assigned to the department. An operation can use resources that are owned or borrowed from other departments. (See: Defining Departments and Resources, page 3-24).

To define resource requirements:

1. Navigate to the Select Work Order window (Work Order Details > Resource Requirements).

Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: *Implementing Function Security, Oracle Applications System Administrator's Guide - Security*.

2. Choose a Work Order.
3. Choose Continue.

The resources that appear on the following Resources window are assigned to the department, and assigned to the current operation of the routing. See: *Defining Departments and Resources*, page 3-24.

Resources (EM1)

Main Quantities Scheduling Costing

				Usage Rate or Amount			
Operation	Res Seq	Department	Resource	UOM	Basis	Value	Inverse
10	10	F-Maint	Mechanic1	HR	Item	.25	4

Instances

- Note:** If you access the Resources window via the Operations window, you cannot change operation information. If you access the Resources window via the Work Order window, you can change operation information.

- The UOM requires a time-based measure, for this work order to schedule. It must be the same as the site level profile option, BOM: Hour UOM. See: Bills of Material Profile Options, *Oracle Bills of Material User's Guide*.

- eAM Work Management 4-49

- *Item*: Charge and schedule the resource where the resource usage quantity is the amount required per assembly unit you make.
- *Lot*: Charge and schedule the resource where the resource usage quantity is the amount required per job or schedule.

If you select Lot, the Basis will be based on the *resource item* when the work order is created.

9. Enter the Usage Rate or Amount Value for the resource. You can post usage time for persons, equipment, and miscellaneous material.
10. Select the Quantities tab. You can view the Required quantity of this resource to use. This information defaults from the Usage Rate/Amount information. You can also view the Applied amount or rate of the resource already used. The Open amount or rate identifies the amount of the resource left to use (the difference between the Required and Applied).
11. Select the Scheduling tab. This information defaults from the current operation's setup. See: Preparing Work Order Operations, page 4-31.
Select Yes in the Scheduled field to indicate that this resource can be scheduled.
12. Select the Costing tab. You can view and update this resource's costing information.
 1. Select a Charge Type.
 - *Manual*: You can manually enter the cost.
 - *PO receipt*: The cost defaults as the cost on the purchase order receipt.
 2. The Department defaults as the area the current resource is assigned to. See: Defining Departments and Resources, page 3-24.
13. Optionally choose Instances to view or update a list of specific people or equipment assigned to this resource. The Person tab displays persons grouped in specific roles. The Equipment tab displays similar types of equipment grouped by resource. You can define specific machines to any of your machine type resources and you can define specific persons to any of your labor type resources. When a resource has instances defined, you can view the resource load and capacity in the Scheduler Workbench (See: Using the Scheduler Workbench, page 6-7).

For example, you can define all machines belonging to the resource, GRINDERS. An individual grinder machine can then be a specific resource requirement and scheduled, and can have its own unique capacity definition.

This information defaults from your current resource definition. You can add persons (including contingent workers) and equipment that are associated with the current resource.

See: Defining a Resource, *Oracle Bills of Material User's Guide*.

14. Save your work.

Related Topics

Defining a Resource, *Oracle Bills of Material User's Guide*

Viewing Resource Requirements

You can view resource requirements for a work order. Resources define the time an assembly spends at an operation and the cost you incur for the operation. A resource is a person, piece of equipment, or contractor service used to perform an operation. A resource and usage rate for all scheduled activities are required in a routing.

To view resource requirements:

1. Navigate to the View Resource Requirements window.
2. From the Select Work Order window, select a work order.
3. Choose Continue.

View Resource Requirements

Operation	Seq	Department	Resource	UOM	Basis	Value	Inverse
10	10	W-Maint	FliftMech	HR	Item	.1	10
10	20	W-Maint	FKTK	HR	Item	1	1
20	10	W-Maint	FliftMech	HR	Item	.1	10
30	10	W-Maint	FliftMech	HR	Item	.1	10
40	10	W-Maint	FliftMech	HR	Item	.1	10

4. View the list of operations and their resources associated to the current work order.

Related Topics

Preparing Work Order Operations, page 4-31

Defining Departments and Resources, page 3-24

Defining Resource Requirements, page 4-47

Defining a Resource, *Oracle Bills of Material User's Guide*

Work Order Relationships

Work order relationships enable you to manage a network of related work orders, enabling you to manage complex projects, such as planned or facility shutdowns. The different relationships provide separate scheduling rules that are used to manage large projects. A Gantt chart enables you to manage work by displaying work order schedules and a summary of work order details. The Gantt Chart's drag and drop functionality enables you to manage schedules with ease.

This section includes the following topics:

- Work Order Relationship Definition, page 4-53

- Parent-Child Relationship, page 4-53
- End to Start Dependency, page 4-55
- Cost Relationship, page 4-55
- Follow-up Work Relationship, page 4-56

Work Order Relationship Definition

Work orders for different assets may associate to each other in a hierarchy. Valid relationships are Parent Child, End to Start Dependency, Cost, and Follow-up Work. Manage complex maintenance jobs through these four types of work order relationships. See: Routine Work Orders, page 4-4. A Gantt chart enables you to manage work by displaying work order schedules and a summary of work order details. The Gantt Chart's drag and drop functionality enables you to manage schedules with ease.

Parent-Child Relationship

The Parent-Child Relationship enables a network of work orders, which includes one top level work order that defines the time line of all its child work orders. The start and end dates of the child work orders are within the start and end dates of the parent work order. The parent work order dates are scheduled, while its child work orders automatically schedule, as well. A child work order can be a parent to another work order. One parent can have multiple children, but one child can have only a single parent. You can have an infinite number of parent-child work order levels.

To create parent work orders:

1. Navigate to the Work Orders page (Maintenance Super User: Work Orders tab).
2. Query a work order (See: Viewing Work Orders, page 21-64).
3. Click the work order and select the Work Relationships sub-tab.

This page graphically displays the work order's schedule. The tab enables you to view the scheduling relationships for the work order in a graphical format and lists the work order's possible relationships.

Work Relationships

Work Order: WO102907 ☆

[Uncomplete Work Order](#)

[Update Work Order](#)

[Check Material Shortage](#)

[Estimate](#)

[View Costs](#)

Work Order WO102907

Description Leaking Oil

Department F-Maint

Scheduled Start Date 08-Apr-2004

16:06:00

Asset Activity

Scheduled Completion Date 08-Apr-2004

16:07:00

Status Complete

Duration(hours) 0.017

System Status Complete

Enable Material Issue Request Yes

Project

Material Shortage

Task

Work Order Type Reactive

Firm Yes

Activity Type Service

Activity Cause Breakdown

Activity Source Routine

[Work On Map](#)

Planner

Work Order Attachments [More...](#)

Priority High

[Show Additional Details](#)

[Show Completion Details](#)

Asset Details

Asset Number [DTF35000](#)

Asset Description Delivery Errand Truck 35000

Asset Group Vehicles

Area Fleet Garage

Department F-Maint

Asset Criticality Normal

Asset Status Latest

Parent Asset [Delivery Trucks](#)

[Operations](#) [Materials](#) [Quality Plans](#) [Requests](#) **[Work Relationships](#)** [Approval History](#) [Preventive Maintenance](#) [Failure Information](#) [Safety](#)

Select Work Order: [Update Dependencies](#)

[Go](#)

[Update Work Hierarchy](#)

[Update Alternate Cost Hierarchy](#)

[View Cost](#)

[Expand All](#) | [Collapse All](#)

Select Focus Work Order	April
<input type="radio"/>	WO102907

[View All Relationships](#)

- Select the work order for which you want to define a child work order, and click Update Work Hierarchy.

Use the Update Work Hierarchy page to add a child work order.

Maintenance Home [Assets](#) [Work Requests](#) **[Work Orders](#)** [Stores](#) [Budget Forecasts](#) [Failure Analysis](#) [Construction Units](#) [Safety Management](#) [Reports](#)

[All](#) [Requests](#) [Express Work](#) [Crew Schedule](#) [Mass Time Entry](#) [Generate PM Work Orders](#)

Work Orders: All > Work Order: WO102907 >

Update Work Hierarchy [Cancel](#) [Save And Continue](#) [Apply](#)

Select Work Order: [Create Child Work Order](#) [Go](#) [Refresh](#) [Settings](#) [Help](#)

[Expand All](#) | [Collapse All](#)

	Focus Work Order	Description	Asset Number	Status	Scheduled Start Date	Scheduled Completion Date	Duration(hours)	Firm	Scheduling Relationship Status	Shift Dates	Remove
<input type="radio"/>	WO102907	Leaking Oil	DTF35000	Complete	08-Apr-2	08-Apr-2	0.017	Yes			Remove

- In the Select Work Order field, depending on your requirement, select to create a new child work order or add an existing work order as a child.
- Enter details of the new child order you want to create, or add the existing work order that you are adding as a child.
- Click the Apply button.

A confirmation message displays that the work order has been added as a scheduling child.

End to Start Dependency

You can create work orders with scheduling dependency relationships (including child sibling work orders). For example, one work order's scheduled start date is dependent on another work order's completion. With this relationship, the next work order cannot start until the prior work order is completed. Note that to create an end to start dependency between two work orders, they should be siblings sharing a common parent.

To create End to Start dependencies:

1. Navigate to the Work Orders page (Maintenance Super User >Work Orders).
2. Search for a work order. (See: Viewing Work Orders, page 21-64).
3. Click the work order and select the Work Relationships sub-tab.
4. Select a work order and in the Select Work Order field, and choose the option to Update Dependencies.
5. In the Work Order Dependencies page, click the Add Dependencies button.
6. Select a work order in the Dependent Work Order field. In the Dependency Type field, select Prior or Next.

Maintenance Home Assets Work Requests **Work Orders** Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Mass Time Entry Generate PM Work Orders

Work Orders: All > Asset Details: FL1030 > Work Orders > Work Order: EAM-WO-003 >

Work Order Dependencies: EAM-WO-003 Cancel Apply

Work Order EAM-WO-003 Description Lubricate Fork Lift Mast
Asset Number FL1030 Asset Group Fork Lifts
Scheduled Start Date 25-Nov-2008 15:00:00 Scheduled Completion Date 25-Nov-2008 16:00:00

Dependent Work Order	Dependency Type	Start Date	End Date	Schedule Status	Remove
----------------------	-----------------	------------	----------	-----------------	--------

7. Click the Apply button.

Cost Relationships

You can optionally roll a child work order's costs into the parent work order for reporting purposes. You can perform cost roll ups on ad hoc work orders because the cost roll up is independent of scheduling relationships. You can base the cost roll up, within a hierarchy, on scheduling relationships, as well. Scheduling relationships are not required to roll up costs within a hierarchy. You may create a cost reporting hierarchy that is different than the scheduling hierarchy.

To create work order costing relationships:

1. Navigate to the Work Orders page (Maintenance Super User > Work Orders).
2. Query a work order (See: Viewing Work Orders, page 21-64).
3. Click the work order and select the Work Relationships sub-tab.
4. To view the cost roll up of a child work order, click View Costs.

Maintenance Home Assets Work Requests **Work Orders** Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Mass Time Entry Generate PM Work Orders

Work Orders: All >

Work Order Costs

* Indicates required field

Work Order WO325907 Include Child Work Order No

Period From Period To

Go Clear

Select Object: Estimate Export

Expand All Collapse All

	Focus	Work Order	Asset Number	Asset Group	Asset Type	Actual Cost(USD)	Estimated Cost(USD)	Variance Cost(USD)	Cumulative Actual Cost(USD)	Cumulative Estimated Cost(USD)	Cumulative Variance Cost(USD)	Estimation Status
<input type="checkbox"/>		WO325907	FL1010	Fork Lifts	Capital	0.00	27.08	27.08	0.00	27.08	27.08	Complete

5. Click the Update Alternate Cost Hierarchy to create a cost reporting hierarchy. You can create new work orders or add existing work orders.

Alternatively, to establish a cost reporting hierarchy by importing the parent-child work order hierarchy, click the Import Work Hierarchy button.

Maintenance Home Assets Work Requests **Work Orders** Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Mass Time Entry Generate PM Work Orders

Work Orders: All > Work Order: WO325907 >

Update Alternate Cost Hierarchy

Import Work Hierarchy

Select Work Order: Create Child Work Order Go

Expand All Collapse All

	Focus	Work Order	Description	Asset Number	Status	Scheduled Start Date	Scheduled Completion Date	Remove
<input type="radio"/>		WO325907	FL1010	FL1010	Released	14-Feb-2013 16:54:00	14-Feb-2013 17:54:00	

6. A confirmation message displays and the work order is added as a cost child.

Follow-up Work Relationships

You can create a work order for a capital asset number or rebuild able item, while executing work for the asset on another work order. For example, a second problem with an asset is discovered while executing a work order. A follow-up work order, associated with the original work order, is created for the issue. This is independent of scheduling or cost relationships.

To create and view follow-up work orders:

1. Navigate to the Work Orders tab (Maintenance Super User > Work Orders).
2. Search for a work order (See: Viewing Work Orders, page 21-64).
3. Select View Follow-up Work Orders from the Select Work Order list of values.
4. Choose Go.

Maintenance Home

Assets

Work Requests

Work Orders

Stores

Budget Forecasts

Failure Analysis

Construction Units

Safety Management

Reports

All

Requests

Express Work

Crew Schedule

Mass Time Entry

Generate PM Work Orders

Work Orders: All >

View Follow-up Work Orders

Expand All | Collapse All

Focus Work Order	Description	Asset Number	Status	Scheduled Start Date	Scheduled Completion Date
WO324907		FL1010	Released	13-Feb-2013 18:20:00	13-Feb-2013 20:20:00

5. Select a value in the Select Work Order field list of values to create a follow-up work order.
6. Click Go.
7. Use the Create Follow-Up Work Order page to enter details of the follow-up work order that you are creating.

Create Follow-up Work Order Cancel Save A

* Indicates required field
Time = hours

Originating Work Order	WO324907	Scheduled Start Date	13-Feb-2013 18:20:00
Status	Released	Scheduled Completion Date	13-Feb-2013 20:20:00
Relationship Type	Followup Work	Scheduled Duration	2

* Work Order	WO400907	Planner	<input type="text"/>
Asset Number	<input type="text"/>	Description	<input type="text"/>
<small>Asset Number is mandatory for Assets and Serialized Rebuilds</small>			
* Asset Group	<input type="text"/>	Department	Operations
* Wip Accounting Class	MaintWAC	Department Description	Operations
Scheduled Start Date	28-Jun-2019 19:18:00	Asset Activity	<input type="text"/>
<small>(example 28-Jun-2019 19:18:56)</small>			
Scheduled Completion Date	28-Jun-2019 19:18:00	Firm	No
Duration	0	Status	Draft
Request Number	<input type="text"/>	Work Order Type	<input type="text"/>
		Shutdown Type	<input type="text"/>
		Priority	<input type="text"/>

Asset Details
 Asset Number
 Asset Description
 Asset Group
 Area
 Department
 Asset Criticality
 Asset Status
 Parent Asset

► **Additional Details**

► **Failure Information**

► **Operations**

► **Materials**

► **Work Permits**

► **Work Clearance**

Cancel Save Apply

8. Click Apply.

A confirmation message displays that a follow-up work order has been created.

Related Topics

eAM Scheduling, page 3-195

eAM Work Order Transactions

There are two types of Enterprise Asset Management work order transactions: material and resource. A material transaction is used when you issue material from inventory to a work order. A resource transaction is used when you charge resources (for example labor, or equipment) to a work order.

This section includes the following topics:

- Operation Completion, page 4-59
- Work Order Completion, page 4-60
- Rebuild Work Order Completion, page 4-63
- Transacting Material, page 4-64

- Viewing Resource Transactions, page 4-65
- Closing Work Orders, page 4-66

Operation Completion

Operations are the instructions or tasks to perform a repair. Every operation is assigned to a department (See: Defining Departments and Resources, page 3-24), associated with assigned resources (trades people, contractor services, and equipment). When you enter a work order for an asset number, the associated activity (See: Associating Asset Numbers with Activities, page 3-136) attaches to the work order, delivering its related maintenance route (See: Defining Maintenance Routes, page 3-139) and BOM. The maintenance route is comprised of operations necessary to complete the activity. You can Complete and Uncomplete operations. After an operation is complete, you can perform an Operation Uncompletion. If an operation is dependent upon another operation, you cannot uncomplete that operation's dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 after operation 20 has been completed.

You can complete or uncomplete an operation using the Maintenance Super User responsibility.

To complete an operation:

1. Navigate to the Maintenance Super User responsibility.
2. Select the Work Orders tab.
3. Query work orders and select a work order from the list.
4. Select an Operation and choose Complete/Uncomplete. This is the operation you wish to complete.

Operations

Operations												
Operations Materials Quality Plans Requests Work Relationships Approval History Preventive Maintenance Failure Information Safety												
Summary Details												
Select Row: Complete/Uncomplete Go Add ...												
Show All Details Hide All Details												
Details	Operation	Description	Department	Resource	Required	Assigned Units	Start Time	End Time	Duration(hours)	Instances Assigned	Assigned Hours	Flexfields
<input checked="" type="radio"/>	10 OP1		Operations	R1	2	13-1	Mar-2013 08:26:50	13-1	Mar-2013 10:26:50	2	1	

5. Enter the Actual Start Date and Time of transaction; the system date appears as default values.

6. Enter Actual Duration (hours) information.
7. The Actual End Date defaults as the current system date. You cannot change this value.
8. Optionally enter a Reconciliation Code.

This is a description of why you are completing this operation. For example, Operation Completed or Operation Partially Completed.
9. Click the **Apply** button.

To uncomplete an operation:

1. Navigate to Maintenance Super User responsibility.
2. Select the Work Orders tab.
3. Query work orders and select a work order from the list.
4. Select an Operation and choose Complete/Uncomplete.

If the operation was previously completed, then you can uncomplete the operation.
5. Click the Apply button to uncomplete the operation.

Related Topics

Preparing Work Order Operations, page 4-31

Defining Maintenance Routes, page 3-139

Operation Completion Moves, *Oracle Work in Process User's Guide*

Work Order Completion

Oracle eAM work orders are created against assets. They are defined manually, or generated automatically based on a scheduled activity. If you attach a manually created work order to an activity (normally the role of a planner), the work order inherits the activity's attributes, such as the asset BOM, asset route (operations), attachments, quality plan for the parent and any child work orders including any ERES and E-Signatures required, cost information, and scheduling rules.

For more information, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

The operations within a work order do not need to be complete to complete a work order. However, the date you complete a work order must be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date

you start a work order must be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a Complete, Complete - No Charges, Cancelled, Pending - Close or Failed - Close work order. If you uncomplete a work order with a status of Complete or Complete - No Charges, transitions to a Complete status; for all other statuses, the work order transitions to the status it had when closed. See: eAM Work Order Statuses, page 4-24).

For planned work orders, the default work order completion date value is the scheduled completion date.

However, the profile option, EAM: Actual Work Completion Date Preference, can be set to use the system date as the default work order completion date. See EAM Profile Options in the *Oracle Enterprise Asset Management Implementation Guide*.

Planners or crew supervisors can complete or uncomplete work orders, using the Maintenance Workbench (Using the Maintenance Workbench, page 4-70), from the Enterprise Asset Management responsibility, or by accessing the Work Order Completion menu option. After completing a work order, the completion transaction record is created with an electronic signature (User Name). During completion, a record is created with this signature for any mandatory collection plan results or mandatory meter readings.

To complete a work order:

1. Navigate to the Work Order Completion window (Maintenance Super User or Maintenance User Workbench: Work Orders tab or Enterprise Asset Management: Work Order Planning > Maintenance Workbench).

2. Select a work order.

3. Select the Complete Work Order value in the Select Work Order drop-down.

4. Optionally enter a Reconciliation Code.

This is a simple description of why you are completing this work order. For example, Work Order Completed or Work Order Partially Completed.

5. Optionally enter Actual Duration (hours) information.

You must enter two values within this region: Actual Duration and Actual Start Date and Time. The value that you do not enter is automatically calculated.

Actual Duration identifies the total elapsed time of the work order. It is automatically calculated as the difference between the Scheduled Start Date and Scheduled End Date.

6. The Meters region enables you to enter readings for meters associated with this Asset Number. Readings for meters defined as mandatory must be entered. You can optionally enter non-mandatory readings.

At work order completion, meter readings are mandatory for work orders

generated by the Preventive Maintenance scheduling engine. After a work order is completed, meter readings are required for all runtime interval meters associated with the Asset Number in the Preventive Maintenance scheduling definition. See: Preventive Maintenance Scheduling, page 3-173. If there is a meter associated with this Asset Number, you are prompted to enter a Current Reading or a Reading Change. If you enter a Current Reading, the Reading Change defaults. If you enter a Reading Change, the Current Reading defaults. See: Entering Meter Readings, page 5-3.

- Select the Reset check box to indicate if you would like to Reset the Current Reading to zero.
7. Oracle Quality collection plans associated with the current work order's asset number and requiring completion appear in the Quality Plans region. When the collection plan was created, it was specified if the collection plan required completion. Also, during the Enterprise Asset Management collection plan creation process, triggers might have been specified to make only certain assets eligible for the collection plan. See: Quality Setup, page 3-201.

Required fields are dependent on the Collection Plan's collection element specifications. See: Quality Setup, page 3-201.

8. Choose Apply to save your work.

To uncomplete a work order:

1. Navigate to the Work Order Completion window.
2. Select a completed work order.
3. Select the Complete Work Order value in the Select Work Order drop-down to uncomplete this work order.
4. Optionally enter a Reconciliation Code. This is a simple description of why you are uncompleting this work order.
5. Optionally enter an Actual Duration or Actual Start Date and Time. Actual Duration identifies the total elapsed time of the work order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date. Changing the times and duration affects resource usage for employees and equipment.
6. Choose Apply to save your work.

Related Topics

Entering Meter Readings, page 5-3

Rebuild Work Order Completion

There are two ways to create rebuild work orders. In the scenario that a new rebuild able item is issued from inventory to be placed into the asset, a rebuild work order creates for the rebuild able item that was taken out with a need for repair, given the required information was entered into the material transaction (See: Transacting Material, page 4-64). This child work order of the parent work order can complete, independent of the parent work order. However, if the rebuild able item needing repair is removed from the asset, repaired, then reinstalled, that manually created child, rebuild work order must first be completed before the parent work order can complete. In this scenario, first complete all rebuild or child work orders (See: Rebuild Work Orders, page 4-14) before you can complete a parent work order (See: Work Order Completion, page 4-60). The operations within a work order do not need to be complete in order to complete a work order. However, the date you complete a work order must be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a work order must be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a work order after it is completed, transcending it to a Released status (See: eAM Work Order Statuses, page 4-24).

Planners or Crew Supervisors can complete or uncomplete work orders using the Maintenance workbench (See: Using the Maintenance Workbench, page 4-70), or by accessing the Rebuildable Work Order Completion menu option. After completing a work order, the completion transaction record is created with your electronic signature (User Name). A record is created with this signature, during completion, for any mandatory collection plan results or mandatory meter readings, as well.

To complete a rebuild work order:

1. Navigate to the Rebuild Completion window (Maintenance Super User or Maintenance User Workbench: Work Orders tab, or Enterprise Asset Management: Work Order Planning > Maintenance Workbench).
2. Query and select a rebuild work order.
3. Select the Complete Work Order in the Select Work Order drop-down.
4. Select a rebuild work order.
Only rebuild work orders are available.
5. Optionally enter a Reconciliation Code.
This is a description of why you are completing this work order. For example, Work Order Completed or Work Order Partially Completed.
6. Enter an actual Duration and Actual Start Date and Time.

Actual Duration identifies the total elapsed time of the work order. It automatically calculates as the difference between the Scheduled Start Date and Scheduled End Date. Changing the times and duration affects resource usage for employees and equipment.

7. If the rebuild work order is generated from a material issue or is a standalone rebuild work order for a Rebuildable Item's serial number that resides out of inventory, then enter the Completion Location information.
 1. Enter the Completion Subinventory. For rebuild work orders that are created from a material transaction, this must be an expense subinventory.
 2. If the rebuild able item is locator controlled, enter a Completion Locator. See: Inventory Attribute Group, *Oracle Inventory User's Guide*.
 3. If the rebuild able item is lot controlled, enter a Completion Lot. See: Inventory Attribute Group, *Oracle Inventory User's Guide*.
8. Choose Apply to save your work.

To uncomplete a rebuild work order:

1. Navigate to the Rebuild Completion window.
2. Select a completed rebuild work order.
3. Select the Complete Work Order from the Select Work Order drop-down to uncomplete the work order.
4. Optionally enter a Reconciliation Code.

This is a description of why you are uncompleting this work order.
5. Choose Apply to save your work.

Related Topics

Defining Subinventories, *Oracle Inventory User's Guide*

Transacting Material

You might need to issue a rebuild able item or asset from inventory to a maintenance work order. For example, a work order was issued for the inspection of a pump. During the pump inspection, you found that the motor, one of the components of the pump, is problematic. You can replace the rebuild able item by issuing a new motor rebuild able item from inventory. If you choose to perform a material issue from inventory, the old motor rebuild able item attaches to the work order, automatically creating the child,

rebuild work order number associated to the parent work order. In this case, the Asset Number genealogy automatically updates to identify this new item number. See: Overview of Inventory Transactions, *Oracle Inventory User's Guide*.

You can execute a material issue transaction from the Stores tab page, within Maintenance Super User (See: Stores, page 21-113).

Related Topics

Issuing and Returning Specific Components, *Oracle Work in Process User's Guide*

Viewing Resources Transactions

Resource transactions define the time an assembly spends at an operation and the cost you incur for an operation. There are two types of resources: person and machine. You can transact both person and machine resources. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. You can charge resources to a specific work order. You can view all transactions that have charged against a specific resource.

To view completed resource transactions:

1. Navigate to the Find Resource Transactions window.

You can narrow your selection of transactions by any field within this window. For example, you can view all resource transaction information charged during a specific period, or view all transaction information transpired for a specific work order number.

The concurrent process will also consider the OTL dates for the time entries if they fall within closed accounting periods.

2. Choose Find.

View Resource Transactions

Transaction	Date	Work Order	Asset Number	Asset Group	Rebuild Item
<input type="checkbox"/>	15-DEC-2006 11:19:07	WO243860	DTF35001	Vehicles	
<input type="checkbox"/>	15-DEC-2006 11:18:32	WO243859	DTF35000	Vehicles	
<input type="checkbox"/>	15-DEC-2006 11:17:23	WO243864	FL1030	Fork Lifts	
<input type="checkbox"/>	15-DEC-2006 11:17:06	WO243865	FL1040	Fork Lifts	
<input type="checkbox"/>	15-DEC-2006 11:16:53	WO243863	FL1020	Fork Lifts	
<input type="checkbox"/>	15-DEC-2006 11:15:24	RWO90002			Fork L
<input checked="" type="checkbox"/>	15-DEC-2006 11:15:07	RWO98003			Fork L
<input type="checkbox"/>	15-DEC-2006 11:14:54	RWO90001			Fork L

Transaction Date: 15-DEC-2006 11:15:07 Work Order: RWO98003
Asset Number: Rebuild Item: Fork Lift Battery

Distributions

3. Select the Job or Schedule Header tab to view resource transaction information specific to a work order.
4. Select the Operation, Quantities tab to view resource transaction information specific to a work order operation.
5. Select the Resource Information to view resource transaction information specific to a resource.

Closing Work Orders

You can close a maintenance work order based on a user defined or system work order status. (See: eAM Work Order Statuses, page 4-24).

The following system statuses can be used with user-defined work order statuses:

- Unreleased
- Draft
- Released
- Complete

- Complete - No Charges
- On Hold
- Cancelled

See Defining Work Order Statuses at the Organization Level, page 3-22 for more information on user-defined work order statuses at an organizational level.

You can close one or many work orders at once. After a work order or a period is closed, cost variances are posted to the asset's WIP accounting class code accounts, if the work order is associated with an asset route. Variances are posted to the WIP account for every asset within the asset route when the work order is released. These accounts are charged, even if one or more assets on the asset route move between organizations before the work order is closed.

Note: If you want to update the quality results for a work order with a status of Closed, you must unclose the work order.

If a work order was at a Complete status at the time of closing it, you can unclose the work order to transition it to a Complete status. For all other statuses during the closing of a work order, unclosing the work order transitions to same status it had when closed.

To close a work order:

1. Navigate to the Find Work Orders window (Enterprise Asset Management > Work Orders > Close Work Orders).

See Defining Work Order Statuses at the Organization Level, page 3-22 for more information on user-defined work order statuses at an organizational level.

2. Select a work order.
3. Click the Status drop-down list.

The available values include system and user defined work order statuses. Select one of the following options:

1. All - This option selects all work order statuses, including user defined values..
 2. Specific - Select the check box for the specific work order statuses.
4. Select data in other optional fields on the page.
 5. Choose Find, and the **Close Work Order** page appears, and displays the work orders that match your selection criteria.
 6. From the Tools menu, select Close Work Orders.

The Close EAM Work Orders window appears.

7. Select a Report Type.

Your selection determines the type of information presented on the report that is produced by the concurrent process (Close Discrete Jobs) closing the work order. The report presents project information, work orders closed, status information, and quantity information.

Close EAM Work Orders

Report Type

☒ Summary

☐ Detail Using Planned Start Quantity

☐ Detail Using Actual Completion Quantity

☐ No Report

Actual Close Date 09-AUG-2022 08:3

Submission Date 09-AUG-2022 08:39:41

OK Cancel

8. Select an Actual Close Date.

This date must be greater than or equal to the system date.

9. Select a Submission Date.

This date must be greater than or equal to the system date.

10. Choose OK.

To unclose a work order:

1. Navigate to the Find Work Orders window.

2. Select a closed work order.

You can optionally enter other data selection information.

3. Click the Find button, and Close Work Order window appears.

4. From the Tools menu, select Unclose Work Orders.

5. Save your work.

To close a rebuild work order:

1. Navigate to the Find Rebuild Work Orders window.

2. Select a work order.

Only rebuild work orders are available.

You can narrow the results if you select a work order Status. User-defined work order statuses for your organization are available for selection.

3. Choose Find, and the Close Rebuild Work Order window appears.

4. From the Tools menu, select Close Rebuild Work Orders.

The Close EAM Work Orders window appears.

5. In the Report Type region, select a report type. Your selection determines the type of information presented on the report that is produced by the concurrent process (Close Discrete Jobs) closing the work order. The report presents project information, the work orders closed, status information, as well as quantity information.

6. Select an Actual Close Date. This date must be greater than or equal to the system date.

7. Select a Submission Date. This date must be greater than or equal to the system date.

8. Choose OK.

9. Select a closed rebuild work order from the list of values.

10. Click the Find button, and the Close Rebuild Work Order window appears.

11. From the Tools menu, select Unclose Rebuild Jobs.

12. Save your work.

Related Topics

Closing Discrete Jobs Using Submit Requests, *Oracle Work in Process User's Guide*

eAM Work Order Planning

A planner performs several functions, including purchasing required material for work

orders, approving work requests, creating work orders, releasing work orders, and completing work orders. This section includes the following topics:

- Using the Maintenance Workbench, page 4-70

Using the Maintenance Workbench

Using the Maintenance Workbench, a planner can mass release and mass complete work orders. You can set the EAM: Mass Complete work orders at system date profile option to perform a mass completion for work orders with past and future scheduled completion dates, with a default value of the System Date using the Maintenance Workbench. See *Profile Options, Oracle Enterprise Asset Management Implementation Guide*.

You cannot complete mass work orders that have mandatory meter readings and mandatory quality plans associated with a work order (See: Work Order Completion, page 4-60). A planner can also procure direct items (See: Overview of Direct Item Procurement for eAM Work Orders, page 6-1) for work orders, without having to leave the Maintenance Workbench. You can generate work orders from suggested work orders, manage work order required material, resources, and update work order operations as necessary.

You can forecast multiple assets at once. You can select multiple assets to forecast, and then execute the forecast. After execution, you can create a work order, associate the work order with a project and task for capital expenditures, and associate the work order with a parent work order. This is useful for shutdowns. When an organization knows that they will be shutting down a portion of their plant or facility, they can add the preventive maintenance work orders to the shutdown and using Oracle Projects, capitalize the costs into fixed assets.

To use the Maintenance Workbench:

1. Navigate to the Maintenance Workbench page (Enterprise Asset Management > Work Order Planning > Maintenance Workbench).
2. You can narrow your data selection using any of the fields available. For example:
 - **Asset Owning Department:** Use this field to filter results based on forecasts.
 - **Owning Department:** Use this field to filter results based on work orders.

Maintenance Workbench (EM1)

Asset Number	<input type="text"/>	<input type="checkbox"/> Rebuildable	Rebuild Number	<input type="text"/>
Asset Group	<input type="text"/>		Rebuild Item	<input type="text"/>
Asset Category	<input type="text"/>	<input type="checkbox"/> Include Asset Children	<input type="checkbox"/> Transferred Assets	
Owning Department	<input type="text"/>	<input type="checkbox"/> Include Work Requests	Date To	<input type="text"/>
Area	<input type="text"/>			
Date From	<input type="text"/>			
Set Name	<input type="text"/>			

Work Order

Work Order	<input type="text"/>	Project	<input type="text"/>
Owning Department	<input type="text"/>	Planned	<input type="text"/>
Priority	<input type="text"/>	Tagout Required	<input type="text"/>
Shutdown Type	<input type="text"/>	Material Shortage	<input type="text"/>
Planner	<input type="text"/>		

Status

☐ All Pending

☒ Specific

<input checked="" type="checkbox"/>	Unreleased
<input checked="" type="checkbox"/>	Awaiting Scheduling
<input checked="" type="checkbox"/>	Released
<input checked="" type="checkbox"/>	V-RELEASE
<input type="checkbox"/>	Complete

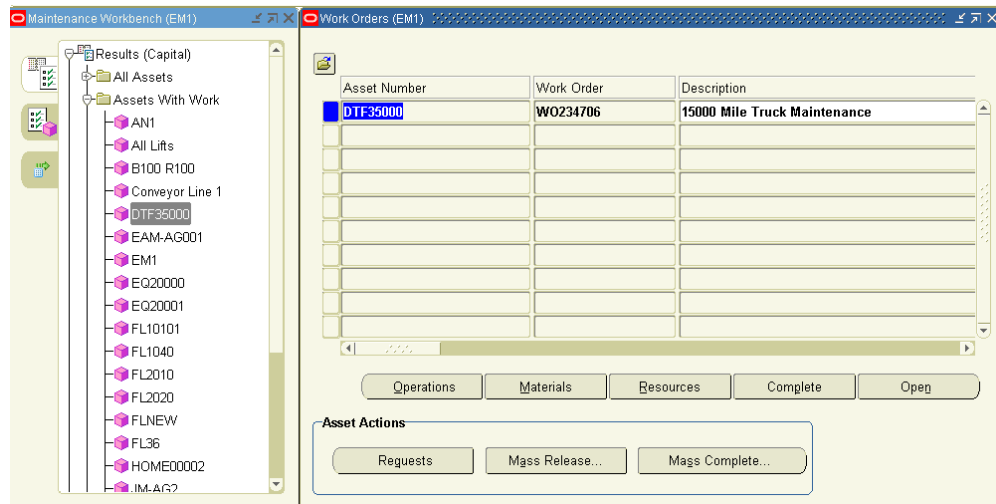
☐ Operation

Assigned Department	<input type="text"/>	Shutdown Type	<input type="text"/>
Resource	<input type="text"/>		

Launch

3. Choose Launch.

Maintenance Workbench



4. Optionally in the Maintenance Workbench pane, select the Results (Capital) tab, Results (Rebuildable Inventory) tab, or the Forecast Work tab.

Selecting the Results (Capital) tab displays asset number information (See: Defining Asset Numbers, page 3-85) in a tree structure format. If you expand the Results (Capital) branch, the tree details asset number information into three lower branches, including All Assets, Assets With Work, and Routes.

- All Assets: All assets, associated with the data selection entered in Step 2, appear under the expanded All Assets branch.
- Assets With Work: All assets with work orders (See: eAM Work Orders, page 4-3), associated with the data selection entered in Step 2, appear under the expanded Assets With Work branch.
- Routes: All assets with an associated asset route (See: Defining Asset Routes, page 3-101), associated with the data selection entered in Step 2, appear under the expanded Routes branch.

Selecting the Results (Rebuildable Inventory) tab displays rebuild able item information (See: Defining Rebuildable Items, page 3-143) in a tree structure format. If you expand the Results (Rebuildable Inventory) branch, the tree details rebuild able item information into three lower branches, including All Rebuildables, Rebuildables with Work Orders, and Instance Numbers.

- All Rebuildables: All rebuildables, associated with a rebuild work order, appear.
- Rebuildables with Work Orders: All rebuild able items with work orders (See:

eAM Work Orders, page 4-3), associated with the data selection entered in Step 2, appear.

- Instance Numbers: All Instance Numbers appear.

Select the Forecast Work tab to access the Forecast Work Orders window to view the associated asset number information in the Maintenance Workbench pane. You can forecast and implement multiple assets at once. If you expand the Forecast Work branch, the tree details asset number information into three lower branches, including All Assets, Assets With Work, and Routes.

- All Assets: All assets, associated with the data selection entered in Step 2, appear under the expanded All Assets branch.
- Assets With Work: All assets with work orders (See: eAM Work Orders, page 4-3), associated with the data selection entered in Step 2, appear under the expanded Assets With Work branch.
- Routes: All assets with an associated asset route (See: Defining Asset Routes, page 3-101), associated with the data selection entered in Step 2, appear under the expanded Routes branch.

Forecasted Work Orders

Select	Action	Type	Asset Number	Activity	Suggested Start Date	Exp
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	17-FEB-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	04-MAR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	19-MAR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	03-APR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	18-APR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	15000 Mile Maint	18-APR-2005 12:00:00	
<input type="checkbox"/>	Create	Forecasted	DTF35000	3000 Mile Maint	03-MAY-2005 12:00:00	

1. Enter a Cutoff Date to indicate how far out you would like the work orders to be created from the suggested dates.

The Horizon defaults as the difference between the Start Date and Cutoff Date.

2. Optionally select a Set Name.

If a Set Name (See: Defining Set Names, page 3-162) is entered, the Simulate

and Run buttons are enabled. If you select Simulate, then you cannot implement work orders. If Run is selected, you can implement work orders only for forecasted suggestions from default. The Default check box is selected in the Preventive Maintenance (PM) Schedule definition. See: *Entering Preventive Maintenance Schedule Definitions*, page 3-173) PM Schedules in the current PM Set; default PM Schedules are chosen from that PM set for work order generation.

3. Optionally select the Include Run To Failure check box to indicate that the scheduling process should include suggested work orders for Run To Life asset number and activity associations.

If this check box is cleared, manual work orders can be created. Run To Life items are typically items that cost more to maintain than the item itself. For more information on Run To Life items, See: *Preventive Maintenance Scheduling*, page 3-173.

4. Choose Run to generate work order suggestions for the specified date period.

The Expected Start Date is calculated if you are using backward scheduling, and the Expected End Date is calculated if you are using forward scheduling (See: *Information on the Rescheduling Point region in Preventive Maintenance Scheduling*, page 3-173).

5. Optionally choose Implement to release the selected (indicated by the check box on the left side of the window) forecasted work orders.

The work orders are created at the status specified in the Preventive Maintenance Schedule definition. (See: *eAM Work Order Statuses*, page 4-24 and *Preventive Maintenance Scheduling*, page 3-173).

In addition, you can select the user-defined work order statuses in the Status field that are assigned to your organization.

Note: User-defined work order statuses are defined upon system statuses and are assigned to organizations. For example, you can define a work order status of "Ready to Start" based on the Released system status. You can also have a work order status of Ready to Start based on the system status of Draft. Both statuses can then be assigned to your organization for use. See *Defining Work Order Statuses at the Organization Level*, *Oracle Enterprise Asset Management Implementation Guide*

Note: You can Forecast Work for assets, but not rebuild able items.

5. If you selected the Results (Capital) or Results (Rebuildable Inventory) tab, you can

optionally, choose Operations to view the tasks associated with a specific work order.

You can view and update the material and resources associated with a specific operation (See: eAM Operations and Tasks, page 4-29).

6. Optionally choose Materials to view and update the material requirements associated with a selected work order (See: Defining a Material Requirements Plan Name, page 3-197).

1. Optionally you can view or update the current work order's associated asset number's items list by choosing Select Materials. The current asset number's associated Asset BOM items are available to add to the required material. See: Setting Up Asset Bills of Material, page 3-103.
2. Optionally choose Direct Item to select direct items from supplier catalogs, create requisitions, and add them to your items list.

Direct Items are one time non-inventoried items that are purchased directly from a supplier. Oracle Self Service Purchasing defaults the work order number and operation number, as well as the class code information for correct expensing. After you choose Direct Item, the current work order and operation reference values are passed to the requisition created using Self Service Purchasing. If the work order is project related, then the project and task information is captured in the purchase requisition (See: Overview of Direct Item Procurement for eAM Work Orders, page 6-1). You can exit Self Service Purchasing and return to the Maintenance Workbench by selecting Return To Portal.

Note: Upon re-query of this work order, the Direct Items region reflects any Requisition and Purchase Order details.

Note: You must have Oracle Self Service Purchasing installed for this functionality. You can purchase direct items from a Requisition or Purchase Order window if you have Oracle Purchasing installed (See: Entering Purchase Orders for Direct Items, page 8-20).

3. Choose Copy to Asset to dynamically update the BOM associated to the asset group with any items list changes (See: Setting Up Asset Bills of Material, page 3-103).
7. Optionally choose Resources to view, update, add, or delete resource requirements for a selected work order (See: Defining Resource Requirements, page 4-47).
 - Optionally choose Instances to view or update a list of specific people or

equipment assigned to this resource.

The Person tab displays persons grouped in specific roles. The Equipment tab displays similar types of equipment grouped by resource. You can define specific machines to any of your machine type resources and you can define specific employees to any of your labor type resources. When a resource has instances defined, you can view the resource capacity and load in the Scheduling Workbench (See: Using the Scheduler Workbench, page 6-7).

For example, you can define all machines belonging to the resource, GRINDERS. An individual grinder machine can then be a specific resource requirement and scheduled, and can have a unique capacity definition.

This information defaults from your current resource definition. You can only add persons and equipment that are associated with the current resource.

8. Optionally select the Complete button to complete a selected work order (See: Work Order Completion, page 4-60).
9. Optionally select the Open button to open the work order details of a specified work order See: eAM Work Orders, page 4-3).
10. Optionally select the Requests button to view all open service and work requests for the current asset number.

Note: You can view work requests for assets, but not rebuild able spares. The Results (Capital) tab must be selected to view work requests.

11. Optionally select the Mass Release button to release multiple work orders at once. Work orders at the status specified in the Preventive Maintenance Schedule definition appear. See: Preventive Maintenance Scheduling, page 3-173.

Maintenance Workbench (EM1)

- Results (Capital)
 - All Assets
 - Assets With Work
 - AN1
 - All Lifts
 - B100 R100
 - Conveyor Line 1
 - DTF35000**
 - EAM-AG001
 - EM1
 - EQ20000
 - EQ20001
 - FL10101
 - FL1040
 - FL2010
 - FL2020
 - FLNEW
 - FL36
 - HOMEOOOO2
 - JIMAS2

	Work Order	Asset Number	Description	Start Date	End Date	Status
<input checked="" type="checkbox"/>	WO234706	DTF35000	15000 Mile Truck	05-JUL-2006 07:00	05-JUL-2006 09:09	Unreleased
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						
<input type="checkbox"/>						

You cannot complete mass work orders that have mandatory meter readings and mandatory quality plans attached. Further, you cannot release the work orders if these conditions exist.

- eAM Work Management 4-77

Mass Complete

Work Order	Asset Number	Description	Start Date	End Date	Activity
<input checked="" type="checkbox"/> GB_F	FL10101		22-JUN-2006 07:00	22-JUN-2006 08:00	
<input checked="" type="checkbox"/> GB_WO_2	FL10101		22-JUN-2006 04:06	22-JUN-2006 04:06	
<input checked="" type="checkbox"/> GB_WO_3	FL10101		22-JUN-2006 07:00	22-JUN-2006 08:00	
<input checked="" type="checkbox"/> WO235310	FL10101		10-JUL-2006 03:31	10-JUL-2006 03:31	
<input checked="" type="checkbox"/> GB_WO_5	FL10101		22-JUN-2006 04:23	22-JUN-2006 04:23	
<input checked="" type="checkbox"/> GB_WO_APP	FL10101		04-JUL-2006 23:05	04-JUL-2006 23:05	
<input checked="" type="checkbox"/> GB_WO_BG	FL10101		05-JUL-2006 07:00	07-JUL-2006 13:00	
<input checked="" type="checkbox"/> GB_WO_4	FL10101		22-JUN-2006 04:19	22-JUN-2006 04:19	
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					

13. Save your work.

Related Topics

Defining a Resource, *Oracle Bills of Material User's Guide*

Capitalizing Work Orders

You can capitalize part or all of the costs incurred, while maintaining an asset. The asset's book value and useful life increment with the additional value, within Oracle Fixed Assets. Accountants analyze the maintenance cost history to decide which costs to capitalize. You can identify the work orders that increase an asset's value. You can capitalize only the costs of work orders at the *Complete - No Charges* or *Closed* statuses.

When defining a maintained asset number, you can optionally enter Fixed Asset information to associate a Fixed Asset Category and Fixed Asset number with the maintained asset number, if Oracle Fixed Assets is installed. See: *Defining Asset Numbers*, page 3-85.

To capitalize work order costs:

1. Navigate to the Find Work Orders window (Billing and Capitalization > Work Order Capitalization).
2. Query one or more work orders to capitalize.
 1. You can narrow your search criteria, using the fields in the header region of the

window.

For example, you can enter a specific work order, asset number, or specify if you want to display only work orders at a Closed status.

Note: The Status list includes user-defined work order statuses enabled for the organization.

2. Optionally choose **Clear** to reset the search criteria to the default search criteria (all fields are cleared and the Closed and Complete - No Charges **Status** check boxes are selected).
 3. Choose **Find**. The Work Orders region displays queried work orders, dependent on your search criteria.
3. Select a work order.

You can search using a number of search parameters such as Work Order and construction Estimate Number. If you search by estimate number, the values available for selection are only the construction estimates that have work orders created for them.

Find Work Orders

Find Work Orders (EM1)

Work Order: V-FA1-WO1
Estimate Number: V-FA1
Asset Group: V-FA1
Asset Number: V-FA1/001
Asset Activity:
Start Date:
Completion Date:
Owning Department:
Project:
Task:

Work Request:
Status:
☒ Closed
☒ Complete - No Charges
☒ V-COMP-NO CHANGE
☐ Previously Billed
Reference Invoice:
☐ Internal Customer
Customer:
Clear Find

Work Orders

Work Order	Estimate Number	Asset Group	Asset Activity	Status	Project	Task
V-FA1-WO1	V-FA1	V-FA1		Complete - No C		

Capitalize Work Order View Past Details

4. Click the **Capitalize Work Order** button.

This button is enabled for only those work orders that have amounts available to capitalize.

Work Order Capitalization

Work Order Capitalization (EM1) - KC_WO13

☐ Internal Customer

Customer:
 Bill To:

Billing Basis:
 Price List:
 Cost Type:
 Capitalization %:
 Project:
 Task:

Organization Currency:
 Billing Currency:

Currency Conversion
 Type:
 Date:

Fixed Asset
 Category: Number:

Calculate Amounts

Capitalization

Op Sequence	Item/Resource	Type	UOM	Applied Quantity	Previous Capitalized Quantity	Capitalization %	Calculated Amount	Previous Capitalized Amount
<input checked="" type="checkbox"/> 10	KC_COMP	Material	Ea	3	1	10	20.00	100.00
<input type="checkbox"/> 20	KC_OSPRES	Resource	HR	10	0	10	0.00	0.00
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								

Calculated Total: Offset Account: Comments:

Cancel **View Past Details** **Initiate Capitalization**

5. Enter a **Capitalization %**.

The costs associated with the selected items and resources within the Capitalization region are capitalized by this percentage.

6. After selecting items or resources to capitalize within the Capitalization region, choose **Calculate Amounts** to view the projected amount to capitalize, based on what you had entered within the Capitalization % field.

The asset's book value and useful life will increment with this additional value within Fixed Assets.

7. Optionally change the defaulted **Offset Account**. Capitalized maintenance costs are credited to their associated maintenance expense accounts, while this Offset Account is debited by the same amount within Fixed Assets.

Maintenance expenses that are capitalized are considered capital asset value and not maintenance expenses, within the General Ledger.

8. The **Comment** field contains the work order number, Asset, and Asset Description, concatenated together.

9. Choose **Initiate Capitalization** to execute a concurrent process that capitalizes the current work order's maintained asset's associated Fixed Asset with the calculated amounts.

10. Optionally choose **View Past Details** to view all past capitalization transactions for the maintained asset's associated Fixed Asset.

View Past Details

The screenshot shows a window titled "View Past Details" with a sub-header "Capitalization Details". It contains a table with the following columns: Fixed Asset, Book, Capitalization Date, Item/Resource, Qty, Capitalization Cost, Mass Additions Id, and Comments. The table lists four transactions for Fixed Asset 102543. Below the table, there is a "Total Cost" field showing 590. A "Close" button is located at the bottom right of the window.

Fixed Asset	Book	Capitalization Date	Item/Resource	Qty	Capitalization Cost	Mass Additions Id	Comments
102543	OPS CORP	28-SEP-2006 12	KC_RES	10	400	233876	KC_WO13:EM1:KC_DEP:
102543	OPS CORP	21-SEP-2006 07	KC_COMP	1	100	229876	KC_WO13:EM1:KC_DEP:Alex-cc
102543	OPS CORP	14-OCT-2006 12	KC_COMP	2	20	239876	KC_WO13:EM1:KC_DEP:
102543	OPS CORP	21-SEP-2006 04	KC_RES	7	70	228878	KC_WO13:EM1:KC_DEP:Alex-c
Total Cost					590		

11. Click the **Close** button.
12. Close the windows.

Preventive Maintenance

This chapter covers the following topics:

- Introduction
- Preventive Maintenance Overview
- Meters
- Entering Meter Readings
- Preventive Maintenance Scheduling
- Generating Work Orders
- Viewing the Preventive Maintenance Work Order Report

Introduction

This chapter discusses how work orders are created automatically using preventive maintenance schedules. The following topics are necessary when setting up preventive maintenance:

- Preventive Maintenance Overview, page 5-1
- Meters, page 5-2
- Preventive Maintenance Scheduling, page 5-5

Preventive Maintenance Overview

eAM generates work orders automatically based on meter readings, runtime and/or calendar days. An example of meter-based preventive maintenance is your car's oil changes. Most car manufacturers recommend that you change your engine oil every 3,000 miles or six months, whichever comes first.

To set up this scenario:

1. Define your car's odometer as a meter.
2. Associate that meter to an asset (your car), using the Asset Meter Association window.
3. Associate the Maintenance Activity (oil change) that should occur, based on the meters you defined.

This is performed using Preventive Maintenance Scheduling.

Preventive Maintenance includes the following topics:

- Meters, *Oracle Enterprise Asset Management Implementation Guide*
- Project and Task Setup, *Oracle Enterprise Asset Management Implementation Guide*
- Defining Meter Templates, *Oracle Enterprise Asset Management Implementation Guide*
- Defining Meters, *Oracle Enterprise Asset Management Implementation Guide*
- Associating Meter Templates with Asset Groups, *Oracle Enterprise Asset Management Implementation Guide*
- Associating Meters with Asset Numbers, *Oracle Enterprise Asset Management Implementation Guide*
- Entering Meter Readings, page 5-3
- Preventive Maintenance Scheduling, page 3-164
- Defining Set Names, *Oracle Enterprise Asset Management Implementation Guide*
- Defining a Preventive Maintenance Template, *Oracle Enterprise Asset Management Implementation Guide*
- Entering Preventive Maintenance Schedule Definitions, page 3-173
- Generating Work Orders, page 5-6
- Generating the Preventive Maintenance Work Order Report, page 5-8

Meters

Meters are defined and associated with asset numbers to measure an asset or rebuildable item's usage, examples include odometers or counters. Meters are used in Preventive Maintenance Scheduling to schedule and generate PM work orders.

Meter related tasks include the following topics:

- Project and Task Setup, page 3-155
- Defining Meter Templates, page 3-156
- Defining Meters, page 3-159
- Associating Meter Templates with Asset Groups, page 3-158
- Associating Meters with Asset Numbers, page 3-162
- Entering Meter Readings, page 5-3

Entering Meter Readings

After a work order is completed, meter readings are required for all meters, associated with the work order's current asset number, that appear in the Runtime Interval rules in the Preventive Maintenance Scheduling Definition window (See: Entering Preventive Maintenance Schedule Definitions, page 3-173 and Work Order Completion, page 4-60). You can enter standalone meter readings at any time.

Note: To enable the Preventive Maintenance Scheduler process, an initial meter reading needs to have already been entered. This might have been performed by entering an initial reading during the Meter's definition.

The Meter Reading window invokes with a **Disable** button based on the Disable Meter Reading function security setting. If you do not have access to the function security, eAM Disable Meter Reading, then the **Disable** button does not display and you cannot disable a meter reading.

To enter mass meter readings:

1. Navigate to the Mass Meter Readings page (Maintenance Super User > Assets > Mass Meter Readings).

Mass Meter Readings

Maintenance Home **Assets** Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Capital Rebuildable Inventory **Mass Meter Readings** Mass Geocode Entry Asset Setups GIS Assets Map Workbench

Mass Meter Readings Cancel Apply

Search

Meter Name Asset Number DTF35000 Go

Meter Readings

Details		History	Source							Flexfields	History	
Meter Name			Meter Name	Reading Type	Value	Direction	UOM	Date	Last Reading Value	Last Reading Date		
DTF35000 Odometer			DTF35000 Odometer	Absolute		Ascending	Mile	05-Jul-2019 18:10:25	145200	11-Jan-2007 21:18:33		

2. Optionally enter a meter name, and then click the Go button.

3. Optionally enter an asset number and then click the Go button.

All meters that are associated with this asset appear (See: Associating Meters with Asset Numbers, page 3-162).

4. Enter a Value or Change Reading value for new meter readings, depending on the meter type.

Note: If the meter is a Change type, the Value field indicates the difference between the last reading and the current reading. The Change value is used to calculate the Life To Date Reading, within the Latest tabbed region.

5. Optionally change the Date, if required.

6. Optionally enter any necessary Comments.

7. Optionally enter Reset information.

1. If you enter a Reset Reading value, you are resetting the source meter to this value.

For example, if a motor must be replaced, you can reset the meter reading value of the pump, associated with the motor.

Companies can associate a Source Meter to an asset number and meter association. The Source Meter reading subsequently feeds corresponding meters that are associated with assets within the Meter Hierarchy (See: Defining Meters, page 3-159 for more information on meter hierarchies).

2. Optionally select the Include Target Reset check box to reset the current asset's target meter to the source meter's Reset Reading.
3. Optionally enter a Reset Comment.

Note: You cannot reset past meter readings if a meter reading is entered after the reading date.

8. Choose Apply to save your work.
9. Optionally select the History icon to view all meter readings for the selected meter and current asset number.

This helps you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading.

1. The Life To Date field displays the accumulated meter readings, which is usually the same as the current meter reading.

The current meter reading and Life To Date values are different if you have previously entered a Reset Reading. For example, before the reset, both the current meter reading and the Life To Date value were 17,000. You then reset the meter to 3,000. The Life To Date value continues to increase from 17,000, while the current meter reading increases from 3,000. The system uses the Life To Date meter reading to calculate the Usage Rate and includes the initial reading.

2. Optionally select the Disable icon to disable a past meter reading for the current Reading.

If meter readings are entered before resetting the meter, you cannot disable those meter readings. The most current reading before the meter is reset cannot be disabled, unless the meter reset reading entry is disabled.

Note: Preventive Maintenance Scheduling does not use any disabled information. After a meter reading is disabled, you cannot re-enable it

Preventive Maintenance Scheduling

eAM enables you to generate work orders automatically using a preventive maintenance schedule, based on Runtime Rules, Day Interval Rules, List Dates and Calendar dates. For example, a forklift might need servicing after 100 motor running hours, or 90 days, whichever comes first. Meters are used to keep track of asset usage.

Preventive Maintenance Scheduling tasks include the following topics:

- Defining Set Names, page 3-162
- Defining a Preventive Maintenance Template, page 3-164
- Entering Preventive Maintenance Schedule Definitions, page 3-173
- Generating Work Orders, page 5-6
- Generating the Preventive Maintenance Work Order Report, page 5-8

Generating Work Orders

After you have established PM scheduling definitions, you can generate work orders. There are two ways to generate work orders. You can execute the Generate Preventive Maintenance Work Orders process, or you can implement forecasted work orders from the Maintenance Workbench.

When executing the Generate Preventive Maintenance Work Orders process, the program creates suggested work orders, based on the date or meter rules that are associated with the scheduling definitions that you defined. See: Entering Preventive Maintenance Schedule Definitions, page 3-173. You should schedule this process to periodically execute, automatically. You can execute this program manually at any time, by accessing the menu option.

If you selected the PM Work Order Prefix option on the Enterprise Asset Management EAM Parameters page, the system will generate PM work orders beginning the specific work order prefix. When the Work Order Business Object API is called, the system will incorporate the prefix into the work order name. This enables the system to differentiate PM work orders from manual work orders.

Use the Maintenance Workbench if you want to review and create PM work orders. You can launch the Preventive Maintenance Scheduler to implement forecasted work orders. See: Using the Maintenance Workbench, page 4-70.

The following are instructions to invoke the process from the Reports menu under the Enterprise Asset management responsibility.

You can also run the Generate Preventive Maintenance Work Orders - Self Service program from the Reports tab in the Maintenance Super User responsibility.

Note: The self service program does not include the Asset Category ID report parameter.

To generate work orders:

1. Navigate to the Generate Preventive Work Orders page.

Generate Preventive Maintenance Work Orders (EM1)

Run this Request...

Name: **Generate Preventive Maintenance Work Orders**

Operating Unit:

Parameters:

Language: **American English**

Language Settings... Debug Options

At these Times...

Run the Job: **As Soon as Possible**

Schedule...

Upon Completion...

☒ Save all Output Files

Layout:

Notify:

Print to: **noprint**

Options...

Help (C) Submit Cancel

2. In the Parameters page, select a Start Date.
3. Select a Cut Off Date.
4. To further narrow down the data selection, you can optionally enter any of the following parameters:
 - Area - location where your assets reside.
 - Asset Category - the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR
 - Owning Department
 - Asset Type - Capital and Rebuildable Inventory
 - Asset Group - if you previously selected an Asset Type
 - Asset Number - if you previously selected an Asset Type
 - Set Name - PM set used to implement work orders that are forecasted against default Preventive Maintenance Schedules in this set. If a Set Name is specified, you will only select PM schedules for PM Set for work order generation.
 - Project

- Task - if you previously selected a project
 - Parent Work Order
 - Planner - select if you want to generate PM work orders for specific planners
5. Click the **OK** button, and the system displays the Generate Preventive Maintenance Work Orders page.
 6. Click the **Submit** button.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Viewing the Preventive Maintenance Work Order Report

You can generate the Preventive Maintenance Work Order Report that lists the details of work orders generated from the Preventive Maintenance Work Order Generation concurrent program. Use the Generate Preventive Maintenance Work Orders - Self Service program from the Reports tab in the Maintenance Super User responsibility, or the Reports menu under the Enterprise Asset management responsibility to generate the report.

See Preventive Maintenance Work Order Report, page 31-16 for more information.

To view the Preventive Maintenance Work Order Report:

1. Run the Generate Preventive Maintenance Work Orders - Self Service concurrent program.

In addition, you can generate the PM work order report as follows:

1. Navigate to the Enterprise Asset Management responsibility.
 2. Click Preventive Maintenance, Generate Work Orders.
 3. Enter the report parameters, and submit the report.
2. Navigate to the View Requests page.
 3. Click the View Output button for the report.

The report appears.

Preventive Maintenance Work Order Generation Report

```

-----
Organization Code      : EM1
Organization Name      : Seattle Maintenance
Request ID             : 46864174
Request Name          : Preventive Maintenance Generate WO Request
Start date             : 01-JAN-2013 00:00:00
Cut Off Date           : 31-MAR-2017 00:00:00
Area                   : --
Area Description       : --
Owning Department     : --
Department Description : --
Asset Type             : Capital
Asset Category         : --
Asset Group           : --
Asset Group Description : --
Asset Number          : FL1010
Asset Description      : Fork Lift 1010
Set Name              : --
Project               : --
Project Name          : --
Task                  : --
Planner               : --
Parent Work Order      : --
Description            : --
  
```

```

-----
Count of Work Orders Generated : 4
-----
  
```

```

Work Order      : PM386955
Asset Number    : FL1010
Asset Description : Fork Lift 1010
Activity        : Lubricate Fork Lift Mast
Scheduled Start Date/Time : 21-MAR-2017 07:00:00
Scheduled End Date/Time   : 21-MAR-2017 08:00:00
Work order Status : Unreleased
  
```

```

Work Order      : PM386956
Asset Number    : FL1010
Asset Description : Fork Lift 1010
Activity        : Lubricate Fork Lift Mast
Scheduled Start Date/Time : 28-MAR-2017 07:00:00
Scheduled End Date/Time   : 28-MAR-2017 08:00:00
Work order Status : Unreleased
  
```

```

Work Order      : PM386957
Asset Number    : FL1010
Asset Description : Fork Lift 1010
Activity        : Lubricate Fork Lift Mast
Scheduled Start Date/Time : 04-APR-2017 07:00:00
Scheduled End Date/Time   : 04-APR-2017 08:00:00
Work order Status : Cancelled
  
```

```

Work Order      : PM386958
Asset Number    : FL1010
Asset Description : Fork Lift 1010
Activity        : Lubricate Fork Lift Mast
Scheduled Start Date/Time : 11-APR-2017 07:00:00
Scheduled End Date/Time   : 11-APR-2017 08:00:00
Work order Status : Cancelled
-----
  
```

4. View the details for the selected PM work orders.

Related Topics

Preventive Maintenance Work Order Report, page 31-16

eAM Planning and Scheduling

This chapter covers the following topics:

- Introduction
- Overview of eAM Planning and Scheduling
- eAM Planning
- Launching the Planning Process
- Viewing Suggested Demand
- eAM Scheduling
- Using the Scheduler Workbench

Introduction

Oracle Enterprise Asset Management utilizes Oracle Production Scheduling and Oracle Advanced Supply Chain Planning to ensure cost savings and work management efficiencies, by generating predictive work activities. These work activities use a planning process to balance the work load for resource management. This chapter contains the following topics:

- Overview of eAM Planning and Scheduling, page 6-1
- eAM Planning, page 3-194
- eAM Scheduling, page 3-195

Overview of eAM Planning and Scheduling

Oracle Enterprise Asset Management utilizes Work Orders to create demand for asset maintenance. Work Order operations are completed using the Work Orders' associated material and resource requirements (See: Overview eAM Work Management, page 4-2). Cost savings and work management efficiencies are achieved by generating future,

planned work activities, and then using a planning process to balance the work load for resource management.

First, a Master Demand Schedule is created. This Master Demand Schedule is attached to Material Requirements Planning (MRP) options. MRP is launched, creating planned Work Order suggestions. You can use the Planner Workbench to implement the suggestions into purchase requisitions or maintenance Work Orders. Using the Purchasing AutoCreate feature, purchase orders are automatically created from the requisitions. After the purchase orders receive into inventory, you can issue material to a maintenance Work Order.

This section includes the following topics:

- eAM Planning, page 3-194
- eAM Scheduling, page 3-195

eAM Planning

Oracle eAM utilizes Material Requirements Planning (MRP) to calculate net material requirements from gross material requirements by evaluating the following:

- Master schedule
- Bills of material
- Scheduled receipts
- On-hand inventory balances
- Lead times
- Order modifiers

Material Requirements Planning plans material replenishments by creating a set of recommendations to release or reschedule orders for material, based on net material requirements. MRP assumes infinite capacity is available to meet the material requirements plan.

The following illustration depicts how eAM uses Material Requirements Planning. First, a Master Demand Schedule (MDS) is created. This schedule is then attached to MRP Plan Options. Next, the MRP is launched, creating suggestions for purchasing requisitions. Finally, these suggestions are implemented, purchased, and then received into inventory. After the material is in inventory, you can issue it to a maintenance work order.

eAM Material Requirements Planning



eAM Planning includes the following topics:

- Defining a Master Demand Schedule Name, page 3-196
- Defining a Material Requirements Plan Name, page 3-197
- Defining Plan Options, page 3-198
- Launching the Planning Process, page 6-3
- Viewing Suggested Demand, page 6-5

Launching the Planning Process

Launch the planning process for a material requirements plan (MRP) from a master demand schedule to generate planning recommendations for all planned items. You can launch the planning process for a material requirements plan (MRP) or a master production schedule (MPS). The planning process involves three phases for defining the MRP or MPS. The process uses the input from a master demand schedule or master production schedule to determine the quantities and timing of the items to purchase.

To launch the planning process:

1. Navigate to the Launch MRP window.

Launch MRP

The screenshot shows two overlapping windows. The top window is titled "Launch MRP (EM1)" and contains a "Run this Request..." section with a "Copy..." button. Below this are input fields for "Name" (containing "Launch Planning Processes"), "Operating Unit", "Parameters", and "Language" (set to "American English"). There are also "Language Settings..." and "Debug Options" buttons. The bottom window is titled "Parameters" and contains input fields for "Plan Name", "Launch Snapshot", "Launch Planner", "Anchor Date" (set to "01-JAN-2013"), and "Plan Horizon" (set to "10-JUL-2014"). At the bottom of the Parameters window are "OK", "Cancel", "Clear", and "Help" buttons.

2. Enter the following parameters:

Plan Name: Select the MRP Plan Name to launch.

Launch Snapshot: Valid values are Yes and No. Select Yes to launch the Snapshot.

Launch Planner: You must launch the planner if you selected Yes to launch the Snapshot.

Anchor Date: Enter an Anchor Date, earlier or equal to the current date, that acts as a start date for repetitive planning periods.

Plan Horizon: Enter a date, greater than the current date, up to which the planning process creates an MRP or MPS. The default horizon is the current date plus the number of offset months set in the profile, MRP: Cutoff Date Offset Months (See: Implementing Profile Option Summary, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

3. Choose OK.
4. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Viewing Suggested Demand

After the MRP is launched, you can view the purchase requisition suggestions created by the launched MRP plan.

To view suggested purchase requisitions:

1. Navigate to the Supply/Demand window.

Supply/Demand

The screenshot shows the 'Supply/Demand (EM1)' window. At the top, there are tabs for 'Plan' (MaintMRP) and 'Type' (MRP). Below the tabs is a table with the following columns: Item, Order Type, Sugg Due Date, Qty/Rate, Order Number, Action, and Firm. The table contains 11 rows of data. Below the table, there are buttons for 'Pegging', 'Resource Requirements', 'Release Details', 'Release', 'Select All For Release', and 'Horizontal Plan'.

Item	Order Type	Sugg Due Date	Qty/Rate	Order Number	Action	Firm
Shop Rags	Non-standard jo	17-OCT-2002	-5	57674	Demand	<input type="checkbox"/>
Water	Non-standard jo	17-OCT-2002	-5	57674	Demand	<input type="checkbox"/>
Filled Propane Tanks	Non-standard jo	17-OCT-2002	-4	57674	Demand	<input type="checkbox"/>
Fork Lift Lubrication	Non-standard jo	17-OCT-2002	-5	57674	Demand	<input type="checkbox"/>
Fork Lift Lubrication	Non-standard jo	18-OCT-2002	-5	57676	Demand	<input type="checkbox"/>
Fork Lift Lubrication	Non-standard jo	18-OCT-2002	-5	57675	Demand	<input type="checkbox"/>
Water	Non-standard jo	18-OCT-2002	-5	57676	Demand	<input type="checkbox"/>
Water	Non-standard jo	18-OCT-2002	-5	57675	Demand	<input type="checkbox"/>
Water	Non-standard jo	18-OCT-2002	-5	57677	Demand	<input type="checkbox"/>
Fork Lift Lubrication	Non-standard jo	18-OCT-2002	-5	57677	Demand	<input type="checkbox"/>

2. Review the supply/demand details. See: Supply and Demand Fields, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

To view the horizontal plan:

You can view bucketed horizontal planning information, based on your selected display preferences. MRP provides two ways of viewing this information: snapshot and current. Snapshot information is the information produced by your original planning execution. Current information includes all modifications after the planning execution.

1. Navigate to the Supply/Demand window.
2. Choose Horizontal Plan.
3. Indicate if you would like to view Snapshot or Current information.

Related Topics

Reviewing Supply and Demand, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Reviewing the Horizontal Plan, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

eAM Scheduling

Oracle Enterprise Asset Management (eAM) shares the Scheduler Workbench, used in Oracle Manufacturing, to schedule work orders and operations.

The Scheduler Workbench enables a planner to graphically view and reschedule work orders. It provides you with a visual display of work orders, operations, and resources. You can interactively reschedule work orders, operations, and resources by dragging and dropping them at a new date and time. Any sequencing requirements defined for the Work Order are displayed and maintained during scheduling changes. Resource availability and requirements display so that you can graphically view the impact of scheduling changes.

Important: You have the Infinite Scheduler available to you; this scheduler is not constraint-based.

The scheduling process calculates the work order and operation scheduled durations and dates, based on the forward or backward scheduling goal (See: Routine Work Orders, page 4-4), and Work in Process parameters. The concurrent program is triggered after a work order is released (See: eAM Work Order Statuses, page 4-24). The work order automatically transitions to a Pending Scheduling status, until the concurrent program finishes scheduling. At that time, the work order transitions back to a Released status.

Additional Information: Oracle eAM uses the Infinite Scheduler for automatic scheduling. The Infinite Scheduler considers only the calendar setup and will not consider further finite exceptions. It does not consider shift exceptions or take the resource loads and availability into consideration. The Resource Availability form is a view to display information on the availability and considers exceptions so that you can perform manual scheduling accordingly.

For information regarding scheduling rules for work order relationships, see Work Order Relationships, page 4-52.

Using the Scheduler Workbench

Use the Scheduler Workbench to select specific work orders, expand, and collapse work orders and operations, using a tree hierarchy structure. A Gantt Chart graphically displays both firmed and unfirmed work orders (See: Routine Work Orders, page 4-4). You can view and update start and end dates for each resource.

In automatic mode, the Scheduler process creates start and end times for operations and resources. By default, you are in manual mode.

To use the Scheduler Workbench:

1. Navigate to the Scheduler Workbench.
2. Choose Filter to limit the information displayed such as restricting the results based on the assigned planner. You can display information by Department, Resource, Asset Information, filter by time, or a combination of this information. You can view information for work orders at Released, On Hold, Unreleased, Cancelled, and Complete statuses.

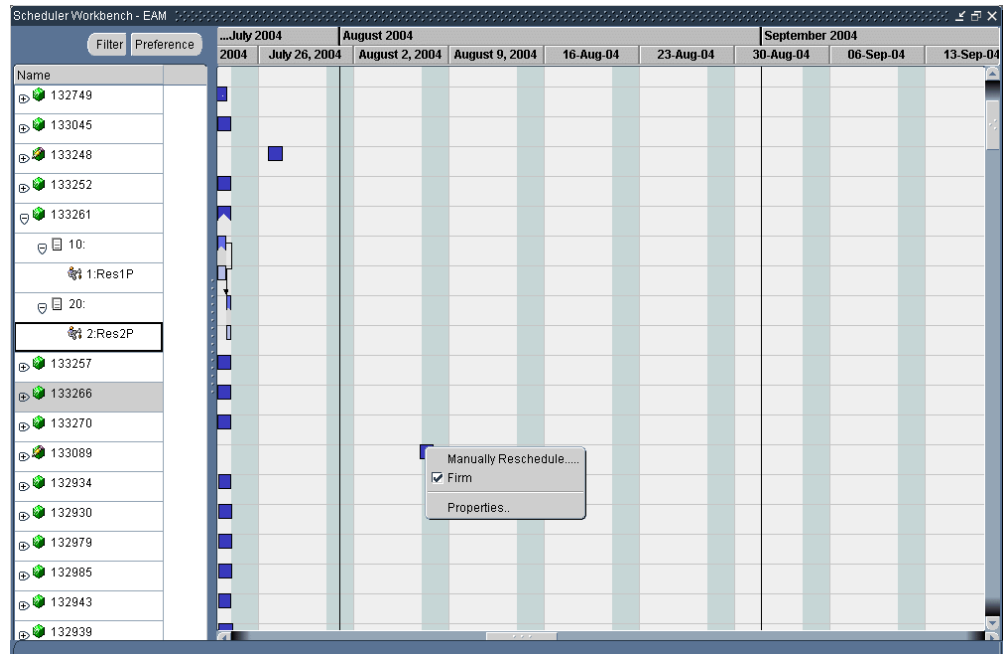
Filter

The screenshot shows a 'Session Filter' dialog box with a blue title bar and a close button. The dialog is divided into several sections for filtering work orders. At the top left, there are input fields for 'Department' and 'Resource', each followed by a dropdown arrow. To the right of these is a 'Workorder Status' section with a list of checkboxes: 'Released' (checked), 'Unreleased' (checked), 'Draft' (checked), 'On Hold' (checked), 'Complete' (unchecked), and 'Complete - No Charges' (unchecked). Below the status section, on the left, is a vertical list of filters: 'Work Orders', 'Work Order Type', 'Activity', 'Activity Type', 'Activity Cause', 'Project', and 'Task', each with an input field and a dropdown arrow. To the right of this list are input fields for 'Asset Group', 'Asset Number', and 'Owning Department', each with a dropdown arrow. Below 'Asset Number' is a checkbox labeled 'Show Child'. At the bottom of the dialog is a 'Filter By Time' section. It contains an unchecked checkbox for 'Enable Date'. Below this are two radio buttons: 'Date' (selected) and 'Offset days from today' (unselected). To the right of the 'Date' radio button are 'Start' and 'End' date pickers, both showing '5/21/13 11:02 AM'. To the right of the 'Offset days from today' radio button are empty 'Start' and 'End' input fields. At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

3. Choose OK to filter information entered (See: Filtering Jobs, Oracle *Production Scheduling User's Guide*).

Work orders appear on the left side of the window, with their associated operations' resources, in a tree hierarchy format. On the right, bars spanning between calendar days represent associated schedules for the current operation resources. If dependent operations exist, you can see dependency links; the Scheduler process considers these dependencies. You can drag and drop the bars between different calendar days to dynamically adjust schedules.

Scheduler Workbench



4. Optionally firm or unfirm Work Orders by selecting Create/Modify Work Orders from the Tools menu. The Find Work Orders window appears (See: Routine Work Orders, page 4-4). You can also right click on a schedule, symbolized by a bar.
 - You can view resource load versus capacity, using the Scheduler Workbench. For information on viewing work order properties, operation properties, and resource properties, See: Viewing a Property Window, *Oracle Production Scheduling User's Guide*.
 - For information on displaying resources and resource load versus capacity, See: Showing Select Resources and Resource Load Versus Capacity Panes, *Oracle Production Scheduling User's Guide*.
 - Normally, Work Order rescheduling takes place within the Work Order window, but you can also reschedule them within the Gantt Chart. For information on how to reschedule Work Orders, operations, and resources within the Gantt Chart, See: Rescheduling Jobs, Operations, and Resources in the Gantt Chart, *Oracle Production Scheduling User's Guide*.

Related Topics

Overview of Workbench, *Oracle Production Scheduling User's Guide*

Launching the Workbench, *Oracle Production Scheduling User's Guide*

eAM Cost Management

This chapter covers the following topics:

- Introduction
- Overview of eAM Cost Management
- eAM Cost Estimation
- Viewing Cost Information
- Asset Cost Rollup
- Parent-Child Hierarchy Cost Rollup
- Alternate Cost Hierarchy Rollup
- Transferring Invoice Variances to Maintenance Work Orders
- Viewing Simulated Transfer Details
- Transferring Invoice Variances

Introduction

Costs generate as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within eAM. This chapter contains the following topics:

- Overview of eAM Cost Management, page 7-1
- Transferring Invoice Variances to Maintenance Work Orders, page 7-14

Overview of eAM Cost Management

Costs generate as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies, defined within Enterprise Asset Management, and can roll up to any level within an asset hierarchy. Labor, Material, and Equipment

charges further classify into several maintenance cost categories.

Enterprise Asset Management captures and retains all work. You can reference completed work to review operations, resources, and costs. This information provides the scope of work and the process by which it is completed.

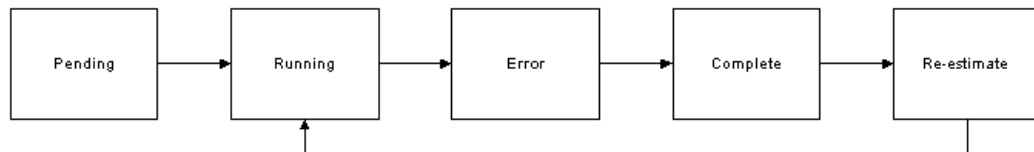
Managing costs in eAM includes the following topics:

- eAM Costing Methods and Mappings, page 3-226
- Setting Up Cost Categories, page 3-228
- Setting Up eAM Cost Management, page 3-231
- eAM Cost Estimation, page 7-2
- Viewing Cost Information, page 7-4
- Asset Cost Rollup, page 7-12
- Parent-Child Hierarchy Cost Rollup, page 7-13
- Alternate Cost Hierarchy Rollup, page 7-13

eAM Cost Estimation

Estimating the costs of maintenance Work Orders is often necessary for planning and assessing purposes. The Work Order Cost Estimate Processor estimates the costs of all materials and resources exploded or entered on a maintenance Work Order, enabling you to plan and assess your costs. A Work Order's estimated and actual costs might differ because all materials or resources, associated with a Work Order, might not actually be used when the Work Order executes. For example, a required material was not issued to the maintenance Work Order.

Cost Estimation Lifecycle



The Work Order Cost Estimate Processor can continually execute or launch manually via a concurrent request. Work Orders have one of the following Estimation Statuses:

- *Pending* - The Work Order is waiting to be selected by the Work Order Cost Estimate Processor.

- *Running* - The Work Order Cost Estimate Processor is currently estimating the costs of the Work Order.
- *Error* - The Work Order Cost Estimate Processor attempted to estimate the Work Order's costs, but there was an error.
- *Complete* - Work Order Cost Estimate Processor successfully completed estimating the Work Order's costs.
- *Re-estimate* - The Work Order is waiting to be picked up by the Work Order Cost Estimate Processor, for re-estimation. In this case, the Work Order was estimated at least once.
- *Running and Re-estimate* - Changes were made to a Work Order's requirements, while the Work Order Cost Estimate Processor was executing. These Work Orders are then re-estimated by the Work Order Cost Estimate Processor.

To view the status of the Work Order Cost Estimation process:

1. Navigate to the Maintenance Work Orders window.

Maintenance Work Orders

The screenshot shows the 'Maintenance Work Orders (EM1)' window. It features a table with columns: Select & Estimate, Work Order, Estimation Status, Asset Activity, Asset Group, Asset Number, Rebuild Item, and Rebuild Asset Number. The first row shows a work order with ID 204212, status 'Complete', activity '30000 Mile Maint', group 'Vehicles', and number 'DTF35000'. Below the table are several filter fields: Description (30000 Mile Truck Maintenance), Class (MaintWAC), Department (F-Maint), and Status (Released). There are also buttons for 'Select All', 'Re-estimate Work Order', and 'Value Summary'. At the bottom, there are fields for 'From Period' (11/01/2005) and 'To Period' (09/30/2006).

Select & Estimate	Work Order	Estimation Status	Asset Activity	Asset Group	Asset Number	Rebuild Item	Rebuild Asset Number
<input checked="" type="checkbox"/>	204212	Complete	30000 Mile Maint	Vehicles	DTF35000		
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							

Description: 30000 Mile Truck Maintenance
 Class: MaintWAC
 Department: F-Maint
 Status: Released

Accounting Information by Period
 From Period: 11/01/2005
 To Period: 09/30/2006

Buttons: Select All, Re-estimate Work Order, Value Summary

2. Select the Work Orders to estimate/re-estimate by selecting the individual Select & Estimate check boxes. You can choose Select All to automatically select all Work Orders listed for re-estimation.
3. Choose Re-estimate Work Order to estimate/re-estimate all selected Work Orders. The Estimation Status field displays the status of the Work Order Cost Estimation

process.

Related Topics

[Viewing Cost Information, page 7-4](#)

Viewing Cost Information

You can view the material, labor, and equipment costs of asset numbers, activities, and work orders. You can see detailed or summarized views of actual, estimated, or variance cost information. When viewing the parent asset number, you can view just the parent asset number costs or the costs of the parent and child asset numbers that are rolled up to the parent level.

Within both the forms application and Maintenance User profile, different costs are viewable. In the forms application, you can view work order and activity costs. In the Maintenance User profile, you can view work order and asset number costs.

For assets that transferred from one organization to another, each organization can view only the work order costs on those assets that were incurred by itself.

To view cost information within the forms application:

1. Navigate to the Work Order window, and search for a work order to view associated costs.

Work Order (EM1)

Work Order	204247	3000 Mile Truck Maintenance
Asset Number	DTF35000	Delivery Erand Truck 35000
Asset Group	Vehicles	
Asset Activity	3000 Mile Maint	
Class	MaintWAC	
Status	Released	
	<input type="checkbox"/> Pending	
Parent Work Order		
Relationship Type		

Scheduled Dates	
Start Date	06/27/2006 12:00:00
Completion Date	06/27/2006 13:57:36
Duration(hours)	1.96
Actual Dates	
Start Date	
Completion Date	

Department	F-Maint	<input checked="" type="checkbox"/> Firm	<input type="checkbox"/> Notification Required
Priority		<input type="checkbox"/> Tagout Required	<input checked="" type="checkbox"/> Planned
Work Order Type		<input checked="" type="checkbox"/> Enable Material Issue Requests	
Shutdown Type	Required	PM Suggested Start Date	06/27/2006 12:00:00
Warranty Status		PM Suggested End Date	
Failure Information		<input type="checkbox"/> Failure Entry Required	
Failure		Failure Date	
Cause		Comments	
Resolution			
Material Shortage			
Material Shortage	No	As Of Date	09/01/2006 16:15:08
		<input type="button" value="Check Shortage"/>	

- Click the Costs button.

Maintenance Work Orders

The screenshot shows the 'Maintenance Work Orders (EM1)' window. It features a table with the following columns: 'Select & Estimate' (checkboxes), 'Work Order', 'Estimation Status', 'Asset Activity', 'Asset Group', 'Asset Number', 'Rebuild Item', and 'Rebuild Asset N'. The first row is populated with: 204247, Complete, 3000 Mile Maint, Vehicles, DTF35000, and empty cells for Rebuild Item and Rebuild Asset N. Below the table, there are input fields for 'Description' (3000 Mile Truck Maintenance), 'Class' (MaintWAC), 'Department' (F-Maint), and 'Status' (Released). To the right of these fields are two buttons: 'Select All' and 'Re-estimate Work Order'. At the bottom, there is a section titled 'Accounting Information by Period' with 'From Period' (06/01/2006) and 'To Period' (09/30/2006) fields, and a 'Value Summary' button.

Select & Estimate	Work Order	Estimation Status	Asset Activity	Asset Group	Asset Number	Rebuild Item	Rebuild Asset N
<input checked="" type="checkbox"/>	204247	Complete	3000 Mile Maint	Vehicles	DTF35000		
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							

Description: 3000 Mile Truck Maintenance
 Class: MaintWAC
 Department: F-Maint
 Status: Released

Buttons: Select All, Re-estimate Work Order

Accounting Information by Period
 From Period: 06/01/2006
 To Period: 09/30/2006
 Value Summary

3. Optionally re-estimate selected work orders' costs by choosing Re-estimate Work Order. After chosen, the Work Order Cost Estimation process executes to re-estimate the costs for all selected work orders. See: eAM Cost Estimation, page 7-2. You can optionally first choose Select All to automatically select all work orders to re-estimate.
4. In the Accounting Information By Period region, choose the dates that identify the accounting period you want to view.
5. Click the Value Summary button.

Maintenance Work Order Value Summary

Maintenance Work Order Value Summary (EM1) - 204247

Period From: 06/01/2006 Period To: 09/30/2006 Refresh

Asset Group	Vehicles	Completion Date	06/27/2006 13:57:36
Asset Number	DTF35000	Work Order Status	Released
Asset Activity	3000 Mile Maint	Parent Work Order	
Rebuild Item		Estimation Status	Complete
Rebuild Serial Number		Last Estimate Id	-1
Owning Department	F-Maint	Last Estimate Date	09/01/2006 16:15:19

Actual Costs Estimates Variances

Cost Category	Total	Material	Labor	Equipment
Maintenance	50.76	19.26	26.50	5.00
Job Total	50.76	19.26	26.50	5.00

Details

- You can view total Material, Labor, and Equipment costs for the cost categories associated with the current work order. You can view totals for actual, estimated, or variance costs, depending on the tab you select.

Actual Costs: The Actual Costs tab displays the current work order's accumulation of material and resource transaction costs, based on the specified periods.

Note: The Cost Manager process executes to provide updated, actual cost information.

Estimated Costs: The Estimates tab displays the current work order's material and resource requirements' estimated costs. The Work Order Cost Estimate Processor executes to provide updated, estimated cost information. You can also manually launch this process via a concurrent request. See: Viewing Cost Information, page 7-4

Variance Costs: The Variances tab displays the difference between the actual costs and estimated costs.

- For the selected cost category, choose Details to view the Material, Labor, and Equipment costs for individual operations on the current work order's routing. You can view totals for actual, estimated, or variance costs, depending on the tab you select.

Note: To see if there are any changes to the selected work order's costs, choose Refresh. For example, if the work order's Estimation Status is Reestimate, choosing Refresh indicates if the Work Order Cost Estimate Processor has picked up the work order and re-estimated the costs. If, after choosing Refresh, the Estimation Status is changed to Complete, the maintenance work order has the latest estimation costs.

Costs Details By Operation

Cost Details By Operation (EM1) - 204247, Maintenance

Asset Group	Vehicles	Estimation Status	Complete
Asset Number	DTF35000	Completion Date	06/27/2006 13:57:36
Asset Activity	3000 Mile Maint	Owning Department	F-Maint
Rebuild Item		Work Order Status	Released
Rebuild Serial Number		Parent Work Order	
Period From	06/01/2006	Period To	09/30/2006

Actual Costs **Estimates** Variances

Department Code	Operation Sequence Number	Total	Material	Labor	Equipment
F-Maint	50	5.00	0.00	5.00	0.00
F-Maint	90	0.25	0.00	0.25	0.00
F-Maint	60	0.25	0.00	0.25	0.00
F-Maint	110	0.25	0.00	0.25	0.00
F-Maint	130	2.50	0.00	2.50	0.00
F-Maint	80	0.25	0.00	0.25	0.00
F-Maint	120	0.25	0.00	0.25	0.00
F-Maint	30	5.00	0.00	5.00	0.00
Total		50.76	19.26	26.50	5.00

Detailed Estimates Distributions

- Click the Distributions button to view the specific accounts charged for an individual operation.

WIP Transaction Distributions (EM1) - 204247, 10

Account Location Currency Transaction Work Order Details Comments

Transaction Date	Account	Transaction Value	Item / Sub Element	Revision	Transaction Type

Work Order: Item/Sub Element: UOM:

Asset Group: Revision: Quantity:

Asset Number: Basis: Unit Cost:

Account: Value:

The system returns to the Cost Details by Operation window.

- Click the Detailed Estimates button to display the details of the work order such as required material, resources, and associated direct items.

Estimated Cost Details (EM1) - 204247, 50

Material Cost			
Item	Required Quantity	Item Unit Cost	Total Item Cost

Resource Cost					
Resource	Usage	UOM	Resource Rate	Overhead Cost	Total Resource Cost
Mechanic1	0.20	HR	25.00	0.00	5.00

Direct Item Cost						
Item Name	Item Description	Item Unit Cost	Quantity	Requisition Number	PO Number	Total Item Cost

Total Estimated Cost

Total Estimated Cost 5.00

To view cost information within Maintenance Super User:

1. Navigate to the Asset Numbers page, and query an asset number. See: Obtaining Asset Number Information, page 21-17.
2. Select the asset number, and then select Costs from the View drop-down list.
3. Click the Go button, and the Asset Costs page appears.

Organization EM1

Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Capital Rebuildable Inventory Mass Meter Readings Mass Geocode Entry Linear Assets Map Workbench

Assets: Capital >

Asset Costs: DTF35000

View Work Requests Go

Asset Number DTF35000
Description Delivery Errand Truck 35000

Asset Group Vehicles

Cost View Options

* Indicates required data

View Actual Costs
Period From Mar-05
Include Child Assets
Go

View Cost By Period
Period To Dec-05
Include Related Assets
Go

Actual Costs

Export Work Order Cost Details

Period	Material (USD)	Labor (USD)	Equipment (USD)	Total (USD)
Mar-05	0.00	18.75	0.00	18.75
Nov-05	2,590.10	175.00	2,582.50	5,347.60
Dec-05	0.00	6.25	0.00	6.25

Cost Summary

Total Material Cost (USD) 2,590.10
Total Labor Cost (USD) 200.00
Total Equipment Cost (USD) 2,582.50
Total Asset Maintenance Cost (USD) 5,372.60

Return To Search

View Work Requests Go

4. In the Cost View Options region, you can narrow your selection criteria.

1. From the View drop down list, select the type of cost information to view. Values are Actual Costs, Estimated Costs, Variance Costs, and Cost Summary.

Actual Costs: The Actual Cost option displays the selected asset number's actual costs, by period, of the material and resource transactions.

Note: The Cost Manager process executes to provide updated, actual cost information.

Estimated Costs: The Estimated Costs option displays the estimated costs, by period, of the required material and resources associated with the selected asset number.

Note: The Work Order Cost Estimate Processor executes to provide updated, estimated cost information. You can also execute the Work Order Cost Estimate Processor manually via a concurrent request.

Variance Costs: The Variance Cost option displays the difference between the actual and estimated costs within a period.

Cost Summary: The Cost Summary option displays a summary of the actual, estimated, and variance cost information, associated with the asset number, for the specified period(s).

2. From the View Cost By drop-down list, select how you would like to view your cost information. Valid values are Period and Cost Category.
 - If you select Cost Category, you can view cost information by the cost categories.
 - If you select Period, you can view cost information by periods. Optionally enter the Period From and Period To. Accounting Periods are defined within Oracle Inventory (See: Maintaining Accounting Periods, *Oracle Inventory User's Guide*).
5. Select the Include Child Assets check box to view the rolled up costs for the current asset number and its children. See: Defining Asset Numbers, page 3-85 to review how asset number hierarchies are created.
6. Click the Go button to view cost element information. The information is broken down into the three cost elements: Material, Equipment, and Labor.
7. Optionally click the Export button to save or export your cost information to a spreadsheet.

Related Topics

Overview of Cost Management, *Oracle Cost Management User's Guide*

Submitting a Request, *Oracle Applications User's Guide*

Asset Cost Rollup

You can optionally roll a child asset's costs into its parent asset, for reporting purposes.

To view an asset hierarchy cost rollup:

1. Navigate to the Asset Numbers page.
2. Query an Asset.
3. Select the Asset to view its details.
4. Select Costs from the View drop down list, and then choose Go.
5. Select the Include Child Assets check box to roll the costs of the current asset's child assets.
6. Choose Go.

Parent-Child Hierarchy Cost Rollup

You can optionally rollup costs associated with a child work order into the parent work order, for reporting purposes.

To view a parent-child hierarchy cost rollup:

1. Navigate to the Work Orders page.
2. Query a work order.
3. Select the work order to view its details.
4. Select the Work Relationships tab to view all relationships, related to the current work order, in the View All Relationships region. See: Work Order Relationships, page 4-52.
5. Click the View Cost button.

Work Order Costs

Maintenance Home Assets Work Requests **Work Orders** Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Mass Time Entry Generate PM Work Orders

Work Orders: All > Work Order: WO102907 >

Work Order Costs

* Indicates required field

* Work Order: WO102907 Include Child Work Order: Yes

Period From: Period To:

Go Clear

Select Object: Estimate Export

Expand All | Collapse All

<input type="checkbox"/>	Focus	Work Order	Asset Number	Asset Group	Asset Type	Actual Total Cost(USD)	Estimated Total Cost(USD)	Variance Total Cost(USD)	Cumulative Actual Cost(USD)	Cumulative Estimated Cost(USD)	Cumulative Variance Cost(USD)	Estimation Status
<input type="checkbox"/>		WO102907	DTF35000	Vehicles	Capital	47.59	16.84	<30.75>	47.59	16.84	<30.75>	Re-Estimate

[Return To Work Order: WO102907](#)

6. Select Yes from the Include Child Work Order list of values to view costs for all children rolled up to the current work order.
7. Click the Go button.

Alternate Cost Hierarchy Rollup

You can view parent-child work order hierarchy costs, rolled up to the parent level. You

may want to view costs for work orders outside of the hierarchy network.

To view an alternate hierarchy cost rollup:

1. Navigate to the Work Orders page.
2. Query a work order.
3. Select the work order to view its details.
4. Select the Work Relationships sub-tab to view all relationships, related to the current work order, in the View All Relationships region. See: Work Order Relationships, page 4-52.
5. Choose Update Alternate Cost Hierarchy to view work order costs outside of the hierarchy network.
6. Choose Import Work Hierarchy.
7. Select the work order.
8. Select View Cost from the *Select Work Order*: list of values.
9. Click the Go button.

Transferring Invoice Variances to Maintenance Work Orders

You can transfer variances, between purchase order price and invoice price, to a maintenance Work Order, from your user-defined adjustment account. This process (Transfer Shop Floor Invoice Variance) is available for both direct items and outside services and enables you to value your maintenance costs at the actual costs.

Transferring invoice variance tasks include the following:

- Viewing Simulated Transfer Details, page 7-15
- Transferring Invoice Variances, page 7-15

Related Topics

Overview of Direct Item Procurement for eAM Work Orders, page 6-1

Overview of eAM Contractor Services, page 9-1

Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*

Viewing Simulated Transfer Details

You can generate the Simulate Transfer Shop Floor Invoice Variance report to display the details of each invoice variance and a summary total of the variance amount that may transfer. The report format is similar to the Shop Floor Invoice Variance Report. View this report to determine if you want to execute the variance transfer. Complete this task before you execute the Shop Floor Invoice Variance Report.

Related Topics

Simulate Transfer Shop Floor Invoice Variance, page 31-19

Transferring Invoice Variances

The Transfer Shop Floor Invoice Variance process transfers the invoice variance from your specific adjustment account (See: Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*) to the maintenance Work Orders. This process generates account distribution entries that add the invoice variance amount back to the maintenance Work Order WIP accounts. This transfer executes for one organization, and one adjustment account at a time. For each execution, the process creates a unique batch number.

When the process completes successfully, you can generate the Shop Floor Invoice Variance Report to view your transfer details (See: Shop Floor Invoice Variance Report, page 31-20). Each execution completed by the transfer process is identified by a batch id number, generated by the process itself.

The accounting distribution created by the process is as follows:

Account Distributions Generated

Account	Debit	Credit
WIP accounting class valuation accounts	XXX	-
Invoice variance adjustment account	-	XXX

To execute the Transfer Shop Floor Invoice Variance process:

1. Navigate to the Shop Floor Invoice Variance window.
2. Select Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

- **Transfer Description**

Optionally enter a description for the invoice transfer.

- **Specific Work Order**

Optionally view the variance transfer details for a Specific Work Order. Maintenance Work Orders with statuses of Cancelled, Closed, and Complete - No Charges are not available.

- **IPV Item Type**

You can transfer invoice variances for:

- *Direct Shop Floor Delivery items only*
- *Outside Processing and Direct Shop Floor Delivery items*
- *Outside Processing items only*

- **Item Range**

If you chose *Outside Processing items only* as the value for the IPV Item Type parameter, you can specify an item range for your transfer.

- **Specific Item**

If you chose *Outside Processing items only* as the value for the IPV Item Type parameter, you can specify an item for your transfer.

- **Category Set**

If you chose *Outside Processing items only* as the value for the IPV Item Type parameter, you can specify a Category Set for your transfer.

- **Specific Category**

If you previously selected *Outside Processing items only* as the value for the IPV Item Type parameter and a value in the Category Set parameter, you can specify a specific category from the previously selected category set.

- **Specific Project**

You can choose to transfer invoice variances for items associated to a specific project.

- **Adjustment Account**

You can enter an adjustment account from which the invoice variance is transferred.

- **Invoice Cutoff Date**

Enter a date. Approved and posted invoices through this date are included in your transfer.

3. Choose OK.
4. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Direct Item Procurement for eAM Work Orders

This chapter covers the following topics:

- Introduction
- Overview of Direct Item Procurement for eAM Work Orders
- Enabling Direct Item Procurement
- Automatically Creating Requisitions for Direct Items
- Manually Entering Requisitions for Direct Items
- Creating Purchase Orders from Requisitions
- Manually Entering Purchase Orders for Direct Items
- eAM Direct Procurement Accounting

Introduction

Oracle Enterprise Asset Management (eAM) direct item procurement enables you to order items directly to your maintenance organization. This chapter contains the following topics:

- Overview of Direct Item Procurement for eAM Work Orders, page 6-1
- Enabling Direct Item Procurement, page 8-3
- Automatically Creating Requisitions for Direct Items, page 8-4
- Manually Entering Requisitions for Direct Items, page 8-11
- Creating Purchase Orders from Requisitions, page 8-17
- Manually Entering Purchase Orders for Direct Items, page 8-20

- eAM Direct Procurement Accounting, page 8-24

Overview of Direct Item Procurement for eAM Work Orders

One of the most important features included in Enterprise Asset Management (eAM) is Work Management (See: Overview of eAM Work Management, page 4-2). Work Management enables you to create Work Requests when an asset is problematic. After the Work Request is approved, a Work Request can associate with a work order. A work order includes a listing of all maintenance activities are performed on an asset. Material requirements for a work order (See: Defining Material Requirements, page 4-38) may include stocked, non-stocked direct items, services, and direct items (description-based items). Stocked items are those that are either used frequently, or the criticality of short lead time to obtain replacement parts mandates that they be stocked in inventory. Non-stock direct items can be included in the internal catalog, but the decision is made to not maintain an inventory balance. These items are not transactable, not stockable, but you can procure them. Direct items are either non-stock or description-based. Non-Stock direct items can represent items that are not stocked in inventory, or services that need to be purchased from a supplier. Non-Stock direct items are not stocked in inventory but are defined in the Item Master as an inventory item, purchaseable, and purchase but not stockable (See: Inventory Attribute Group, *Oracle Inventory User's Guide*). Direct items are contrived as "one-off", bought directly from a vendor for a specific work order and operation. They are delivered directly to the Shop Floor from maintenance work order execution. You can add planned direct items to a work order BOM or an activity BOM. Planned direct items must first be created in the Item Master as Non-Stockable and Purchasable inventory items (See: Non-Stock Direct Item Setup, page 3-153). A purchase requisition is optionally automatically created for these items, when the work order is released.

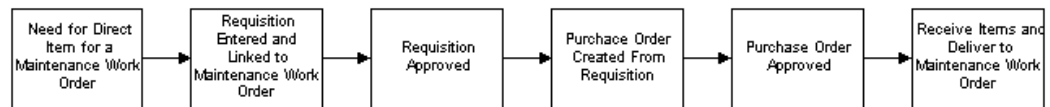
If you have Oracle iProcurement installed, all item types may be included in your internal catalog. A planner can procure direct items from the Maintenance Workbench (See: Using the Maintenance Workbench, page 4-70). Purchase requisitions and purchase orders of such items capture the work order for which they are required. If the work order is project related, then the project and task information is captured in the purchase requisition. You can procure Non-Stock and Description-based direct items, without accessing iProcurement, as well.

The following diagram illustrates the integration between Enterprise Asset Management and Procurement. First, a maintenance work order is created. If the asset or maintenance BOM that is associated with the asset includes direct items, those direct items are automatically part of the work order material requirements. You can also manually add direct items (Non-Stock, Description-based, and Services) to a work order. When the work order is released, a purchasing requisition is created for the direct items that are included in the material requirements and that have the Auto Request Material check box selected. This check box setting defaults from the asset or maintenance BOM setup, but you can update it on the work order. The requisition is linked to the work order, and then approved. A purchase order is created from the

requisition, and then approved. You can create a purchase order manually, without first creating a requisition. In both cases, the purchase order needs approval. The items are received using a standard receipt routing, and delivered to the maintenance work order. The cost on the work order records as the actual purchase order price.

Important: You cannot automatically create one requisition for multiple direct items on a work order. If a work order includes multiple direct items, you must manually create the requisition.

Direct Item Procurement for eAM Work Orders Process



This section includes the following topics:

- Enabling Direct Item Procurement, page 8-3
- Automatically Creating Requisitions for Direct Items, page 8-4
- Manually Entering Requisitions for Direct Items, page 8-11
- Creating Purchase Orders from Requisitions, page 8-17
- Manually Entering Purchase Orders for Direct Items, page 8-20
- eAM Direct Procurement Accounting, page 8-24

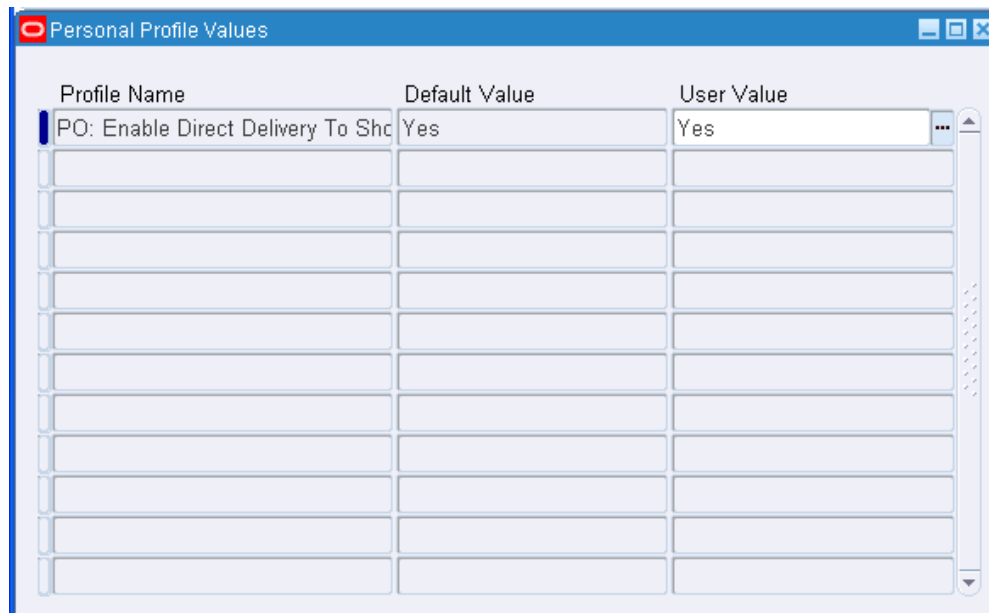
Enabling Direct Item Procurement

To enable direct item (both supplier catalog and non-catalog items) procurement for eAM work orders directly from an eAM work order, set the *PO: Enable Direct Delivery To Shop Floor* profile option to Yes. When this value is set to Yes, you can create an eAM-related requisition or purchase order. You can enter eAM specific information, such as work order and operation reference numbers, as well as identify a requisition line as having a Shop Floor destination. Requisitions are created automatically for direct items (Non-Stock and Description-based), after a work order with those direct items on its material requirements listing is released.

To enable direct item procurement:

1. Navigate to the Personal Profile Values window.

Personal Profile Values



The screenshot shows a window titled "Personal Profile Values" with a table containing three columns: "Profile Name", "Default Value", and "User Value". The first row is populated with "PO: Enable Direct Delivery To Shop Floor", "Yes", and "Yes". The remaining rows are empty. A vertical scrollbar is visible on the right side of the table.

Profile Name	Default Value	User Value
PO: Enable Direct Delivery To Shop Floor	Yes	Yes

2. Select *PO: Enable Direct Delivery To Shop Floor* from the Profile Name list of values.
3. Select Yes from the Default Value list of values.
4. Save your work.

Related Topics

Purchasing Profile Options, *Oracle Purchasing User's Guide*

Automatically Creating Requisitions for Direct Items

First, a maintenance work order is created. If the asset or maintenance BOM that is associated with the work order's asset includes direct items, those direct items are automatically part of the work order's material requirements. You can also manually add direct items (Non-Stock and Description-based) to a work order. When the work order is released, a purchasing requisition is created for the direct item that is included in the material requirements and that have the Auto Request Material check box selected. This check box setting defaults from the asset or maintenance BOM setup, but you can update it on the work order. The requisition is linked to the work order, and then approved. A purchase order is created from the requisition, and then approved. You can also create a purchase order manually, without first creating a requisition. In both cases, the purchase order needs approval.

Important: You cannot automatically create one requisition for multiple direct items on a work order. If a work order includes multiple direct items, you must manually create the requisition. You must clear the Auto Request Material check box on the Maintenance BOM or the work order direct item line.

To automatically create requisitions:

1. Navigate to the Work Orders window.

2. Choose New.

The header information displays general information about the Asset Number and the type of work required.

3. The work order number is assigned, but you can update it.
4. Enter an Asset Number requiring maintenance. The Asset Group defaults (See: Defining Asset Numbers, page 3-85).
5. Select an Asset Activity. Asset activities associated with this asset number are available.

Note: If this work order was previously created, you can add an asset activity, as long as the work order is at an Unreleased or Draft status, or an asset activity was not previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an asset activity to a pre-existing work order.

After selecting an asset activity, the associated maintenance BOM (material) (See: Setting Up Maintenance Bills of Material, page 3-134) and maintenance route (resources), associated with the activity (See: Defining Maintenance Routes, page 3-139), attach to the work order. After an asset activity is saved to a work order, you can no longer change or delete it.

6. Enter a Class code to represent the charge (expense) accounts associated with the Asset Number. This defaults from the Asset Number (See: Defining Asset Numbers, page 3-85); you can update it.
7. Enter the Status. For example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: eAM Work Order Statuses, page 4-24).
8. If this is a child work order in a work order network and Parent Child is populated in the Relationship Type field, the parent work order is populated in this field.

9. In the Scheduled Dates region, enter the work order's scheduled Start date if it is based on a forward schedule. The scheduling process uses this date as a starting point to calculate the scheduled end date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 3-195).
10. Enter a scheduled Completion date for backward scheduling. This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required end date (See: eAM Scheduling, page 3-195).
11. Within the Main tab, the Department defaults from the selected Asset Number (See: Defining Asset Numbers, page 3-85). This indicates the persons or department responsible for this Asset Number.
12. Optionally select a Priority. For example, High, Medium, or Low.
13. Optionally select a Work Order Type. Work order types enable you to differentiate work orders, for example, Routine, Preventive, Rebuild, Emergency, or Facilities. Maintenance management can use this information to sort and monitor work activities for reporting and budgeting. Work order types are referenced in the work order. For information on how to create valid values, See: Work Order Types, page 3-61.
14. The Shutdown Type defaults from the activity. This helps the planner group work orders that may require shutdowns, so that they are planned together.
15. If the Firm check box is selected, planning and scheduling does not adjust the schedule, regardless of material or resource availability (See: Overview of Planning and Scheduling). This check box defaults as selected or cleared, depending on the Auto Firm On Release check box setting, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 3-13). This defaults after the work order is released.

If the check box is selected, the end date is calculated, based on the work order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the work order. You can update this check box for work orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 4-24).
16. Optionally select the Notification Required check box.
17. Optionally select the Tagout Required check box to indicate that the area needs to be secured for operations required to execute this work order. Tags are generally printed and placed on an asset, warning the plant that it is shutdown and should

not be started. This check box helps the planner isolate those jobs that require a tagout.

To store tagout documents using the Attachments feature

18. Select the paperclip Attachments icon to attach relevant tagout documents. You can attach URL, file, or text attachments. See: Defining Work Order Documents, page 4-28.
19. The Planned check box is selected if the current work order was created from forecasted work orders (See: Preventive Maintenance Work Orders, page 4-13).
20. Optionally select the Enable Material Issue Requests check box to enable eAM to manage material availability for the current work order. Material is physically available to a work order via the material request and verification process. This check box is selected by default if it is selected on the eAM Parameters window. This check box is disabled when the work order is at a Released status.
21. Optionally select the Activity tab.
 1. Optionally select an Activity Type. This code indicates the type of maintenance for this Activity and is used when defining a job or a standard job, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the Activity (See: Defining Activities, page 3-122).
 2. Optionally select an Activity Cause to specify what situation caused this work to generate, for example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the Activity (See: Defining Activities, page 3-122).
 3. Optionally select an Activity Source to specify reasons Activities need execution, for example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. This value defaults from the Activity (See: Defining Activities, page 3-122).
22. Optionally select the Project tab. This tab is enabled if Project Manufacturing is installed and enabled.
 1. Optionally select a Project.
 2. Optionally select a Task.
23. You can select the Rebuild tab if this work order is created for a rebuild able item. See: Rebuild Work Orders, page 4-14.
24. Optionally select the Maintenance Request tab to display service and work requests associated with this work order. You can add service and work requests to a work order by selecting a service request or request number, respectively. Work requests

at an Awaiting Work Order status and Maintenance Type Service Requests at an Open status are available for association. You may associate multiple work requests to a single work order, and one work order can associate with a service request. You can associate a service request to multiple work orders. You can dissociate a work and service request from a work order.

25. Select the Bill, Routing tab to select alternate, predefined BOMs and Routings. See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Maintenance Routes, page 3-139.

After the alternate BOM and routing are selected, the system uses the associated items and assigns the associated resources needed to execute the work order.

26. Optionally choose Operations to prepare necessary operations. These operations default from the maintenance route (See: Defining Maintenance Routes, page 3-139) associated with the current Activity, but you can update and add to them (See: Preparing Work Order Operations, page 4-31).
27. Optionally choose Materials to view or update the material requirements for this purchase order (See: Defining Material Requirements, page 4-38). When this work order is Released, purchase orders or requisitions are created for the direct item material requirements if the Auto Request Material check box is selected (viewed by scrolling right). These items defaulted from the Maintenance BOM; they are referenced in the Direct Items region. The Supplier and Price information was established within the Bills of Material window when adding the direct items to the asset or maintenance BOMs. This information defaults into the work order.

Material Requirements

Material Requirements (EM1) - WO220767

Inventory Items

Main Quantities Supply Comment ATP

Material	Op	Department	Date Required	Material Description	Plan
<input type="checkbox"/> 10-40W Oil	10	F-Maint	04-SEP-2006 19:	10-40W Car / Truck Motor Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/> Air Filter	10	F-Maint	04-SEP-2006 19:	Air Filter for Vehicle	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fuel Filter	10	F-Maint	04-SEP-2006 19:	Fuel Filter for Vehicle	<input checked="" type="checkbox"/>
<input type="checkbox"/> Oil Filter	10	F-Maint	04-SEP-2006 19:	Oil Filter for Vehicles	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shop Rags	10	F-Maint	04-SEP-2006 19:	Shop Rags for Clean up	<input checked="" type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

Op	Item Type	Line Type	Item	Description	UOM	Required Qty	Purchasing Category	Need By Date
<input type="checkbox"/> 50	Non Stock	Quantity	EAM Item 1	EAM Non Stoc	Ea	1	MISC.MISC	04-SEP-20
<input type="checkbox"/>								
<input type="checkbox"/>								

Select All (B) Select Direct Items Copy To Asset

28. Optionally choose Resources to view, add, or update the resources assigned to each operation. See: Defining Resource Requirements, page 4-47.
29. Optionally choose Relationships to manage work order schedules and view work order details. See: Work Order Relationships, page 4-52.
30. Optionally choose Asset Route to view the asset route associated with the current work order's asset group. You might need to perform one activity on multiple asset numbers. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. See: Defining Asset Routes, page 3-101.
You can choose Asset Route if an Asset Route is associated with the current Asset Number.
31. Optionally choose Costs to view the costs of work orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: Defining Period Types, *Oracle General Ledger User's Guide* and Defining Calendars, *Oracle General Ledger User's Guide*.
 1. Optionally select a work order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current work order.
 - *Actual Costs*: This is the accumulation of all costs for material and resource

transactions for the asset number's associated maintenance work orders, based on a specified period.

- *Estimates:* A BOM (material parts list) and routing (resources) can associate with a work order. When you select the Estimates tab, the estimated costs of all material and resources associated with a work order appear, enabling you to budget costs. Direct items that are included in the material requirements are considered.
 - *Variances:* The difference between the actual costs recorded and estimated costs.
 - *Material:* All material and material overhead transaction costs.
 - *Labor:* All employee resource and resource overhead transaction costs.
 - *Equipment:* All material resource and resource overhead transaction costs.
2. Optionally choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and material for specific operations of the current work order.

32. Save your work.

To view the purchasing requisition created:

1. Navigate to the Find Requisitions window (Purchasing > Requisitions > Requisition Summary).
2. Select the maintenance Work Order number from the Reference Num list of values.
3. Choose Find. The maintenance work order appears. The Source reads EAM.

[illegible]

Manually Entering Requisitions for Direct Items

Important: You cannot automatically create one requisition for multiple direct items on a work order. If a work order includes multiple direct items, you must manually create the requisition.

1. Navigate to the Work Orders window.

2. Select a work order number (See: eAM Work Order Statuses, page 4-24).
3. Choose Materials to view or update the material requirements for this purchase order (See: Defining Material Requirements, page 4-38). After purchase orders or requisitions related to direct items are created for this work order, they are referenced in the Direct Items region.

Note: Purchase orders and requisitions are not referenced within the forms application. You can reference them using the Maintenance Super User responsibility. See: Work Orders, page 21-45.

Material Requirements

Material Requirements (EM1) - WO220767

Inventory Items

Main Quantities Supply Comment ATP

	Material	Op	Department	Date Required	Material Description	Plan
<input type="checkbox"/>	10-40W Oil	10	F-Maint	04-SEP-2006 19:	10-40W Car / Truck Motor Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Air Filter	10	F-Maint	04-SEP-2006 19:	Air Filter for Vehicle	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Fuel Filter	10	F-Maint	04-SEP-2006 19:	Fuel Filter for Vehicle	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Oil Filter	10	F-Maint	04-SEP-2006 19:	Oil Filter for Vehicles	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Shop Rags	10	F-Maint	04-SEP-2006 19:	Shop Rags for Clean up	<input checked="" type="checkbox"/>

Select All Check ATP Select Materials Direct Item Copy To Asset

Create Direct Items

	Op	Item Type	Line Type	Item	Description	UOM	Required Qty	Purchasing Category	Need By Date
<input type="checkbox"/>	50	Non Stock	Quantity	EAM Item 1	EAM Non Stoc	Ea	1	MISC.MISC	04-SEP-2006
<input type="checkbox"/>									
<input type="checkbox"/>									

Select All (B) Select Direct Items Copy To Asset

4. Choose Direct Item to purchase items directly from supplier and non-supplier catalogs, using Oracle iProcurement, or enter the direct items to purchase within the Create Direct Items region (See: Defining Direct Item Material Requirements, page 4-43).

Shop Requisitions Post Award Requests Receiving Contractors Feedback									
Requisitions Notifications Approvals									
Requisitions									
Search									
Views									
View All My Requisitions Go									
Indicates requisition with a pending change request.									
Select requisition: Copy To Cart Cancel Requisition Change Complete Delete ... Rows 1 to 30									
	Requisition	Description	Total Quantity	Qty Delivered	Qty Cancelled	Open Quantity	Creation Date	Status	Order
<input type="radio"/>	14616	Pen Style Hi-Liter, Fluorescent Green	0.79 USD	1	0	0	1 23-May-2019 08:44:20	In Process	
<input type="radio"/>	14615	Pen Style Hi-Liter, Fluorescent Green	0.79 USD	1	0	0	1 23-May-2019 08:41:32	In Process	
<input type="radio"/>	14612		350.00 USD	1	0	0	1 14-Mar-2018 05:45:33	Approved	65902
<input type="radio"/>	14611		50.00 USD	5	0	0	5 10-Jan-2018 06:36:29	Approved	6391
<input type="radio"/>	14608		50.00 USD	5	0	0	5 10-Jan-2018 06:35:37	Approved	6390
<input type="radio"/>	14610		60.00 USD	6	0	0	6 10-Jan-2018 06:35:05	Approved	6389
<input type="radio"/>	14609		6.00 USD	2	0	0	2 10-Jan-2018 06:34:34	Approved	
<input type="radio"/>	14607		350.00 USD	1	0	0	1 29-Nov-2017 05:37:26	Approved	65821
<input type="radio"/>	14606		350.00 USD	1	0	0	1 28-Nov-2017 07:07:44	Approved	65820
<input type="radio"/>	14605	Sentinel Standard Desktop - Rugged	27.00 USD	3	0	0	3 10-May-2017 08:13:08	In Process	

All procured Non-Stock, Service, and Description-based requisition numbers appear in the Requisitions region.

- Change the default values for any of the following supplier related fields:
 - Supplier Contact
 - Supplier Site
 - Contact Phone
- Buy necessary items and check out. These items are automatically associated with your work order.
- Save your work.

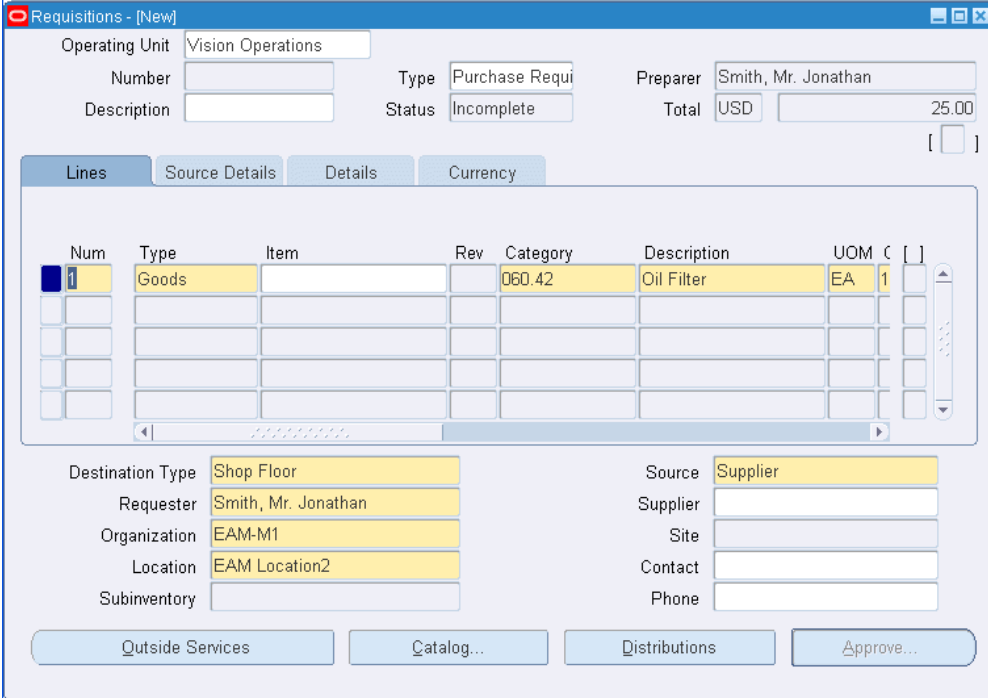
To manually enter requisitions for direct items using Oracle Purchasing:

In addition to procuring direct items directly from a work order (See: Defining Direct Item Material Requirements, page 4-43), you can access direct item procurement functionality using Purchasing. This functionality is available if you have Enterprise Asset Management installed.

You can enter a requisition within both the forms application and Maintenance User. When entering a requisition within the forms application, this is performed directly within the Requisitions window, and not from the eAM work order, as in Maintenance User. See: Work Orders, page 21-45

1. Navigate to the Requisitions window (Purchasing > Requisitions > Requisitions).

Requisitions



Requisitions - [New]

Operating Unit: Vision Operations

Number: Type: Purchase Requi Preparer: Smith, Mr. Jonathan

Description: Status: Incomplete Total: USD 25.00 []

Lines Source Details Details Currency

Num	Type	Item	Rev	Category	Description	UOM	C
1	Goods	Oil Filter	060.42	EA	1		

Destination Type: Shop Floor Source: Supplier

Requester: Smith, Mr. Jonathan Supplier:

Organization: EAM-M1 Site:

Location: EAM Location2 Contact:

Subinventory: Phone:

Outside Services Catalog... Distributions Approve...

2. Optionally enter a requisition Description.
3. Select the Lines tab.
4. Select Goods or Services from the item Type list of values.
5. Optionally select an item to purchase. Items that are defined in Inventory, with the Stockable check box cleared, are available for selection. See: Inventory Attribute Group, *Oracle Inventory User's Guide*
6. Select the purchasing Category of the item you want to purchase.
Use the Miscellaneous category for direct items. See Defining Categories, *Oracle Inventory User's Guide*. You can specify labor or equipment, as well as material accounts, to charge on a work order by assigning the category to the requisition line. This enables you to bypass the outside processing setup if the outside resource service is a one-time situation. The purchase order can include several cost elements.

Note: You must add attachments while manually creating requisitions.

7. Enter the Description for the item; the description should be meaningful because it is used to procure the item.

If this item is not inventoried, this is how an internal person understands what item you are attempting to procure.

8. Select a UOM for the purchase order line.

When you choose a line type, its default unit of measure populates this field. If you choose an item, its default unit of measure overwrites the line type default. You can change the UOM until the item is received, billed, or encumbered.

9. Enter a Quantity to purchase.

10. Select a Need-By date.

11. Select Shop Floor from the Destination Type list of values, for all direct item and non-stock item, eAM related requisitions.

You can select a destination type of Shop Floor for all purchasable items that are not selected as Stockable in the Item Master (See: Defining Items, *Oracle Inventory User's Guide*).

When you select a destination type of Shop Floor, eAM recognizes this as a requirement to deliver the direct item to the maintenance work order.

12. The Destination Organization list of values displays those organizations where the item is non-stockable, if the Destination Type is Shop Floor.

Note: For information on all remaining fields on this window, See: Entering Requisition Lines, *Oracle Purchasing User's Guide*.

13. Select values in any of the following supplier related fields:

- Supplier
- Site
- Contact
- Phone

14. Choose Outside Services.

You can access this window from the Requisition, Purchase Order, and Release windows. This is enabled if the Destination Type previously specified is Shop Floor.

Outside Services

The screenshot shows a software window titled "Outside Processing (1) - Line 1". The window contains the following fields and controls:

- Job:** A text field containing "WO220767" with a dropdown arrow.
- Line:** An empty text field.
- Assembly:** An empty text field.
- Operation:** A container with three sub-fields: "Sequence", "Code", and "Department".
- Resource:** A container with three sub-fields: "Sequence", "UOM", and "Resource Qty".
- Unit Type:** An empty text field.
- Assembly Qty:** An empty text field.
- Buttons:** "Done" and "Cancel" buttons at the bottom right.

15. Select a work order from the Job list of values. Released maintenance work orders are available. After you select a work order, any eAM project and task information associated with the work order is copied to the corresponding Project and Task fields, within the Project tab in the requisitions or purchase order Distributions window.
16. Select an Operation Sequence. The purchased material is associated with this operation on the current work order. Purchasing displays the operation Code and the Department.
17. Choose Done.

Note: For information on all remaining fields on the Outside Processing window, see *Oracle Purchasing User's Guide*.

18. Save your work.
19. The requisition needs approval. After the requisition is approved, it appears on the eAM work order and is viewed in Purchasing.

Related Topics

Oracle Purchasing User's Guide

Oracle Work flow Guide

Creating Purchase Orders from Requisitions

After a requisition is created and approved, you can execute an AutoCreate process to create purchase orders.

Prerequisites

- ☐ You must associate the operating unit with the destination organization. For more information, see *Setting Up Organizations, Oracle Enterprise Asset Management Implementation Guide*.

To create purchase orders using the AutoCreate process:

1. Navigate to the Find Requisition Lines window (Purchasing > AutoCreate).

Find Requisition Lines

Operating Unit Vision Operations

Approved Yes

Requisition 18277

Emergency PO Number

Supplier Sourcing

Supplier

Document Type

☐ Global

☐ VMI Only

☐ Show External Locations

Ship-To

Buyer Smith, Mr. Jonathan

Requester

Preparer

Supplier List

Supplier Site

Document

Negotiation Number

Minimum Amount

Currency

Rate Type

Line Status

Item, Rev

Job

Category

Description

Line Type

Clear Find

2. Enter the Requisition number. This requisition is created into a purchase order.
3. Choose Find.
4. Choose Automatic.

New Document

Global Agreement

Document

Release

Supplier Automotive Supplier #1

Purchasing Org Vision Operations

RFQ Type

Release Date

Supplier Site DETROIT

Supplier List Name

Currency

Source Default

Requisition

Currency USD

Rate Date 02-SEP-2006

Line

Rate Type

Rate

Create Cancel

5. Select a Supplier.
6. Choose Create, and then make a note of the purchase order number created.
7. Verify that the item is of Type Goods.
8. Choose Shipments.
9. Choose Receiving Controls.
10. Select a Receipt Routing. This is the receipt routing to which you are assigning the procured items: Direct Delivery, Standard Receipt, or Inspection Required. See: Receiving Controls, Options, and Profiles, *Oracle Purchasing User's Guide*.
11. Choose OK.
12. From the Shipments window, choose Distributions. Verify that the destination Type field is populated with Shop Floor, and the Subinventory is blank.
13. Choose Outside Services. Verify the Job and Operation Sequence.

Note: For information on all remaining fields within the Outside Processing window, See: Entering Outside Processing Information, See: Entering Outside Processing Information, *Oracle Purchasing User's Guide*.

14. Choose Done.
15. Save your work.
16. Choose Approve.
17. Within the Approve Document window, choose OK. After the purchase order is approved, the purchase order is received within Purchasing.

Related Topics

Entering Purchase Order Distributions, *Oracle Purchasing User's Guide*

Manually Entering Purchase Orders for Direct Items

You can create purchase orders for direct items within Purchasing.

You must manually create requisitions or purchase orders for work orders that require multiple direct items.

To enter purchase orders for direct items via Oracle Purchasing:

1. Navigate to the Purchase Orders window.

Purchase Orders

Purchase Orders - [New]

Operating Unit: Vision Operations Created: 03-SEP-2006 06:18:52

PO, Rev: 0 Type: Standard Purchase Order P-Card:

Supplier: Automotive Supplier #1 Site: DETROIT Contact:

Ship-To: M2- Boston Bill-To: V1- New York City Currency: USD Total: 25.00 []

Buyer: Smith, Mr. Jonathan Status: Incomplete

Description:

Lines Price Reference Reference Documents More Agreement Temporary Labor

Num	Type	Item	Rev	Job	Category	Description	UOM	Quantity	Price
1	Goods	---			060.42	Oil Filter	EA	1	25

Item: Oil Filter

Buttons: Catalog... Currency... Terms Shipments Approve...

2. If you did not choose automatic purchase order generation in the purchasing options (Numbering tab), enter a unique PO (purchase order) number. Otherwise, the number generates when you save your work. See: Defining Purchasing Options, *Oracle Purchasing User's Guide*. The Rev (revision) appears to the right of the number.
3. Select Standard Purchase Order from the Type list of values. You can modify the document type names in the Document Types window (See: Defining Document Types, *Oracle Purchasing User's Guide*).
4. Optionally select a Supplier. A supplier must be provided for approval.
5. Select the supplier Site. A site must be provided for approval. After the purchase order is approved, you can change the supplier site if the PO: Change Supplier Site profile option is set to Yes (See: Purchasing Profile Options, *Oracle Purchasing User's Guide*).
6. Optionally select a Contact. This is the name of the contact at the supplier site.
7. Optionally enter the Ship-To and Bill-To locations for the purchase order. If you entered a supplier site, the location values you assigned to the supplier or supplier site default into these fields. See: Purchase Order Defaulting Rules, *Oracle Purchasing User's Guide*
8. If the Enforce Buyer Name option in the Purchasing Options is set to yes, your name appears as the Buyer. Otherwise, you can enter the name of any buyer. See:

9. Enter a Description for the purchase order. This description does not print on the purchase order, and is for internal use. If you want to add unlimited notes, use the attachments feature (See: Attaching Notes to Purchasing Documents, *Oracle Purchasing User's Guide*)
10. Select the Lines tab. For new purchase order lines, Purchasing displays the next sequential line Num (number) available. You can accept this number or enter any line number that does not already exist. This number is used for all tabs in this window.
11. Select the a Goods or Services line Type. Purchasing automatically copies the corresponding defaults, based on the selected line type. See: Defining Line Types, *Oracle Purchasing User's Guide*.
12. Optionally select an Item to purchase. Items that are defined in Inventory, with the Stockable check box cleared, are available. See: Inventory Attribute Group, *Oracle Inventory User's Guide*.
13. Select the purchasing Category of the item you want to purchase. See: Defining Categories, *Oracle Inventory User's Guide*.
14. Enter the Description of the item. This description should be meaningful, because it is used to procure the item. If this item is not inventoried, this how an internal person understands what item you are attempting to procure.
15. Enter the Quantity you are purchasing.
16. Select a UOM. The unit of measure qualifies the quantity you enter on the purchase order line. When you choose a line type, its default unit of measure populates this field. If you previously chose an item, its default unit of measure overwrites the line type default. You can change the UOM until the item is received, billed, or encumbered.
17. Enter the unit Price for the item.
18. Choose Shipments to enter multiple shipments for standard and planned purchase order lines, and to edit shipments Purchasing automatically created for you (See: Entering Purchase Order Shipments, *Oracle Purchasing User's Guide*).
 1. Select the More tab.

Shipments Window

Num	Receipt Close Tolerance (%)	Invoice Close Tolerance (%)	Match Approval Level	Invoice Match Option	Accrue at Receipt
1		0	3-Way	PO	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

Line Num: 1 Item: Oil Filter

Receiving Controls Distributions

2. Select the Accrue at Receipt check box to indicate that the items on this purchase order line accrue at receipt.
19. Choose Distributions to enter distribution information for purchase order shipments, or to view distributions that Purchasing automatically created for you. You can enter multiple distributions per shipment line, and enter information regarding paper requisitions (See: Entering Purchase Order Distributions, *Oracle Procurement User's Guide*).
20. Choose Outside Services to associate this purchase order with a maintenance work order.
21. Select a maintenance work order from the Job list of values. After a work order is selected, any eAM project and task information associated with the work order copies to the corresponding Project and Task fields within the Project tab in the requisitions or purchase order Distributions window.
22. Select an Operation Sequence. The purchased material is associated with this operation on the current work order. Purchasing displays the operation Code and the Department.
23. Choose Done.
24. Save your work.
25. The purchase order needs to be approved (See: Creating Process Definitions in Oracle Work flow Builder, *Oracle Workflow Guide*). After the purchase order is

approved, it will appear on the eAM work order, and is viewed in Purchasing.

Related Topics

Entering Purchase Order Headers, *Oracle Purchasing User's Guide*

Entering Outside Processing Information, *Oracle Purchasing User's Guide*

Entering Purchase Order Lines, *Oracle Purchasing User's Guide*

eAM Direct Procurement Accounting

You can charge direct items (Non-Stock and Description-based) to a selected appropriate Purchasing Cost Elements by selecting a Purchasing Order Category. To bypass the outside processing setup because the outside resource service is a one-time event (See: Setting Up Outside Service Processing, page 3-214), you can charge labor, equipment, and material accounts to a work order by assigning a category to the requisition line (See: Setting Up Purchase Order Category Associations for Direct Items, page 3-230).

For all requisition or purchase order distribution lines with a destination type of Shop Floor (not related to outside processing), the amount (quantity * purchase price * exchange rate) charges to the eAM Work Order Material account.

The receiving process creates the following accounting entries:

Receiving Process Entries

Account	Debit	Credit
Receiving Inspection	XXX	-
Accounts Payable Accrual	-	XXX

The material delivery process creates the following entries:

Account	Debit	Credit
Work Order Material	XXX	-
Receiving Inspection	-	XXX

Contractor Services

This chapter covers the following topics:

- Introduction
- Overview of eAM Contractor Services

Introduction

Enterprise Asset Management (eAM) integrates with Outside Service Processing, enabling your maintenance environment to track outside service purchasing transaction and costing information for maintenance work orders.

Overview of eAM Contractor Services

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, a contractor service may be a painting service. It is also important to associate the purchasing transactions, such as the requisition and purchase order to the work order. The appropriate steps must be completed in Purchasing and Enterprise Asset Management.

Outside Service Processing provides the functionality to create items that are contractor services, such as landscaping, include these items on a work order, and execute the related purchasing transactions as the work order is released. By creating a contract service as an Outside Service Processing item, the purchasing requisition is created when the work order is Released. The additional purchasing transaction, including the creation of the purchase order, the approval, and invoicing process, are then managed by Purchasing. This optional process ensures that the actual charges are applied to the work order. The supplier accesses the purchase order and maintenance work order using the iSupplier Portal. Within iSupplier Portal, the supplier can view all open and closed outside service operations and their associated maintenance work orders. The supplier can enter mandatory collection plan results, before completing the outside operation (See: Oracle iSupplier Portal, *Oracle iSupplier Portal User's Guide*).

The other option is to enable Standard Rate. This applies pre-determined standard rates, for contractor services, to the work order, without invoking the purchasing transaction.

For information regarding the setup tasks for outside processing and Oracle Enterprise Asset Management, see *Setting Up Outside Service Processing*, page 3-214.

eAM Property Manager

This chapter covers the following topics:

- Introduction
- Overview of eAM Property Manager
- Property Manager Integration

Introduction

The eAM and Property Manager integration enables properties defined in Property Manager to import as assets in eAM. This chapter contains the following topics:

- Overview of eAM Property Manager, page 10-1
- Property Manager Integration, page 10-2

Overview of eAM Property Manager

The eAM and Property Manager integration enables eAM assets to correspond with locations defined in Property Manager. The information transferred from Property Manager are the three-level land or building hierarchies, and the associated Location Codes within Property Manager. eAM also provides user-defined Area codes, enabling you to logically sort assets by where they are physically located. Area codes in eAM do not equal locations in Property Manager. See: Setting Up Areas, page 3-21.

A concurrent request process transfers locations defined in Property Manager into eAM assets, associating eAM assets with locations. During this process, the Organization ID, Asset Group, and the Owning Department parameters are specified. These entities are set up before the process is executed.

This seamless, one-way integration from Property Manager into eAM is invoked within the Property Manager concurrent process. The eAM and Property Manager integration includes the following topics:

- Property Manager Integration Setup, page 3-243
- Executing the Export Process
- Executing the Asset Number Interface, page 3-246
- Property Manager Integration, page 10-2

Property Manager Integration

Property Manager can store three-level land or building hierarchies, providing a parent/child location hierarchy. eAM provides a parent/child asset hierarchy. The integration enables locations defined in Property Manager to import into eAM as Asset Numbers. The process also imports the land or building hierarchy, while respecting its current structure.

Locations are set up in Property and exported to Enterprise Asset Management (eAM) via a two-step process, enabling you to modify data before it exports to eAM. First, push the location records from Property Management to eAM. (See: Executing the Export Process). After submission of the concurrent process, the Property Management Location information is entered into the EAM Asset Interface table and are accessed via the Pending Asset Number window within eAM. You can update all relevant information, including Asset Group, Asset Number, Owning Department, and WIP Accounting Class, for this information, before submitting the interface process (See: Executing the Asset Number Interface, page 3-246). You can use this window to update the information multiple times.

You can view this integration when viewing assets. Location information imports into fields within the Define Asset Number window.

Note: If you make changes to locations within Property, run the export process again. You can run the export process to push location records to eAM multiple times. See: Executing the Export Process.

To view and update assets:

1. Navigate to the Find Asset Numbers window.
2. Within the Others tab, select a Location Code. This location code was exported from Property Manager into eAM.
3. Choose Find. The Define Asset Number window appears. Notice that the asset is the same as the location code.
4. Optionally associate this Asset Number with an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See:

Setting Up Category Codes, page 3-63.

5. Within the Main tab, optionally select a Criticality code, indicating the importance of the asset to the organization. This field is for information purposes.
6. You can optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as material, labor, and resources.
7. Optionally select the Area where this Asset Number resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: Setting Up Areas, page 3-21).
8. Indicate if this Asset Number is Maintainable. If the Maintainable check box is selected, you can create Work Requests, Service Requests, and Work Orders for this asset.
9. Within the Others tab, optionally enter the Fixed Asset region information if Oracle Fixed Assets is installed. This is eAM's integration with Fixed Assets.
 1. To associate the asset/location with a fixed asset, select a Category, which is a grouping of fixed assets, defined within Oracle Fixed Assets. This category is associated with a set of books, and must be the same set of books that is assigned to the current eAM organization. See: Setting Up Category Codes, page 3-63.
 2. Optionally enter the Number if Oracle Fixed Assets is installed. This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.
10. The Property Management fields, Location Name, and Location Code, default from a Property Manager export process (Export Locations to Enterprise Asset Management) if Oracle Property Management is installed. These fields are disabled. The Location Code and Asset Number fields display the same number, and cannot be changed.

Note: Before the above information can pass from Property Manager into eAM, asset groups are first established. See: Defining Asset Groups, page 3-66 and Property Manager Integration Setup, page 3-243.

11. Optionally choose Location Details to view the current location's details.
12. Choose Open. Location attributes are visible with Enterprise Asset Management. You can view Occupancy, Area, and Usage information.

13. Close the window to return to the Define Asset Number window.
14. You can select Resource Usage if the fields in the Production Equipment region are populated. This enables you to view production work orders and resources associated with this equipment.
15. Optionally select Attributes to directly apply an attribute group template to this asset. See: Setting Up Attributes, page 3-79

Existing, enabled attribute groups appear (See: Setting Up Attributes, page 3-79). These attribute templates are optional; you do not need to enter values for all existing attribute groups. From this window, you cannot generate attribute groups.
16. Optionally select Associate Activity to directly associate this Asset Number with an Activity. See: Activity Association Templates, page 3-76.
17. Optionally create file, URL, or text attachments to this asset by selection the paperclip Attachments icon.
18. Save your work.

Related Topics

Defining Asset Numbers, page 3-85

Properties Overview, *Oracle Property Manager User's Guide*

Setting Up Oracle Property Manager, *Oracle Property Manager User's Guide*

Process and Discrete Manufacturing Integration

This chapter covers the following topics:

- Introduction
- Overview of the Process and Discrete Manufacturing Integration
- Viewing Resource Usage
- Production Equipment Downtime

Introduction

Enterprise Asset Management (eAM) integrates with process and discrete manufacturing, enabling your maintenance environment to identify eAM asset relationships with production equipment. This chapter contains the following topics:

- Overview of the Process and Discrete Manufacturing Integration, page 11-1
- Viewing Resource Usage, page 11-2
- Production Equipment Downtime, page 11-4

Overview of the Process and Discrete Manufacturing Integration

Enterprise Asset Management integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify Enterprise Asset Management asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in a discrete or process manufacturing organization. After establishing, you can view the resource usage (jobs, batches, or FPOs) emanating from production, associated with a maintainable asset. In discrete manufacturing organizations, you can view maintenance equipment downtime requirements and their affect on capacity during production planning and scheduling.

Oracle Process Manufacturing (OPM) retrieves maintenance downtime information for a resource from maintenance Work Orders. OPM loads this information into OPM's resource calendar; it is visible within Advanced Planning and Scheduling and Manufacturing Planning.

This integration includes the following topics:

- Organization Setup, page 3-235
- Associating Assets with Production Equipment, page 3-236
- Viewing Resource Usage, page 11-2
- Production Equipment Downtime, page 11-4

Viewing Resource Usage

You can view the resource usage, associated with a specific asset number, created by discrete work orders, batches, or FPOs. You can view resource usage from the Enterprise Asset Management or the Maintenance Super User responsibility.

To view resource usage from the Enterprise Asset Management responsibility:

1. Navigate to the Define Asset Number window (Enterprise Asset Management > Assets > Asset Numbers > Asset Numbers).
2. Choose the Find icon access the Find Asset Number window.
3. Find an asset number to view that has associated production equipment.
4. Choose Find to display the Define Asset Number window.
5. Choose Resource Usage.

This window enables you to view resource demand (discrete work orders, batches, or FPOs) associated with the current asset number. All work orders that use the asset as a resource appear.

6. Choose OK to return to the Define Asset Number window.

To view resource usage from the Asset Numbers page:

You can view resource demand using the Maintenance Super User responsibility (Maintenance Super User > Assets).

1. Search for an asset number. See: Obtaining Asset Number Information, page 21-17.

2. Choose Go.
3. In the Results region, select the radio button next to your asset number, then select Details from the View drop-down list to view associated asset number, attributes, and activity details.

Maintenance Home
Assets
Work Requests
Work Orders
Stores
Budget Forecasts
Failure Analysis
Construction Units
Safety Management
Reports

Capital
Rebuildable Inventory
Mass Meter Readings
Mass Geocode Entry
Asset Setups
GIS Assets
Map Workbench

Assets: Capital >

Asset Details: FL1010
View
Work Requests
Go

Asset Number	FL1010
Description	Fork Lift 1010
Serial Number	FL1010
Asset Group	Fork Lifts
Asset Group Description	Fork Lift Asset Group
Parent Asset Number	All Lifts
Parent Asset Group	Fork Lifts
Fixed Asset Number	102014
Category	ForkLift.Electric
Accounting Class	MaintWAC
Maintainable	Yes
GIS Asset	No
Equipment Serial Number	
Asset Route	No
Supplier Warranty Expiration Date	
Attachments	None
Failure Set	Equipment Failure Set

Asset Health	
Open Work Requests	
Open Work	14
Planned Work	
Planned Work Date	
Shutdown	No
Criticality	Normal
Asset Status	Latest
Owning Department	W-Maint

Asset Location	
Current Org	EM1
Subinventory	
Area	Warehouse
Location	3455 108th Ave.,King,98101,US
Latitude	
Longitude	
Show On Map	
<small> D,M and S used against the numerals in Latitude and Longitude stand for Degrees Minutes and Seconds respectively </small>	

Descriptive Information

Attributes

...

Attribute Group ▲	Description ▲
Fork Lift Classifications	Fork Lift Data
Warranty Data	Warranty Data

Table Diagnostics

Activities

...

Activity						Effective		Last Service		Next Service	
Name ▲	Type ▲	Cause ▲	Source ▲	Owning Department ▲	Priority ▲	Start Date ▲	End Date ▲	Start Date ▲	End Date ▲	Start Date ▲	End Date ▲
Change Fork Lift Battery	Replacement	Normal Wear	Routine	W-Maint	Medium	31-Oct-2002		14-Dec-2006 18:43:00	14-Dec-2006 20:01:00		
Act_LL				W-Maint		18-Jul-2003					
Lubricate Fork Lift Mast	Lubrication	Normal Wear		W-Maint		18-Jul-2003		09-Apr-2013 10:01:19	09-Apr-2013 11:01:19		

- Optionally select work orders from the View drop-down list to view all work orders created against the current asset number for the current equipment resource. This enables you to view resource demand (discrete work orders, batches, or FPOs) associated with the asset number. This information is eAM's integration with Process and Discrete Manufacturing.

Production Equipment Downtime

You can view equipment downtime, associated with a specific resource, caused by maintenance Work Orders. To view resource downtime, execute the Load Production Equipment Maintenance Downtime process to load downtime information into a

simulation set. Resource downtime is viewed within the Department Resource Capacity Change window.

To generate production equipment downtime:

Note: If your manufacturing and maintenance organizations are separate, execute this process within the manufacturing organization.

1. Navigate to the Load Production Equipment Maintenance Downtime window.
2. Enter the following parameters:
 - *Simulation Set:* Select a Simulation Set.
 - *Run Option:* You can optionally load or purge maintenance downtime information.
 - *Include Unreleased Maintenance Work Orders:* Select whether to include Unreleased maintenance Work Orders. Valid values are Yes and No.
 - *Firm Maintenance Work Orders Only:* Select whether to include firmed maintenance work Orders. Valid values are Yes and No.
 - *Department:* Optionally select a Department to indicate that Work Orders associated with the selected department are included. See: Defining Departments and Resources, page 3-24.
 - *Resource:* Optionally select a Resource to indicate that Work Orders associated with the selected Resource are included. See: Defining Departments and Resources, page 3-24.
3. Choose OK.
4. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

eAM Project Manufacturing

This chapter covers the following topics:

- Introduction
- Overview of eAM Project Manufacturing
- Project Definition
- Associating a Work Order with a Project
- Creating Requisitions or Purchase Orders
- Viewing the Requisition within the Maintenance Work Order
- Updating the Commitments for a Project
- Viewing Commitments

Introduction

Enterprise Asset Management integrates with Project Manufacturing, enabling a seamless, integrated business solution for program management, configuration management, financial project management and reporting, project supply chain management and execution, and business intelligence. This chapter contains the following topics:

- Overview of eAM Project Manufacturing, page 12-2
- Project Definition, page 3-239
- Associating a Work Order with a Project, page 12-6
- Creating Requisitions or Purchase Orders, page 12-7
- Viewing the Requisition within the Maintenance Work Order, page 12-11
- Updating the Commitments for a Project, page 12-12

- Viewing Commitments, page 12-13

Overview of eAM Project Manufacturing

Enterprise Asset Management supports a variety of ways to define work breakdown structures. The methods include, using third party project management systems (with on-line integration), project templates, Seiban number wizard, copy, and manual entry. Work breakdown structures are commonly needed for program management. To support financial project management and reporting, the combination of Oracle Projects and Oracle Project Manufacturing enables budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-currency and tax regulations.

To support project supply chain management and execution, Project Manufacturing provides functionality for project sales management, project advanced supply chain planning, project procurement, project execution, and project quality management.

The following diagram illustrates the eAM Project Manufacturing process. First, a maintenance Work Order is linked to a project or task. If a requisition or purchase order is created for that Work Order, the commitments for the Work Order's associated project or task are updated. The Project Cost Collector process (See: *Project Cost Collector, Oracle Cost Management User's Guide*) then passes the costs to the Work Order's associated project WIP accounting class accounts, rather than the WIP accounting class associated with the eAM asset or eAM organization.

eAM Project Manufacturing



This section includes the following topics:

- Project Definition, page 3-239
- Associating a Work Order with a Project, page 12-6
- Creating Requisitions or Purchase Orders, page 12-7
- Viewing the Requisition within the Maintenance Work Order, page 12-11
- Viewing Commitments, page 12-13
- Updating the Commitments for a Project, page 12-12

Project Definition

You can inquire on an existing project, or create a new project from a template. To create a new project, See: Project Definition (Assigning Project Parameters), *Oracle Project Manufacturing User's Guide*. You need to associate this project number with a planning group, a cost group, and a default WIP Accounting Class.

To inquire on an existing project:

1. Navigate to the Find Projects window.

Find Projects

The screenshot shows the 'Find Projects' window with the following fields and values:

- Project Section:**
 - Search For: Projects, Templates (dropdown)
 - Number: (empty)
 - Name: (empty)
 - Long Name: (empty)
 - Type: Build & IT
 - Organization: Seattle Manufacturing
 - Status: (empty)
 - Product Source: (empty)
 - Source Reference: (empty)
- Key Member Section:**
 - Name: (empty)
 - Number: (empty)
 - Role: (empty)
- Customer Section:**
 - Name: (empty)
 - Number: (empty)
 - Relationship: (empty)
- Classification Section:**
 - Category: (empty)
 - Class Code: (empty)

Buttons: Clear, Find

2. Select a project Number.
3. Choose Find.
4. Choose Open.

Projects, Templates

Operating Unit: Vision Operations

Number: IT101

Name: IT Project 101

Type: Build & IT

Organization: Seattle Manufacturing

Long Name: IT Project 101

Trans Duration: 01-JAN-2007 - 31-DEC-2012

Status: Active

Description: Use for OAT Project to Project Material Tr

☐ Workflow in Process

☐ Template

☐ Public Sector

[Change Status](#)

Options

Option Name

- ☒ Tasks
- ☐ Workplan Information
- ☐ Classifications
- ☐ Currency
- ☐ Budgetary Control
- ☐ Key Members
- ☐ Additional Information
- ☐ Pipeline

[Detail](#)

5. Optionally, you can view detailed task information by choosing Detail (See: Viewing Project Details, *Oracle Project Manufacturing User's Guide*).

To assign project parameters:

1. Navigate to the Project Parameters window (Project Manufacturing Manager > Projects > Project Definition > Project Parameters).

Project Parameters

Project Parameters

Project Number IT101 Project Name IT Project 101

Planning Group

General Invoice Transfer Task AutoAssignment Other

Default WIP Classes

Organization	Planning Group	Cost Group	Standard	Maintena
Seattle Manufacturing				

WIP Classes by Task

2. Select a valid Project Number.
3. Optionally, select the name of the Planning Group with which you want to associate your project.

If you plan material requirements by a group of projects, rather than each individual project, you need to define a planning group and assign all projects to this planning group. If you plan material requirements by a single project, you do not need to associate the project with any planning group (See: Defining Planning Group Lookups, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

4. Select an eAM enabled Organization.
5. Select a Cost Group.

If the current organization contains Average as its primary costing method, in the Organization Parameters window, the Cost Group field is required. The Common Cost Group and user-defined cost groups are available. The list of use- defined cost groups includes those cost groups with valid accounts and with Project selected in the Cost Group window (See: Project Cost Groups, *Oracle Cost Management User's Guide*). You must assign the project to its own cost group to keep weighted average costing at the project level.

If the current organization contains Standard as its primary costing method, in the

Organization Parameters window, the Cost Group field is disabled.

6. Optionally, select a Maintenance WIP Accounting Class.

If the current organization is a Standard costing organization, you can choose any discrete WIP accounting class.

If the current organization is an Average costing organization, you can choose any WIP accounting class that has been associated with the selected cost group in the WIP Accounting Classes for Cost Groups window within Oracle Cost Management (See: Defining Project Cost Groups, *Oracle Cost Management User's Guide*).

When you create maintenance work orders for a project, this WIP accounting class is defaulted. It can be overwritten, but with another accounting class that is assigned to the cost group.

7. Select the Other tab.
8. Save your work.

Related Topics

Associating a Work Order with a Project, page 12-6

Creating Purchase Orders from Requisitions, page 12-7

Updating the Commitments for a Project, page 12-12

Viewing Commitments, page 12-13

Project Definition, *Oracle Project Manufacturing User's Guide*

Assigning Project Parameters, *Oracle Project Manufacturing User's Guide*

Project Cost Groups, *Oracle Cost Management User's Guide*

Defining Project Cost Groups, *Oracle Cost Management User's Guide*

WIP Accounting Classes, *Oracle Work in Process User's Guide*

Project Manufacturing Parameters, *Oracle Project Manufacturing User's Guide*

Associating a Work Order with a Project

You can create a maintenance work order for a project. The project number enables the correct cost group and default WIP accounting class to associate with the work order.

Creating a project maintenance work order:

1. Navigate to the Work Order window.

Work Order

Work Order (EM1)

Work Order: Doc100

Asset Number: FL1010

Asset Group: Fork Lifts

Asset Activity:

Class: MaintWAC

Status: Draft

☐ Pending

Parent Work Order:

Relationship Type:

Fork Lift 1010

Scheduled Dates

Start Date: 05-JUL-2018 14:02:49

Completion Date:

Duration(hours):

Actual Dates

Start Date:

Completion Date:

Main Activity **Project** Rebuild Request Approval History

Project: AM_PROJ_1

Task:

Operations Materials Resources Relationships Asset Route Costs

2. Enter necessary work order information. See: eAM Work Orders, page 4-3.

3. Select the Project tab.

4. Select a Project.

You can associate a work order to a project at any status of the Work Order (See: eAM Work Order Statuses, page 4-24).

5. Optionally, select a specific Task.

6. Save your work.

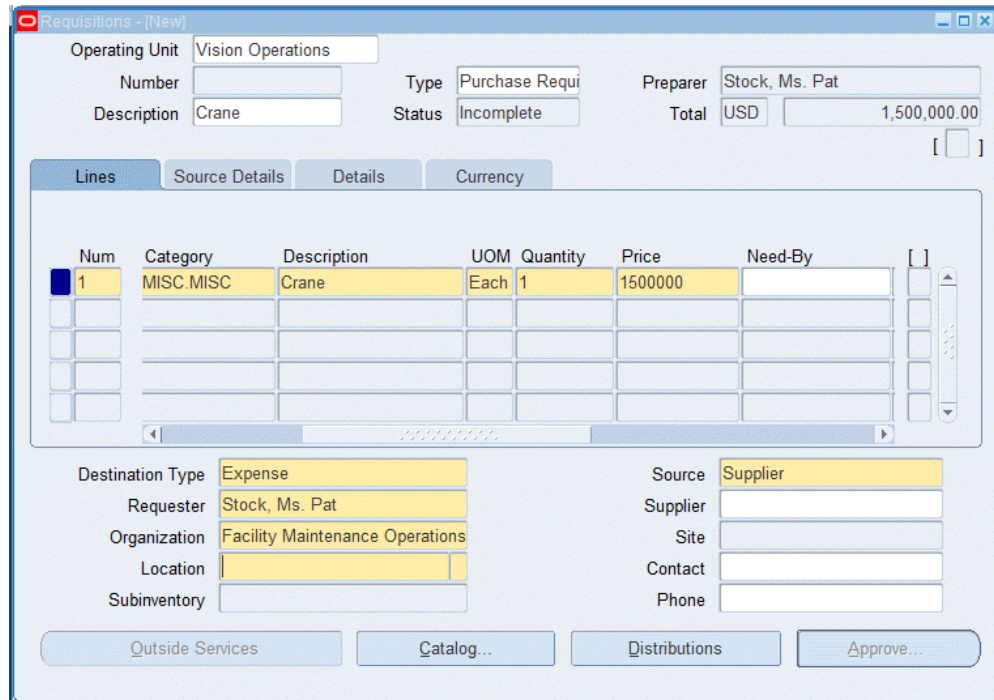
Creating Requisitions or Purchase Orders

You can create a requisition or purchase order for a project, maintenance work order. You can update the commitments for the associated project or task for the work order. You can create requisitions and purchase orders using either Oracle iProcurement, if you have it installed, or Oracle Purchasing.

To create a requisition using Oracle Purchasing:

1. Navigate to the Requisitions window.

Requisitions



Operating Unit: Vision Operations

Number:

Description: Crane

Type: Purchase Requisition

Status: Incomplete

Preparer: Stock, Ms. Pat

Total: USD 1,500,000.00

Lines | Source Details | Details | Currency

Num	Category	Description	UOM	Quantity	Price	Need-By
1	MISC.MISC	Crane	Each	1	1500000	

Destination Type: Expense

Requester: Stock, Ms. Pat

Organization: Facility Maintenance Operations

Location:

Subinventory:

Source: Supplier

Supplier:

Site:

Contact:

Phone:

Outside Services | Catalog... | Distributions | Approve...

2. If automatic requisition number generation is active, you do not need to enter a requisition Number. See: *Defining Numbering Options, Oracle Purchasing User's Guide*. Otherwise, enter a unique requisition Number.
3. The Type will default as Purchase Requisition. The requisition lines are usually satisfied from an outside supplier by means of a purchase order.
4. Select the Items tab.
5. Select the line Type of Goods for the requisition line. Line types help you to define how you want to categorize your items. The default for this field is the Line Type from the Purchasing Options window (See: *Defining Default Options, Oracle Purchasing User's Guide*). If you change this field, defaults from the Line Types window appear in the Category, UOM, and Price fields (See: *Defining Line Types, Oracle Purchasing User's Guide*).
6. Select the purchasing Category.
7. Enter the item Description. This description should be detailed because this is how

someone in your organization will know what is being requested.

8. Enter the Quantity you want to request for the item. You can enter decimal quantities, but you must enter a value greater than zero.
9. Enter the UOM you want to use for your requisition line. If you change this value, the quantity is rounded again if appropriate, and the price is recalculated. If you enter a line type that is amount based, Purchasing uses the unit of measure that you assign to that line type in the Line Types window (See: Defining Line Types, *Oracle Purchasing User's Guide*).
10. Enter the unit Price for the item. You can enter the price in decimal format. You must enter a value greater than or equal to zero. Unit prices are in functional currency.
11. Enter the Need By date for the requested item. This is required for planned items. You must enter a date greater than or equal to the requisition creation date.
12. The Charge Account rolls up from a single distribution after the distribution is created. If more than one distribution is created for the line, Multiple appears.
13. Select Shop Floor from the Destination Type list of values for all direct item and non-stock item, eAM related requisitions. You can select a destination type of Shop Floor for all purchasable items that are not selected as Stockable in the item master (See also: Defining Items, *Oracle Inventory User's Guide*).

When you select a destination type of Shop Floor, eAM recognizes this as a requirement to deliver the direct item to the maintenance work order.

14. Enter the name Requestor (employee) who is requesting the item. You must provide a Requestor before the requisition can be approved. The default is the requisition creator.
15. Enter the Organization.
16. Enter the delivery Location for the requested items. Purchasing defaults the deliver-to location that you assign to the employee.
17. Enter the Source type. The source type determines the source of the requisitioned items. The choices you have for this field is dependent on the PO: Legal Requisition Type profile option (See: Purchasing Profile Options, *Oracle Purchasing User's Guide*).
 - For the Supplier source type, enter the suggested Supplier, Supplier Site, Contact, and Phone.
18. Choose Outside Services to select the work order you previously created.

1. Select the maintenance project work order, you previously created, from the Job list of values.
 2. Select a specific Operation Sequence from the Sequence list of values. This enables you to procure directly to the operation on the maintenance work order. The Department will default from the department associated with the work order selected.
 3. Choose Done.
19. Select a requisition line number, then choose Distributions to associate project and task information with that requisition line. You can charge the cost of this requisition line to multiple Accounting Flexfields or update the default values you provided in the Requisition Preferences window (See: Entering Requisition Preferences, *Oracle Purchasing User's Guide* and Entering Requisition Distributions, *Oracle Purchasing User's Guide*).
1. Select the Accounts tab.
 - Enter the Quantity you want to distribute. Purchasing displays the quantity you have not yet assigned to an Accounting Flexfield. Multiple distribution quantities must total to the requisition line quantity.
 - The Charge Account will default from the WIP accounting class of the cost group, associated with the project. Purchasing uses the Account Generator to create the following accounts for each distribution:
 - *Accrual*: AP accrual account
 - *Variance*: invoice price variance account
 - If you are using encumbrance control (See: Financials Options, *Oracle Payables User's Guide*), Purchasing also creates the following account for each distribution:
 - *Budget*: encumbrance budget account
 - Change or accept the default Recovery Rate for taxable items. The recovery rate is the percentage of tax your organization can reclaim for credit. This rate defaults in based on the Tax Code on the line in the Requisitions window and the setup in the Financial Options window (See also: Recoverable Tax, *Oracle Payables User's Guide*).
 - If you are using encumbrance control for requisitions (See: Financials Options, *Oracle Payables User's Guide*), enter the GL Date that you want to use to reserve funds.

- Save your work.
2. Select the Project tab. Oracle Project Manufacturing must be installed with the Enable Project References check box selected in the Project Manufacturing Parameters window (See also: Project Manufacturing Parameters, *Oracle Project Manufacturing User's Guide*).
 3. Select the Project.
 4. Select a Task.
20. Save your work.
 21. Choose Approve to submit the requisition for approval.
 22. Choose OK.
 23. Choose OK.

Related Topics

Entering Requisition Headers, *Oracle Purchasing User's Guide*

Entering Requisition Lines, *Oracle Purchasing User's Guide*

Requisitions, *Oracle iProcurement Implementation Guide*

Setting Up Project Manufacturing Costing, *Oracle Cost Management User's Guide*

Viewing the Requisition within the Maintenance Work Order

After the purchase requisition is created and associated with a maintenance work order, the requisition appears on the maintenance work order.

To view purchase requisition information on a maintenance work order:

1. Navigate to the Find Work Orders window, and select the project, maintenance work order number, you previously created.
2. Choose Find.
3. Choose Materials to display the requisition created in the Material Requirements window.

The requisition number appears in the Direct Items region. After a purchase order is created from this requisition, the PO Number field populates with that related purchase order number.

Updating the Commitments for a Project

After the requisition is created and approved, the project's accounting commitments can be updated. This is performed by executing the Refresh Project Summary Amounts concurrent process. This process is normally set up to automatically execute, periodically.

To update project commitments:

1. Navigate to the Find Requests window using the Project Manufacturing responsibility. Choose Submit a New Request.
2. Choose OK to run a Single Request.

The screenshot shows two overlapping dialog boxes. The background box is titled 'Submit Request' and contains the following fields: 'Name' with the value 'PRC: Refresh Project Summary Amounts', 'Parameters' (empty), and 'Language' with the value 'American English'. There are 'Copy...' and 'Languages...' buttons. The foreground box is titled 'Parameters' and contains: 'From Project Number' with the value 'AM_PROJ_1', 'To Project Number' (empty), and 'Through Date' (empty). It has 'OK', 'Cancel', 'Clear', and 'Help' buttons. The 'Submit Request' box also has 'Run this Request...' (with 'As Soon as' selected), 'Upon Completion...' (with 'Save all C' checked), 'Notify', 'Print to' (set to 'noprint'), and a 'Help (B)' button. At the bottom of the 'Submit Request' box are 'Submit' and 'Cancel' buttons.

3. Select PRC: Refresh Project Summary Amounts from the Name list of values.
4. Enter the following parameters:
 1. Optionally, enter a From and To Project Number to execute the process over a range of projects.
 2. Optionally, enter a Through Date to narrow the data selection based on a specific end date.
5. Choose OK.

6. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Viewing Commitments

You can view commitments for specific projects. After the Refresh Project Summary Amounts process executes (See: Updating the Commitments for a Project, page 12-12), the commitment amounts for your project increase.

To view commitments for a project:

1. Navigate to the Find Project Status window.

Find Project Status

Find Project Status (Vision Project Mfg: ANY)

Project	
Number	AM_PROJ_1
Name	AM_PROJ_1
Type	
Organization	
Status	
Product Source	
Source Reference	

Key Member	
Name	
Number	
Role	

Customer	
Name	
Number	
Relationship	

Classification	
Category	
Class Code	

Clear Find

2. Select your project Number.
3. Choose Find.

Project Status

The screenshot shows the 'Project Status' window with the title bar 'Project Status (Vision Project Mfg: ANY)'. The 'Current Period' is set to 'JUL-W4-02'. The main table has the following data:

Project	Project Name	Ovr Bgt	ITD - Rev Bgt	ITD - Act Rev	ITD - Cst Bgt	ITD - Act
AM_PROJ_1	AM_PROJ_1		0	0	2663419	

Below the table is a horizontal scrollbar and a set of buttons: 'Totals', 'Events', 'Invoices', 'Commitments', 'Project', 'Resource Status', and 'Task Status'.

This window displays the commitments by a specific project number. The Commit Amt (commitment amount) field has increased in value in comparison to before you entered the requisition.

4. Optionally, choose Totals to add up commitment totals for multiple projects.
5. Choose Commitments, and then choose Find to view commitment details for the current project. All requisitions and purchase orders associated with the current project appear.

Commitment Details

Commitment Details (Vision Project Mfg: ANY) - AM_PROJ_1					
Supplier Name	Commitment Date	Commitment Type	Commitment Number	Quantity	UOM
Advanced Netw	30-JUL-2002	Requisition	4251	20	EA
Advanced Netw	30-JUL-2002	Requisition	4252	10	EA
	29-JUL-2002	Purchase Orders	30065	10	EA

- The Commitment Number is the requisition or purchase order number. After a purchase order has been created from a requisition, the Commitment Number field value changes from the requisition number to the purchase order number.
 - The Project Raw Cost is the cost of the individual requisition or purchase order. The Project Raw Costs are added together to obtain the total commitment amount for the project.
6. Close this window, and then choose Task Status to display commitment information at the task level. All tasks associated with the current project appear.

Task Status

Task Status (Vision Project Mfg: ANY) - AM_PROJ_1

Task	Task Name	Ovr Bgt	ITD - Rev Bgt	ITD - Act Rev	ITD - Cst Bgt
<input type="checkbox"/> 1.0	Engineering D		0	0	0
<input type="checkbox"/> 2.0	Prototype	*	0	0	0
<input checked="" type="checkbox"/> 3.0	Production		0	0	2663419
<input type="checkbox"/> 4.0	Shipping	*	0	0	0
<input type="checkbox"/> 5.0	Installation		0	0	0
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					

Events Commitments Actuals Task Resource Status

7. Select a Task, then choose Commitments.
8. Choose Find to view the commitment details for the specific task.

Commitment Details

Commitment Details (Vision Project Mfg: ANY) - AM_PROJ_1, 3.0					
Supplier Name	Commitment Date	Commitment Type	Commitment Number	Quantity	UOM
Advanced Netw	30-JUL-2002	Requisition	4252	10	EA

Related Topics

Viewing Project Details, *Oracle Project Manufacturing User's Guide*

Setting Up Project Manufacturing Costing, *Oracle Cost Management User's Guide*

Project Cost Collector, *Oracle Cost Management User's Guide*

Integration with Oracle Time and Labor

This chapter covers the following topics:

- Introduction
- Integration with Oracle Time and Labor Overview
- Setting Up the Integration
- Time and Expenses
- Entering Timecard Information
- Extracting Information to Enterprise Asset Management
- Executing the Cost Manager Process

Introduction

This chapter provides the necessary information to set up and use the integration between Oracle Enterprise Asset Management and Oracle Time and Labor.

Integration with Oracle Time and Labor Overview

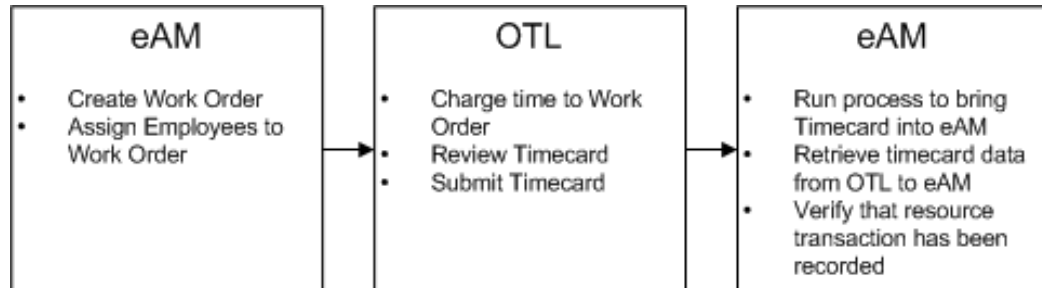
Oracle Time and Labor (OTL) is the repository in which time is entered by employees working in a particular organization. Employees working on Oracle Enterprise Asset Management (eAM) work orders enter their time using OTL Self-Service. Information collected is stored in OTL Time Store, and is composed of a series of business rules and processes. eAM extracts information from the Time Store and charges eAM work orders for the time spent by employees that work on them.

There are multiple steps within the integration flow. First, timecard information is entered for a specific Work Order, within Oracle Time Store (a piece of Oracle Time and Labor). That information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management. Finally, the Cost Manager process is executed. This process charges the resource transaction. After this process executes, you can view

the actual costs for the period that you charged, within the Work Order.

The process is as follows:

OTL Process Flow



This chapter contains the following topics:

- Setting Up the Integration, page 13-2
- Time and Expenses, page 13-2

Setting Up the Integration

There are two required setup procedures for this integration. The first is to establish employees needing to use this functionality as Persons within Oracle Human Resources (See: *Oracle Human Resources User's Guide*). Once established, those Persons are assigned to respective Users, within Enterprise Asset Management. The second setup procedure consists of creating Preference Values, and then linking those values to eligibility criteria.

This section contains the following topics:

- Defining Persons as Users, page 3-253
- Creating Eligibility Criteria, page 3-254

Time and Expenses

There are multiple steps within the integration flow. First, timecard information is entered for a specific Work Order, within Oracle Time Store (part of Oracle Time and Labor). That information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management. Finally, the Cost Manager process is executed. This process charges the resource transaction. After this process executes, you can view the actual costs for the period that you charged, within the Work Order.

This section includes the following topics:

- Entering Timecard Information, page 13-3
- Extracting Information to Enterprise Asset Management, page 13-4
- Executing the Cost Manager Process, page 13-6

Entering Timecard Information

You can enter timecard information and expenses to a work order. When you enter time on a Work Order, the information is stored in Oracle Time Store, a piece of Oracle Time and Labor (OTL). Oracle Enterprise Asset Management (eAM) extracts this information and applies it to the appropriate Work Order.

To enter timecard information:

1. Navigate to the Timecard. All timecards that the current user has entered and submitted appear.

2. Select a Period. The current period defaults.

Note: You cannot submit time for a future period.

3. Choose GO.
4. Select a Work Order. Work Orders with a status of Released or Complete, and that have operations assigned to a department that the current user (you) is assigned to, appear. If you are not assigned to a Work Order's operation but are a resource associated to the department on the Work Order's operation, you can see the Work Order in the list of values. After you charge time and submit the timecard, and the retrieval process is executed, you are assigned to the Work Order's operation.
5. The Asset Number associated with the current Work Order defaults in the Asset Number field.
6. Select an Operation. Operations associated with the current Work Order are available.
7. Select a Resource. Resources associated with the current operation are available.
8. Optionally, select a Charge Department. For example, if the current resource is borrowed, you might want to charge the department that owns the resource. The value defaults with the current operation's assigned department.
9. Use the remaining date fields to enter your time in hours.
10. Optionally, choose Calculate to view the Total hours calculated for both the period,

and specific days.

11. Optionally, to quickly remove information entered, choose Delete.
12. Optionally, choose Save For Later.

For example, you might need to work again on Friday. Save For Later enables you to do this. If this is chosen, the Timecard is given a Working status. Oracle Enterprise Asset Management cannot extract the information, within timecards with a Working status, from Oracle Time and Labor.
13. When you are ready to submit the current timecard, choose Review.
14. To submit the current timecard, choose Submit. The current timecard has a Submitted status.
15. Optionally, choose Return to Activities to view your timecards. All timecards that are at Working and Submitted statuses appear.
16. Optionally, select the Update icon to make changes to the current timecard.
17. Optionally, select the Delete icon to delete a specific timecard.
18. Optionally, select the Details icon to review the current timecard information.

Extracting Information to Enterprise Asset Management

You can extract all timecard information at a Submitted status from Oracle Time and Labor (OTL) to Oracle Enterprise Asset Management (eAM). A concurrent process executes in the background and performs time charge extractions. After extracted, a resource transaction dynamically generates within eAM. Most organizations set this process to periodically execute, automatically.

To extract information from OTL to eAM:

1. Navigate to the Submit Request window.

Retrieve Timecard Data from OTL to EAM

Run this Request...

Name: **Retrieve Timecard Data from OTL to EAM**

Parameters:

Language: **American English**

At these Times...

Run the Job: **As Soon as Possible**

Upon Completion...

☒ Save all Output Files

Notify:

Print to: **adsprinter**

Buttons: Copy..., Languages..., Schedule..., Options..., Help (B), Submit, Cancel

2. Select Retrieve Timecard Data from OTL to EAM.
3. A range of dates must be entered in the Parameters window to specify information to extract from OTL.

The concurrent process will also consider the OTL dates for the time entries if they fall within closed accounting periods.

Note: The decision to extract timecard information once is defined in OTL preferences. By default, the preference is set to NO. The US OTL Administrator can change this preference to YES in the OTL Preferences window (for example, a timecard is submitted with erroneous charges).

4. Choose OK.
5. Choose Submit. A resource transaction has dynamically created in eAM. The timecard information is now in the Resource Transaction Interface table.
6. Choose No to return to the menu.

Executing the Cost Manager Process

Finally, you need to execute the Cost Manager process. Most organizations set this process to periodically execute, automatically. This process charges the resource transaction. After this process runs, you can see the actual costs for the period that you charged, within the Work Order.

Note: Set up the Cost Manager Interface Manager to execute in the background, before executing the Cost Manager process. See: Windows and Navigation Paths for information on how to access this process.

To execute the Cost Manager process:

1. Navigate to the Submit Request window.
2. Select Cost Manager.
3. Choose Submit. The previously created resource transaction is now charged, and you can view the actual resource costs within the Work Order that the timecard was initially charged to; the information exists in the cost tables. To view the resource cost information from within the Work Order, See: Viewing Cost Information, page 7-4.

Cost Manager Process

Submit Request

Run this Request...

Name: **Cost Manager**

Parameters:

Language: **American English**

Copy...

Languages...

At these Times...

Run the Job: **As Soon as Possible**

Upon Completion...

☒ Save all Output Files

Notify:

Print to: **adsprinter**

Help (B) Submit Cancel

Decision

Request submitted.
(Request ID = 2525006)

Submit another request?

Yes No

4. Choose No to return to the menu.

eAM Quality

This chapter covers the following topics:

- Introduction
- Quality Setup
- Using eAM Quality
- Adding Collection Plan Attachments
- Triggering a Work Request
- Triggering a Work Order
- Entering Quality Results

Introduction

eAM integrates with Quality, enabling you to collect quality results on your assets. If an asset is not up to the required standards, a Work Request can automatically generate. This chapter contains the following topics:

- Quality Setup, page 14-2
- Using eAM Quality, page 14-2
- Adding Collection Plan Attachments, page 14-3
- Triggering a Work Request, page 14-4
- Triggering a Work Order, page 14-7
- Entering Quality Results, page 14-10

Quality Setup

A maintenance Work Order transitions through various steps in its life cycle (See: eAM Work Order Statuses, page 4-24). One of the steps in the life cycle is Completion. Certain quality plans might apply to the transaction, depending on the quality plan's setup and its association to transactions and triggers. A list of quality collection plans that applies to the completion transaction appears during the completion process. If a quality plan is specified as mandatory, results are entered before the transaction can finish. Otherwise, results entry is optional and can be deferred.

You can also enter quality plan data and complete operations for parent and child assets.

While creating a collection plan, you have the option of adding collection triggers to the plan. Triggers are restrictions that you define for a collection plan. For example, work orders for assets that belong to the TRUCK asset group require quality results entry for the collection plan. Data collection is initiated if all collection trigger conditions are satisfied.

Quality setup tasks for Oracle Enterprise Asset Management include the following:

- Creating eAM Collection Elements, page 3-202
- Creating eAM Quality Collection Plans, page 3-206
- Creating eAM Quality Collection Plans for a Supplier, page 3-211

Related Topics

Creating eAM Quality Collection Plans, page 3-206

Creating Collection Elements, page 3-202

Creating eAM Quality Collection Plans for a Supplier, page 3-211

Using eAM Quality

You can attach illustrative or explanatory files in the form of text, images, word processing documents, spreadsheets, video, graphics, OLE objects, and so on, to collection plans and specifications.

For each collection element, you can specify that Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise an Action Rule. Action Rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a Work Request or a Work Order is created automatically, based on certain conditions of the asset, determined by the quality data collected. The Action Rule is defined within the collection plan definition.

This section includes the following topics:

- Adding Collection Plan Attachments, page 14-3
- Triggering a Work Request, page 14-4
- Triggering a Work Order, page 14-7
- Entering Quality Results, page 14-10

Adding Collection Plan Attachments

You can attach illustrative or explanatory files in the form of text, images, word processing documents, spreadsheets, video, graphics, OLE objects, and so on, to collection plans and specifications. You can also attach files to quality results, as you enter them.

You can view collection plan attachments as you enter, view, and update quality results. You can view specification attachments as you enter quality results. You can view quality results line attachments as you update and view quality results. See *Viewing Attachments Associated with Quality Results, Oracle Quality User's Guide*.

To add collection plan attachments:

1. Navigate to the Collection Plans or Specifications (See: Overview of Specifications, *Oracle Quality User's Guide*) window. See: Creating eAM Quality Collection Plans, page 3-206 and Defining Specifications, *Oracle Quality User's Guide*.

Note: You must save the collection plan or specification before you can add an attachment to it.

2. Choose the Attachments icon or choose attachments from the View menu. The Attachments window appears.

Attachments

Seq	Category	Description	Data Type	May Be Changed
10	Miscellaneous		File	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Entity Name: Quality Collection Plans

Magnification: 100%

☐ Include Related Documents

Document Catalog...

To add attachments to quality results lines:

1. Navigate to the Enter Quality Results window. See: *Entering Quality Results Directly, Oracle Quality User's Guide*.
2. Select a quality results line.
3. Choose the Attachments icon or choose attachments from the View menu. The Attachments window appears.

Related Topics

Working With Attachments, *Oracle Applications User's Guide*

Attachments for Collection Plans, Specifications, and Results Lines, *Oracle Quality User's Guide*

Triggering a Work Request

For each collection element, you can specify that Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise an Action Rule. Action Rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a Work Request is

created automatically, based on certain conditions of the asset, determined by the quality data collected. The Action Rule is defined within the collection plan definition.

A Work Request is used to request work on an asset. A Work Request is not a Work Order, but is referenced by the Work Order that is ultimately created because of the Work Request.

To set up work request triggers:

1. Navigate to the Collection Plans window.

Collection Plans

Collection Plans (EM1)

Collection Plan: TIRE WEAR INSPECTION EM1 [Views...]

Description: Tire tread Depth Wear Inspection Plan - EAM

Effective: 11-AUG-2004 - []

Plan Type: Maintenance Inspection [Inspection of in-service assets] []

[Copy Elements...] [Transactions] [Specifications...]

Quality Collection Elements

Name	Seq	Prompt	Mandatory	Enabled	Read-Only	Displayed	[]
<input type="checkbox"/> Asset Group	10	Asset Group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[]
<input type="checkbox"/> Asset Serial Number	20	Asset Serial Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[]
<input checked="" type="checkbox"/> Maintenance WorkOrder	30	Work Order	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[]
<input type="checkbox"/> DriverFront Tread Depth mm	40	DSF Tread Depth mm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[]
<input type="checkbox"/> DriverRear Tread Depth mm	50	DSR Tread Depth mm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[]

[Values] [Actions]

2. Select a valid Collection Plan. To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.
3. In the Quality Collection Elements region, select the collection element to create an action rule for. Choose Actions.

Quality Actions

Quality Actions (EAM) - EAM PICKUP BRAKES, Asset Number

Action Rules

Seq	Element	Condition	Value	Spec Limit	From	To
10	Asset Number	equals (=)	<input checked="" type="radio"/>	<input type="radio"/>	av-rsn50	
			<input type="radio"/>	<input type="radio"/>		
			<input type="radio"/>	<input type="radio"/>		

Defaults...

Actions this Rule Invokes

<input checked="" type="checkbox"/>	Create a work request
<input type="checkbox"/>	
<input type="checkbox"/>	

Action Details

Message to Display or Log for this Action

4. In the Action Rules region, enter the Sequence number for the action rule. See: Action Rule Sequencing, *Oracle Quality User's Guide*.
The sequence number establishes the order in which action rules are evaluated as data is collected. The sequence number can be from 0 to 99999.
5. Select the Condition that must be met to invoke the action. For example, when the brake pad thickness wears to less than .2, a Work Request is automatically created. See: Query Operators, *Oracle Quality User's Guide*.
6. Choose either Value or Spec Limit to specify the evaluation method.
Value: If you choose Value, as quality data is collected, the action rule is evaluated using the results value and the value entered. If you have defined a list of values for the collection element, you must choose a value from this list. If you have not defined a list of values for the collection element, you can enter any value.
Spec Limit: If you choose Spec Limit, as quality data is collected, the action rule is evaluated using the quality results value and either the specification limit target value (collection element level), the upper or lower user-defined range limits, or the upper or lower specification range limits. Specification limits are defined at the collection element level.
Spec Limits can be used to define action rules that evaluate numeric results.
7. If the selected Condition requires a range of values, enter both the From and To

value. If the selected Condition requires a single value, enter the From value.

Note: Some conditions (for example, is entered and is empty) do not require values.

If you have chosen the Values, and a list of values has been defined for the collection element, you can select values from this list. If you have not defined a list of collection element values, you can enter any value. See: Defining Collection Element Values, *Oracle Quality User's Guide*.

8. In the Actions this Rule Invokes region, select *Create a work request*.
9. In the Action Details region, enter a Message to Display or Log for this Action. See: Message Actions, *Oracle Quality User's Guide*

If the selected action requires a status code, enter the status code in the Action Details region. See: Application Specific Actions, *Oracle Quality User's Guide*.

10. Save your work.

Related Topics

Associating Output Variables with Actions, *Oracle Quality User's Guide*

Defining a Launch a Work flow Action, *Oracle Quality User's Guide*

Defining Collection Plan Element Alert Actions, *Oracle Quality User's Guide*

Defining Collection Element Actions, *Oracle Quality User's Guide*

Quality Actions, *Oracle Quality User's Guide*

Triggering a Work Order

For each collection element, you can specify that Oracle Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise an action rule. Action rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a work order is created automatically, based on certain conditions of the asset, determined by the quality data collected. The action rule is defined within the collection plan definition.

To set up work request triggers:

1. Navigate to the Collection Plans window.

Collection Plans

Collection Plans (EM1)

Collection Plan: TIRE WEAR INSPECTION EM1 Views...

Description: Tire tread Depth Wear Inspection Plan - EAM

Effective: 11-AUG-2004 -

Plan Type: Maintenance Inspection Inspection of in-service assets []

Copy Elements... Transactions Specifications...

Quality Collection Elements

Name	Seq	Prompt	Mandatory	Enabled	Read-Only	Displayed	
<input type="checkbox"/> Asset Group	10	Asset Group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Asset Serial Number	20	Asset Serial Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Maintenance WorkOrder	30	Work Order	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> DriverFront Tread Depth mm	40	DSF Tread Depth mm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> DriverRear Tread Depth mm	50	DSR Tread Depth mm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Values Actions

2. Select a valid Collection Plan. To create a new collection plan, See Creating Collection Plans, *Oracle Quality User's Guide*.
3. In the Quality Collection Elements region, select the collection element for which you want to create an action rule.
4. Choose Actions.

Quality Actions

Quality Actions (EAM) - EAM PICKUP BRAKES, Asset Number

Action Rules

Seq	Element	Condition	Value	Spec Limit
				From To
10	Asset Number	equals (=)	<input checked="" type="radio"/>	av-rsn50
			<input type="radio"/>	
			<input type="radio"/>	

Defaults...

Actions this Rule Invokes

<input checked="" type="checkbox"/>	Create a Maintenance Work Order
<input type="checkbox"/>	
<input type="checkbox"/>	

Action Details

- In the Action Rules region, enter the Sequence number for the action rule. See Action Rule Sequencing, *Oracle Quality User's Guide*.

The sequence number establishes the order in which action rules are evaluated as data is collected. The sequence number can be from 0 to 99999.

- Select the Condition that must be met to invoke the action. For example, when the brake pad thickness wears to less than .2, a work request is automatically created. See Query Operators, *Oracle Quality User's Guide*.
- Choose either Value or Spec Limit to specify the evaluation method.

Value: If you choose Value, as quality data is collected, the action rule is evaluated using the results value and the value entered. If you have defined a list of values for the collection element, you must choose a value from this list. If you have not defined a list of values for the collection element, you can enter any value.

Spec Limit: If you choose Spec Limit, as quality data is collected, the action rule is evaluated using the quality results value and either the specification limit target value (collection element level), the upper or lower user-defined range limits, or the upper or lower specification range limits. Specification limits are defined at the collection element level.

Spec Limits can be used to define action rules that evaluate numeric results.

- If the selected Condition requires a range of values, enter both the From and To

value. If the selected Condition requires a single value, enter the From value.

Note: Some conditions (for example, is entered and is empty) do not require values.

If you have chosen the Values, and a list of values has been defined for the collection element, you can select values from this list. If you have not defined a list of collection element values, you can enter any value. See *Defining Collection Element Values, Oracle Quality User's Guide*.

9. In the Actions this Rule Invokes region, select Create a Maintenance Work Order or Create a Maintenance Work Order.
10. In the Action Details region, enter a Message to Display or Log for this Action. See *Message Actions, Oracle Quality User's Guide*.

If the selected action requires a status code, enter the status code in the Action Details region. See: *Application Specific Actions, Oracle Quality User's Guide*.

11. Save your work.

Related Topics

Associating Output Variables with Actions, Oracle Quality User's Guide

Defining a Launch a Work flow Action, Oracle Quality User's Guide

Defining Collection Plan Element Alert Actions, Oracle Quality User's Guide

Defining Collection Element Actions, Oracle Quality User's Guide

Quality Actions, Oracle Quality User's Guide

Entering Quality Results

You might need to enter Quality results when completing a work order, operation, or supplier operation. Quality results entry is mandatory if you selected the Mandatory check box, when creating the collection plan (See: *Creating eAM Quality Collection Plans*, page 3-206).

To enter quality results when completing a work order:

1. Navigate to the Work Order Completion window.
2. Select the work order.
3. Save your work.

If the collection plan that is triggered requires quality results entry, the Quality

Results Entry window appears. If not, select Enter Quality Results from the Tools menu or select the Enter Quality Results icon. A collection plan is triggered if its Transaction Description reads, *EAM Work Order Completions (Oracle Enterprise Asset Management)*. See: Creating eAM Quality Collection Plans, page 3-206.

4. Enter the required information.
5. Save your work.

To enter quality results when completing an operation:

1. Navigate to the Work Order window.
2. Select a work order.
3. Choose Operations.
4. Complete an operation. See: Operation Completion, page 4-59.
5. Save your work.

If the collection plan that is triggered requires quality results entry, the Quality Results Entry window appears. If not, select Enter Quality Results from the Tools menu or select the Enter Quality Results icon. A collection plan is triggered if its Transaction Description reads, *EAM Operation Completions (Oracle Enterprise Asset Management)*. See: Creating eAM Quality Collection Plans, page 3-206.

Note: If you want to update the quality results for a work order with a status of Closed, you must unclosed the work order.

6. Enter the required information.
7. Save your work.

To enter quality results via iSupplier Portal:

eAM enables you to create Quality collection plans that are optionally mandatory for a supplier to enter crucial Quality data, via iSupplier Portal, before the supplier can complete an Outside Service operation. A supplier will complete an Outside Service operation when the outside service is performed or shipped to the eAM organization.

1. Navigate to the iSupplier Portal.
2. Select the Orders tab.
3. Select Work Orders sub-tab.

4. Query a Work Order by PO, Work Order, From/To Need by Date, or From/To Promise Date.
5. Select a work order. The Work Order Detail page appears.
6. Choose Complete Operations.
7. Enter necessary information and Quality Results.

Related Topics

Entering Quality Results, *Oracle Quality User's Guide*

Work Order Billing

This chapter covers the following topics:

- Introduction
- Setting Up Work Order Billing
- Billing Work Orders
- Creating a Billable Work Order
- Associating Items and Activities to a Price List
- Initiating Billing
- Creating an Invoice

Introduction

While maintaining an asset or servicing a customer request, you can bill a third party customer for the work that they performed. This chapter discusses Work Order Billing, including the following topics:

- Setting Up Work Order Billing, page 15-1
- Billing Work Orders, page 15-2
- Creating an Invoice, page 15-12

Setting Up Work Order Billing

While maintaining an asset or servicing a customer request, you can bill a third party customer for the work that they performed. The cost of the work performed is based on the material and resource requirements (Bill of Material) of the Work Order, or the cost of the Activity associated with the Work Order.

This section includes the following topics:

- Work Order Billing Setup, page 3-257
- Setting Up Parameters, page 3-257
- Setting Up Costs for the Cost Plus Billing Basis, page 3-259
- Setting Up Prices for the Price List Billing Basis, page 3-260
- Service Attribute Setup, page 3-262
- Setting Up Billable Material, page 3-263
- Setting Up a Billable Resource, page 3-264
- Setting Up a Billable Activity, page 3-266

Billing Work Orders

After the setup tasks are complete (See: Setting Up Work Order Billing, page 15-1), you can bill third parties and customers the work performed, while maintaining an asset or servicing a customer request. The cost of the work performed is based on the work order's material and resource requirements (asset BOMs and asset routes), or the cost of the activity that is associated with the work order.

This section includes the following topics:

- Creating a Billable Work Order, page 15-2
- Associating Items and Activities to a Price List, page 15-4
- Initiating Billing, page 15-4

Creating a Billable Work Order

Work Order Billing requires completed, billable work orders.

To set up a billable work order:

1. Navigate to the Work Order window and create a work order.

Work Order

Work Order (EM1)

Work Order: **57673**

Asset Number: **Fork Lift Daily Maintenance**

Asset Group: **Fork Lifts**

Asset Activity: **Fork Lift Daily Maintenance**

Class: **MaintWAC**

Status: **Released**

Work Order Type:

Instance Number:

All Fork Lift Daily Maintenance

Daily maint for all fork lifts / propane and el

Scheduled Dates

Start: **09-NOV-2002 23:00:00**

Completion: **11-NOV-2002 07:36:00**

Duration(hours): **32.6**

Activity Type:

Activity Cause:

Activity Source: []

Main | Project | Rebuild | Work Request | Service Request | Bill, Routing

Owing Department: **W-Maint**

Priority:

Requested Start Date: **09-NOV-2002 23:00:00**

Requested Due Date:

Shutdown Type:

☒ Firm

☐ Notification Required

☐ Tagout Required

☒ Planned

☐ Enable Material Issue Requests

Operations | Materials | Resources | Asset Route | Costs

2. If you are billing by requirements, add the previously defined billable material to the current work order's Bill of Material, as operation 10. See: Setting Up Billable Material, page 3-263 and Defining Inventory Material Requirements, page 4-38. Add the previously defined billable resource to the current work order's routing, as operation 10. See: Setting Up a Billable Resource, page 3-264 and Defining Resource Requirements, page 4-47.
3. If you are billing by activity, add the previously defined activity to this work order. See: Setting Up a Billable Activity, page 3-266.
4. Release the current work order. See: eAM Work Order Statuses, page 4-24.
5. Issue some material (not all) and charge some resources (not all) to the current work order (See: Transacting Material, page 4-64 and Transacting Resources, page 21-81, respectively).
6. Complete the current work order. See: Work Order Completion, page 4-60.
7. Update the status of the work order to Complete - No Charges. See: eAM Work Order Statuses, page 4-24. You can bill work orders at a Closed status, as well.
8. Save your work.

Associating Items and Activities to a Price List

Material, Resources, and Activities require association with a price list, before you can bill them.

To add items and activities to a price list:

1. Navigate to the Advanced Pricing - Price Lists window.

Advanced Pricing - Price Lists

The screenshot shows the 'Advanced Pricing - Price Lists' window. The 'Price List' tab is active. The form contains the following fields:

- Name: EAM M1 Maintenance Price List
- Description: EAM M1 Price List for Work Order Billing
- Currency: USD
- Multi-Currency Conversion: Generated Currency Cor
- Round To: -2
- Effective Dates: 14-JUL-2003 -
- Payment Terms:
- Freight Terms:
- Freight Carriers:
- Comments:

Below the form is a table with the following columns: Product Context, Product Attribute, Product Value, Product Description, and a status column. The table contains five rows of data:

Product Context	Product Attribute	Product Value	Product Description	Status
Item	Item Number	WB-MaintTech	Work Order Billing Facilities	E
Item	Item Number	WB-Mechanic1	Work Order Billing Fleet Serv	E
Item	Item Number	WB-PrdMaint	Work Order Billing Production	E
Item	Item Number	Lubricate Fork Lift M	Lubricate Fork Lift Mast	E
Item	Item Number	Front Wheels - Elect	Front Wheels Electric Fork Lif	E

At the bottom of the window are buttons for 'Price Breaks' and 'Pricing Attributes'.

2. Add your material and resource items and/or your Activities to the price list.
3. Save your work.

Related Topics

Setting Up Item Costs and Prices, page 3-257

Initiating Billing

If a work order is at a Complete - No Charges or Closed status, you can select it for billing.

To bill by requirements:

1. Navigate to the Find Work Orders window.

Find Work Orders

The screenshot shows the 'Find Work Orders (EM1)' window. It has a title bar with standard window controls. The main area is divided into several sections:

- Search Criteria:** Fields for Work Order (57673), Maintained Item (Fork Lifts), Maintained Unit (Fork Lift Daily Maintenance), Asset Activity (Fork Lift Daily Maintenance), Start Date, Completion Date, Owning Department, Project, and Task.
- Work Request:** A text field.
- Status:** A section with checkboxes for 'Completed No Charge' (checked), 'Closed' (checked), and 'Previously Billed' (unchecked).
- Reference Invoice:** A text field.
- Internal Customer:** A checkbox (unchecked).
- Customer:** A text field.
- Buttons:** 'Clear' and 'Find' buttons.

Below the search criteria is a table titled 'Work Orders' with the following columns: Work Order, Maintained Item, Maintained Unit, Asset Activity, Status, Project, and Task. The first row is highlighted with a blue selection bar.

Work Order	Maintained Item	Maintained Unit	Asset Activity	Status	Project	Task
57673	Fork Lifts	Fork Lift Daily M	Fork Lift Daily M	Complete - No		

At the bottom of the window are three buttons: 'Bill by Activity', 'Bill by Requirements', and 'View Past Details'.

2. Select the work order you want to bill.
3. Choose Find.
4. Choose Bill by Requirements.

Work Order Billing

Work Order Billing (EM1) - EM181738

☐ Internal Customer

Customer: **Global Enterprises**

Bill To: **5400, Walsh Drive SAINT**
San Jose
CA 95106
US

Billing Basis: **Price List**
Price List: **Corporate** USD
Cost Type:
Markup %:
Project:
Task:

Organization Currency: **USD**
Billing Currency: **USD**

Currency Conversion
Type:
Date:

Calculate Amounts

Bill by Requirements

Op Sequence	Item/Resource	Type	UOM	Applied Quantity	Previous Billed Quantity	Item	UOM	Quantity	Cost/Price	Mark %
10	Shop Rags	Material	Ea	2	0	Shop Rags	Ea	2		
10	Fork Lift Battery	Material	Ea	1	0		Ea	1		

Calculated Total: **0.00**
Billed Total: **0.00**

Cancel View Past Details Initiate Billing

5. Within the Work Order Billing window, select a Customer.
6. Select a Bill To for the current customer.
7. Select a Billing Basis. Valid values are Price List and Cost Plus.
 - If you select Cost Plus, select a Cost Type and Markup %. For example, choose a Frozen Cost Type, if you defined a frozen cost for the material and resource items. See: Setting Up Item Costs and Prices, page 3-257. The Markup % defaults with a 0% value, but you can optionally update it.
 - If you select the Price List Billing Basis, select a Price List. All billable items appear on the selected price list, if they are Customer Order enabled (See: Setting Up Item Costs and Prices, page 3-257).
8. Choose Calculate Amounts. The unit rates are calculated for each billable item. The total amount of each billable item is a function of the unit rate, and the billed quantity.
 - If you previously chose a Cost Plus Billing Basis, the unit rate is calculated from the item cost and markup.
 - If you previously chose a Price List Billing Basis, the unit rate is retrieved from the price list that is associated with the item (See: Associating Items and Activities to a Price List, page 15-4). If multiple rates exist for the item, the system defers to the Price List setup (See: Setting Up Item Costs and Prices,

page 3-257).

9. Within the Bill by Requirements region, enter the Quantity to bill, for each billable item. This quantity should be no greater than the difference between the Applied Quantity and Previous Billed Quantity.

The Applied Quantity is what the work order used; for material, the Applied Quantity is the material issued to the work order. For resources, the Applied Quantity equals the resources charged to the work order.

10. Optionally enter the Markup %, for each billable item.
11. To indicate the lines that you want to bill, for each billable item, you can optionally select the individual Bill check boxes. To bill all lines, select the top check box; this automatically selects all check boxes.
12. Choose Initiate Billing to execute the billing process and populate the billing information within the Accounts Receivables interface tables.
13. Choose OK on the confirmation note, indicating that billing has successfully completed.

To bill by an activity:

1. Navigate to the Find Work Orders window.

Find Work Orders

Find Work Orders (EM1)

Work Order: **57673**

Maintained Item: **Fork Lifts**

Maintained Unit: **Fork Lift Daily Maintenance**

Asset Activity: **Fork Lift Daily Maintenance**

Start Date: -

Completion Date: -

Owning Department:

Project:

Task:

Work Request:

Status:

☒ Completed No Charge

☒ Closed

☐ Previously Billed

Reference Invoice:

☐ Internal Customer

Customer:

Work Orders

Work Order	Maintained Item	Maintained Unit	Asset Activity	Status	Project	Task
57673	Fork Lifts	Fork Lift Daily M	Fork Lift Daily M	Complete - No		

2. Select the work order you want to bill.
3. Choose Find.
4. Choose Bill by Activity.

Work Order Billing

Work Order Billing (EM1) - 57673

☐ Internal Customer

Customer: **ABC Corporation America**

Bill To: **300 ABC Parkway**
San Francisco
CA 94111
US

Billing Basis: **Price List**
Price List: **EAM M1 Maintenanc**
Cost Type: **USD**
Markup %:
Project:
Task:

Organization Currency: **USD**
Billing Currency: **USD**

Currency Conversion
Type:
Date:

Calculate Amounts

Bill by Activity

Asset Activity: **Fork Lift Daily Maintenance** | **All Fork Lift Daily Maintenance**

Activity Type:
Activity Source:
Activity Cause:

Billing Details
Activity: **Fork Lift Daily Maintenance**
UOM: **Ea**
Quantity: **1**

Calculated Amount:
Billed Amount:

Cancel **View Past Details** **Initiate Billing**

5. Within the Work Order Billing window, select a Customer.
6. Select a Bill To for the current customer.
7. Select a Billing Basis. Valid values are Price List and Cost Plus.
 - If you select Cost Plus, select a Cost Type and Markup %. For example, choose a Frozen Cost Type, if you defined a frozen cost for the material and resource items. See: Setting Up Item Costs and Prices, page 3-257. The Markup % defaults with a 0% value, but you can optionally update it.
 - If you select the Price List Billing Basis, select a Price List. All billable items appear on the selected price list, if they are Customer Order enabled (See: Setting Up Item Costs and Prices, page 3-257).
8. Choose Calculate Amounts. The unit rates are calculated for each billable item. The total amount of each billable item is a function of the unit rate and the billed quantity.

Work Order Billing

Work Order Billing (EM1) - 57673

☐ Internal Customer

Customer: **ABC Corporation America**

Bill To: **300 ABC Parkway**
San Francisco
CA 94111
US

Billing Basis: **Price List**

Price List: **EAM M1 Maintenance**

Cost Type: **USD**

Markup %: **USD**

Project: **USD**

Task: **USD**

Organization Currency: **USD**

Billing Currency: **USD**

Currency Conversion

Type: **USD**

Date: **USD**

Calculate Amounts

Bill by Activity

Asset Activity: **Fork Lift Daily Maintenance** **All Fork Lift Daily Maintenance**

Activity Type: **Fork Lift Daily Maintenance**

Activity Source: **Fork Lift Daily Maintenance**

Activity Cause: **Fork Lift Daily Maintenance**

Billing Details

Activity: **Fork Lift Daily Maintenance**

UOM: **Ea**

Quantity: **1**

Calculated Amount: **37.50**

Billed Amount: **37.50**

Cancel **View Past Details** **Initiate Billing**

9. Choose Initiate Billing.

Billing Initiated

Work Order Billing (EM1) - 57673

☐ Internal Customer

Customer: **ABC Corporation America**

Bill To: **300 ABC Parkway**
San Francisco
CA 94111
US

Billing Basis: **Price List**
Price List: **EAM M1 Maintenance**
Cost Type:
Markup %:
Project:
Task:

Organization Currency: **USD**
Billing Currency: **USD**

Currency Conversion
Type:
Date:

Calculate Amounts

Bill by Activity

Asset Activity: **Fork Lift Daily Maintenance**

Activity Type:
Activity Source:
Activity Cause:

Quantity: **1**

Calculated Amount: **37.50**
Billed Amount: **37.50**

Cancel **View Past Details** **Initiate Billing**

10. Choose OK.

11. Optionally choose View Past Details to view what was billed.

Past Invoice Details

Past Invoice Details (EM1) - 57673

Reference Invoice Number	Reference Line Number	Invoice Number	Invoice Line Number	Invoice Date	Customer
61	1				ABC Corporation A

Close

If you billed by Activity, one line appears. If you billed by requirements, multiple lines may appear.

12. Choose Close to return to the Find Work Orders window.

Creating an Invoice

After billing is initiated, you can create invoices. First, a source is defined in Oracle Receivables to identify where your invoicing activity originates. The batch source also controls invoice defaults and invoice numbering. Next, ensure that a Work Order Billing flexfield code exist. Finally, you can run the AutoInvoice concurrent process to create invoices. You can set this program to automatically run, or execute it from the menu.

To ensure a batch source exists:

1. Navigate to the Transaction Sources window.

Transaction Sources

Transaction Sources (Order Management Super User, Vision Operations (USA))

Operating Unit: **Vision University**

Name: **Work Order Billing** Type: **Imported**

Batch Source | AutoInvoice ... | Customer Inf... | Accounting I... | Other Inform... | Sales Credit ...

Description: **Work Order billing Batch Source**

☒ Active Effective Dates: **23-APR-2004** -

☐ Automatic Batch Numbering Last Number:

☒ Automatic Transaction Numbering Last Number: **1**

☐ Copy Document Number to Transaction Number

Reference Field Default Value: **interface_header_attribute1**

Standard Transaction Type:

Credit Memo Batch Source: []

2. Query on Work Order Billing in the Name field, to ensure that it exists. If it does not exist, perform the following steps:

1. Enter Work Order Billing in the Name field.

2. Select Imported from the Type list of values.

Because this is an Imported transaction batch source, the system automatically numbers the batch with the batch source name - request ID.

3. Enter a Description.

4. Enter the range of Effective Dates.

The start date defaults as the current date, but you can change it. If you do not enter an end date, this transaction batch source is active indefinitely.

5. To automatically number new transactions created using this source, check the Automatic Transaction Numbering check box and enter a Last Number.

You can use automatic transaction numbering with both Imported and Manual sources.

6. Optionally, to assign the same number to both the document and transaction, for transactions assigned to this source, check the Copy Document Number to Transaction Number check box.

7. Save your work.

For information on all remaining fields, See: Transaction Batch Sources, *Oracle Receivables User's Guide*.

To ensure a Work Order Billing flexfield code exists:

1. Navigate to the Descriptive Flexfield Segments window.

Descriptive Flexfield Segments

Application: **Oracle Receivables** Title: **Line Transaction Flexfield**

☒ Freeze Flexfield Definition Segment Separator: **Period (.)**

Context Field

Prompt: **Context Value** ☐ Required

Value Set: ☒ Displayed

Default Value:

Reference Field:

Context Field Values

Code	Name	Description	Enabled
PROJECTS INVOICES-600	PROJECTS INVOICES-600	Project Mfg Accounting Invoices	<input checked="" type="checkbox"/>
Property-Projects	Property-Projects	Property Manager - Projects	<input checked="" type="checkbox"/>
SERVICE	SERVICE	Service Credit Memos	<input checked="" type="checkbox"/>
STP NETTING	STP NETTING	STP NETTING	<input checked="" type="checkbox"/>
VISION BUILD	VISION BUILD	Vision Build	<input checked="" type="checkbox"/>
Work Order Billing	Work Order Billing	Work Order Invoices	<input checked="" type="checkbox"/>

Compile **Segments**

2. Query on the Line Transaction Flexfield within the Oracle Receivables Application. If Work Order Billing does not exist as a Code within the Context Field Values region, perform the following steps:
 1. Enter Work Order Billing in the Code field.
 2. Enter Work Order Invoices in the Description field.
 3. Select the Enabled check box.
 4. Choose Segments.
 5. Ensure that, at least, the following segments are defined: Work Order, Work Order Id, Invoice Number, and Line Number.
 6. Save your work.

To create invoices:

1. Navigate to the Run AutoInvoice window.
2. Select AutoInvoice Master Program, from the Name list of values.

Parameters

Number of Instances

Invoice Source **Work Order Billing** Work Order billing B

Default Date **17-FEB-2003**

Transaction Type

(Low) Bill To Customer Number

(High) Bill To Customer Number

(Low) Bill To Customer Name **ABC Corporation Americas**

(High) Bill To Customer Name **ABC Corporation Americas**

(Low) GL Date

(High) GL Date

(Low) Ship Date

(High) Ship Date

(Low) Transaction Number

(High) Transaction Number

(Low) Sales Order Number

(High) Sales Order Number

(Low) Invoice Date

OK Cancel Clear Help

3. Enter the Number of Instances. An instance refers to how AutoInvoice groups and processes your transactions.

Submitting a greater number of instances enables you to import transactions into Receivables faster. You can submit a maximum of 15 instances.

Tip: Enter a number of instances based on how many CPUs are available. Use the following formula to determine the number of instances to enter:

$$(\text{Number of Available CPUs}) - 1 = \text{Number of Instances}$$

For example, if you have five CPUs, submit four instances of the AutoInvoice Master program.

4. Select the Work Order Billing Invoice Source.
5. Enter a Default Date.

The Default Date must be in an open or future period. Depending on how you defined your transaction batch source, AutoInvoice uses the Default Date if the GL date is not provided or if the date provided is in a closed period. See: *Determining Dates, Oracle Receivables User's Guide*.

6. Click the **OK** button.
7. Choose Submit.

Related Topics

Transaction Batch Sources, *Oracle Receivables User's Guide*

Running AutoInvoice, *Oracle Receivables User's Guide*

Oracle Service Integration

This chapter covers the following topics:

- Introduction
- Oracle Service Integration Overview
- Creating Service Requests
- Service Requests and eAM Work Orders

Introduction

If you have Oracle Service installed, you can use Service Requests to report and request maintenance service. This chapter contains the following topics:

- Oracle Service Integration Overview, page 16-1
- Service Request Statuses, page 16-1
- Creating Service Requests, page 16-2
- Service Requests and eAM Work Orders, page 16-4

Oracle Service Integration Overview

Service request functionality provides organizations that utilize call centers the tools necessary to capture and track maintenance Service Requests. You can create service and work requests on both eAM capital assets and rebuild able inventory and both request types can simultaneously exist within one eAM organization.

Service requests for eAM maintenance are classified as type Asset Maintenance and Service Requests that are created as an Asset Maintenance type are directed to, and viewable within eAM. You can view a maintenance service request's work in progress and associated eAM work orders' pertinent information within Oracle Service; use the Work Orders tab within the Service Requests window. You can optionally customize a

work flow to send Service Request notifications, such as sending a notification to a maintenance planner that a service request was created for an asset.

An eAM work page enables easy review of all eAM maintenance service and work requests. You can create maintenance work orders from the service or work requests, or associate the requests to existing work orders.

The following topics are pertinent to the Oracle Service integration:

- Service Integration Setup, page 3-247
- Service Request Statuses, page 16-1
- Creating Service Requests, page 16-2
- Service Requests and eAM Work Orders, page 16-4

Service Request Statuses

You can assign Work Orders to Service Requests with any status, except Final. Enterprise Asset Management does not change a Service Request status, when assigning Work Orders to it.

Creating Service Requests

Call center operators can create a service request within the Service Request window. Call center operators can also view the details of associated maintenance work orders, within the Work Orders tab. They can relay this information to the customer as needed.

To create a service request:

1. Navigate to the Service Request window.
2. From the Folder menu, select Open. Select the Folder that displays Enterprise Asset Management (eAM)-specific fields. See: Enabling eAM Specific Fields, page 3-250.

Service Request

Service Request - Pacific Time

Log and Notes Dashboard(P)

Contact Type: Customer Customer Type: Organization Operating Unit: Vision Operations

Name: Vision Operations Number: 50407 Category: Item: Desc: Revision: Instance: Serial: Group: Owner:

First: Last: Email: Relationship: Phone: Phone Type:

Reported: 25-JAN-2012 09:13 Type: Customer Call Status: Open Severity: Low

Subject Workbench Contacts / Addresses Tasks Interactions Related Objects Service History Charges Work Orders

Problem Summary: There is a problem with the monitor. Problem Code: Urgency: Respond - 24 Error Code: Resolution Summary: Resolution Code: Respond By: 28-JAN-2012 09:13 On: Resolve By: 11-FEB-2012 05:13 On:

Solutions Outcome Title Type Number Visibility

Search Knowledge Unlink Solution Refresh

Notes View By: From: 29-JUL-2011 00:00 To: 25-JAN-2012 23:59 Print Friendly Refresh

Type: Description: Visibility:

New Note Details Log and Notes

3. Select a Contact Type. Values are Customer and Employee.
4. Select a Customer Type.
5. Select an eAM enabled Inventory Organization. See: Enabling Organizations for Enterprise Asset Management, page 3-8.
6. Select a maintenance request Type. See: Creating Maintenance Service Request Types, page 3-248.
7. Select an Open Status. See: Service Request Statuses, page 16-1.
8. Select the request Severity.
9. Within the Workbench tab, enter the Problem Summary.
10. In the Notes region, optionally select a note Type.
11. Optionally enter the Description of the note type.
12. Save your work.

Related Topics

Oracle Service User's Guide

Service Requests and eAM Work Orders

Using the Maintenance Super User responsibility, you can create work orders from service requests, or associate a service request with an existing work order. Because more than one work order might be needed to complete a service request issue, a service request can associate with multiple work orders. Because service and work requests can be used to report the same maintenance problem, service and work requests can associate with the same work order. The Show/Hide functionality enables you to display details of a service request.

To create a work order from a service request:

1. Navigate to the Work Orders tab.
2. Select the Requests sub-tab.
3. Populate at least one of the following fields:
 1. Optionally, if you know the specific Service Request number to view, select a Request Number.
 2. To narrow your selection, optionally select an Asset Type. If you select Capital, service and work requests that are created for asset numbers appear. If you select Rebuildable Inventory, service and work requests that are created for Rebuildable Items appear.
 3. Optionally select an Assigned Department.
 4. Optionally select a Status.
 5. Optionally select an asset number to search for related service requests and work orders.
4. Choose Go.

Requests

Maintenance Home
Assets
Work Requests
Work Orders
Stores
Budget Forecasts
Failure Analysis
Construction Units
Safety Management
Reports

All
Requests
Express Work
Crew Schedule
Mass Time Entry
Generate PM Work Orders

Requests
Save Search

Simple Search

Note that the search is case insensitive

Asset Type
Capital
Asset Group
Reported Date From
(25-Jun-2019 19:45:00)
To
Go
Clear

Department
Asset Number
Request Number
33225
Advanced Search

Details	Request Number	Description	View Assigned Work Orders	Status	Asset Group	Asset Type	Asset Number	Department	Expected Start Date	Expected Resolution Date	Create Work Order	Assign Work Order	Attachments
	33225	FL1020	0	Awaiting Work Order	Fork Lifts	Capital	FL1020	W-Maint		03-Jul-2015 10:24:44			

- To create a work order associated with the current service, click the Create Work Order button.

You can also view or add work request attachments. In the Attachments column, click the Add or View buttons to add an attachment, or to view a list of existing attachments currently associated with the service request.

Important: If you are creating a work order, you must first save the work order before you can add a work request attachment.

- Enter the required work order information (See: Routine Work Orders, page 4-4).
- Choose Apply.
- To assign an existing work order to the current service, choose Assign Work Order.
- Query for existing work orders.
- Choose the Assign button next to the work orders you want to associate with the current service.

To obtain service requests using the advanced search:

- Navigate to the Work Orders tab.
- Click the Requests link
- Choose Advanced Search.

4. Populate at least one of the following fields:
 1. To narrow your selection, optionally select an Asset Type. If you select Capital, service and work requests that are created for asset numbers appear. If you select Rebuildable Inventory, service requests that are created for Rebuildable Items appear.
 2. Optionally select an asset group. An asset group is a grouping of similar asset numbers. See: Defining Asset Groups, page 3-66.
 3. Optionally select an asset number to search for related service requests and work orders.
 4. Optionally select an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes, page 3-63.
 5. Optionally select an Add Another value.
 - Optionally select Area. This is a user-defined listing of logical areas of work. Areas are where the assets reside. For example, North Plant, East Wing, or Area 1. See: Setting Up Areas, page 3-21.
 - Optionally Assigned Department to view all service requests associated with a specific department.
 - Optionally if you know the specific service number to view, select Request Number.
 - Optionally select Request By Date.
 - Optionally select a Status.
 - Optionally select a Priority. See: Work Order and Work Request Priority Codes, page 3-58.
 - Optionally select Request Type. Request Types describe and categorize service requests. For example, Manual, System, Routine, Capital, and Furniture. Service Request Types are user-defined (See: Work Request Types, page 3-56).
 - Optionally select Work Order to display all service requests associated with that work order. An unlimited number of service requests can associate with a work order.
 - Optionally select Creation Date to view service requests created on a specific date.

- Optionally select Created By to view service requests created by a specific user.
- Optionally select Requested For to view service requests requested for a specific user.
- Optionally select *Include children from hierarchy*. If the Asset Number value appears and Yes is selected, then service requests for the asset number and all of its children appear. If the asset number does not appear and Yes is selected, all service requests in the system appear. If the asset number does not appear, Yes is selected and additional criteria are entered, the additional criteria is ignored; all service requests in the system appear.

5. Choose Go.

Part 4

Self-Service Work Requests User

The Self-Service Work Requests User is a person in an organization, often personnel (not involved in the maintenance department), who uses work requests to report maintenance problems. This person also uses work requests to check the statuses of problems that have been reported.

This part contains the following chapter:

- Self Service Work Requests, page 17-1
- Using the Self-Service Assets Tab, page 18-1

Self Service Work Requests

This chapter covers the following topics:

- Overview of Work Requests
- Work Request Statuses
- Obtaining Work Request Information
- Creating and Updating Work Requests

Overview of Work Requests

A work request serves a different function than a work order: it is a request for maintenance on an asset (Capital or Rebuildable Inventory). Oracle eAM enables operations and maintenance staff to report any problems with an asset. A supervisor can approve, request additional information, or reject a work request.

Use the Work Requests tab to search for existing work requests and to create new work requests for an asset.

If your organization uses work request prefixing, the system automatically derives the work request number when you create a work request.

Based on the existing Request by Dates Setup for a combination of priority and type, the default values for the Request by Start date from system date (Hrs), the Request by Completion date tolerance (Hrs), and the Request by start and completion dates of work request will appear.

This information may enable you to prioritize work requests and improve productivity.

Example

- Access the Create Work Request page.
- Default values for Request by start date: 14-Oct-2018 04:52:40
- Default values for Request by completion date: 15-Oct-2018 04:52:40

Request by dates setup values are as follows:

Priority	Type	Request by start date from system date (Hrs)	Request by completion date tolerance (Hrs)
Emergency	--	2	3

- Select Priority: Emergency (Request by start and completion dates are recalculated based on existing setup)
- Default values for Request by start date: 14-Oct-2018 05:52:40 [System Date, time + Request by start date from system date (Hrs)]
- Default values for Request by completion date: 14-Oct-2018 08:52:40 [Calculated Request by start date + Request by completion date tolerance (Hrs)]

Note: Request by start and completion date are calculated for a priority and type combination. Priority is a mandatory field for setup; Type is an optional field.

A work request may require approval before it is generated into a work order. Work requests can be approved using the AME approval process. The setup for the Transaction type, EAM Work Request Approval, can be set in Approvals Management. Work requests can be approved based on work request attributes: Assigned Department, Work Request Type, Work Request Priority, Asset Group, Asset Number, Work flow Type, Asset Category, Asset Criticality, Area, Asset Status, Organization Code, Assigned Department.

The Enable AME Approval Work flow check box must be selected to trigger the work request approval process to follow the AME Rules. Department approval can also be used if the AME Approval process is not used. However, department approval and AME approval are mutually exclusive. See Defining eAM Parameters, page 3-13).

Use the Approvals Management responsibility to set the EAM Work Request Approval transaction type.

ORACLE Approvals Management

Home

Favorites

Settings

Worklist

53+

Logged In As OPERATIONS

Help

Logout

Administrator Dashboard

This page displays the transaction types and their association with specific Oracle applications.
 * Indicates required field

Transaction Types

Filter All

Go

Create Transaction Type

Previous 10

21 - 30

Next 10

Name	Transaction Type Key	Application	Update	Delete
Discrete MES ERES Job Assembly Move	oracle.apps.wip.mes.job.assembly.move	Work in Process		
Discrete MES ERES Job Material Transaction	oracle.apps.wip.mes.job.material.transact	Work in Process		
EAM Clearance Release Approval	oracle.apps.eam.clearance.release.approval	Enterprise Asset Management		
EAM Isolation Release Approval	oracle.apps.eam.isolation.release.approval	Enterprise Asset Management		
EAM Permit Release Approval	oracle.apps.eam.permit.release.approval	Enterprise Asset Management		
EAM Work Order Completion - SSWA	oracle.apps.eam.wo.comp.ss	Enterprise Asset Management		
EAM Work Order Release Approval	oracle.apps.eam.workorder.release.approval	Enterprise Asset Management		
EAM Work Request Approval	oracle.apps.eam.workrequest.approval	Enterprise Asset Management		
EDR ERES File Approval	oracle.apps.edrfile.approve	E-Records		

Quick Links

- Configuration Variables
- Exception Log
- Setup Report
- Approver Types

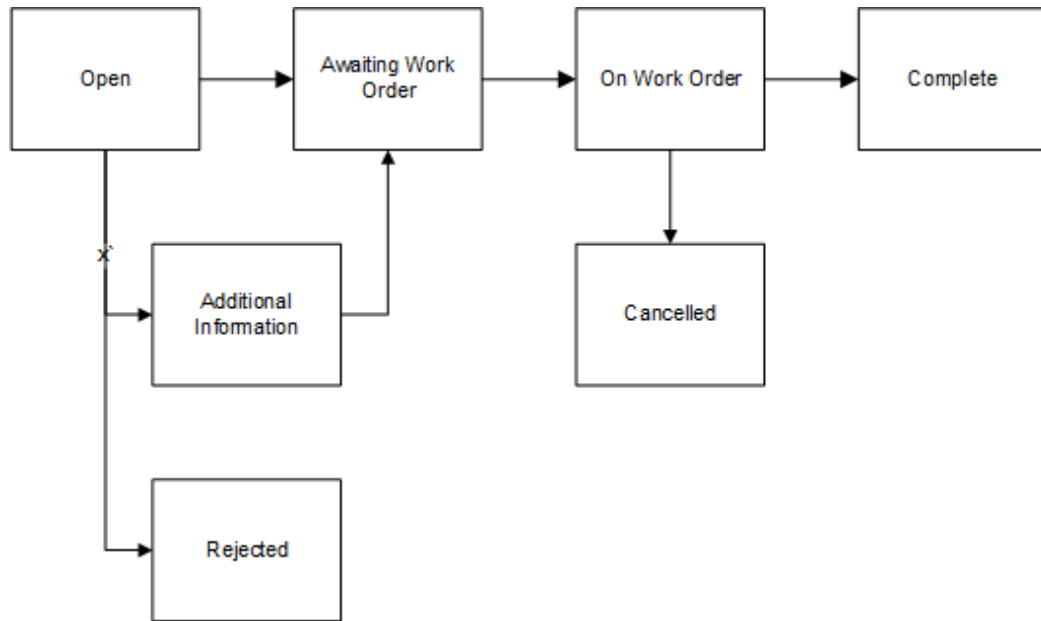
This section's tasks include:

- [Work Request Statuses](#), page 17-3
- [Obtaining Work Request Information](#), page 17-5
- [Creating and Updating Work Requests](#), page 17-8

Work Request Statuses

A work request transitions through several statuses during its life cycle. The work request life cycle is as follows:

Self Service Work Requests 17-3



- *Open* - A work request is created in an Open status.
- *Awaiting Work Order* - The work request status changes from Open to Awaiting Work Order if the individual on the approval route has approved it.
If the Auto-Approve Work Request functionality is enabled for the current organization, the status is automatically set to Awaiting Work Order (See: Defining eAM Parameters, page 3-13).
- *On Work Order* - After a work request is associated with a work order, the status changes to On Work Order.
If you manually change the status to Cancelled when status is On Work Order, the associated work order is cancelled.
- *Cancelled* - The associated work order is cancelled.
You can manually change the status to Cancelled when the status is On Work Order and the associated work order is cancelled. If the associated work order is not cancelled, the system will display an error and the work request cannot be cancelled.
- *Rejected* - The individual on the approval route rejected the work request.
- *Additional Information* - If the work request's status is Additional Information, the originator must add the requested information.
During the approval process, the system adds the information to the work request notes and does not transfer the work request back using Work flow.

- *Complete* - The work request status changes to Complete when the work order associated with the work request is completed.

Requesting Information Through Work Request Work flow Notifications

You can request more work request information by clicking one of the following action buttons on the work flow notification received:

- **Request Information:** Click this button to obtain additional input from any specified user. The Requested Information text will appear in the notification's Action History region only, and will not update the work request log. Also, the status of the work request is not changed during this request process.
- **Additional Information:** Click this button to alternatively request more information and to obtain additional input from the work request originator. The text entered in the notifications response comments are updated to the Work Request Log and to the notification's Comments region. Also, the status of the work request is changed to 'Additional Information' during this process.

See Defining EAM Parameters, page 3-13 for more information regarding Oracle Work flow and eAM notifications.

Obtaining Work Request Information

Query for work requests using either the personalized, simple, or advanced search modes. The personalized mode enables you to select specific fields that you like to search with. The simple search mode displays commonly used fields that are normally used for searching. The advanced search mode provides more search criteria options. From the results table, you can view, update, and create work requests.

To obtain work request information using the simple search:

1. Navigate to the Work Requests tab (Self Service Work Requests: Work Requests tab).
2. Choose Simple Search.

Work Requests

Maintenance Home Assets **Work Requests** Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Create Work Request

Work Requests Save Search

Simple Search

Note that the search is case insensitive Advanced Search

Request Number Status

Asset Type Asset Number

Assigned Department

Go Clear

Create Work Request Export Work Requests ***

Details	Number	Description	Asset Type	Asset Group	Asset Number	Status	Request By Start Date	Request By Completion Date	Originator	Update	Attachments
	33225	FL1020	Capital	Fork Lifts	FL1020	Awaiting Work Order		03-Jul-2015 10:24:44	OPERATIONS		

3. Populate at least one of the following fields to narrow the search results:

1. Request Number

2. Asset Type

If you select Capital, work requests that are created for asset numbers appear. If you select Rebuildable Inventory, work requests that are created for Rebuildable Items appear.

3. Assigned Department

4. Status. See: Work Request Statuses, page 17-3.

5. Asset Number

4. Click the Go button.

To obtain work request information using the advanced search:

1. Navigate to the Work Requests tab.

2. Click the Simple Search button.

3. Click Advanced Search to narrow your selection criteria. Populate at least one of the following fields:

1. Asset Group. See: Defining Asset Groups, page 3-66.

2. Asset Category - This is the Class and Subclass code, such as CRANE. OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes, page 3-63

3. Optionally select an Add Another value such as:

- Area - This is a user-defined listing of logical areas of work. Areas are where the assets reside, for example, North Plant, East Wing, or Area 1. See: Setting Up Areas, page 3-21.
- Asset Criticality - This field enables you to search based on the asset priority ranking.

Important: You must personalize the Work Requests result table of Work Orders tab - Requests search page to include the Asset Criticality value in the drop-down list. Revise the EAM_REQ_ADVSEARCH_PAGE.xml; Package: EamAssetCriticality. See the Oracle Application Framework Personalization Guide for more information.

- Assigned Department - To view all work requests associated with a specific department. See: Defining Departments and Resources, page 3-24.
- Created By - To narrow your search to a specific user login name. This field will also contain the Person Name as defined in the Users window.
- Collection Plan for Quality Triggered Work Request - This field contains the collection plans that are used for the creation of quality triggered work requests.
- Request Number
- Request By Date
- Status. See: Work Request Statuses, page 17-3.
- Priority. See: Work Order and Work Request Priority Codes, page 3-58.
- Request Type - User-defined value that describes and categorizes work requests, for example, Manual, System, Routine, Capital, and Furniture. (See: Work Request Types, page 3-56).
- Source Work Order-Quality - This field contains the source work orders associated with a quality triggered work request created during quality results collection.
- Work Order - To display all work requests associated with that work order. An unlimited number of work requests can be associated with a work order.

- Creation Date
- Created By - This field also contains the Person Name as defined in the Users window
- Requested For
- Include children from hierarchy check box

If there are populated search criteria, they are applied (or effective) on the results of all the work requests and children for the current asset number.

If the asset number is not populated and Yes is selected, the Include children from hierarchy check box setting is ignored and other search criteria are considered.

4. Click the Go button.

Creating and Updating Work Requests

You can create a work request within the simple or advanced search pages. Click the Advanced Search button to add fields such as:

- Area
- Asset Criticality: This field enables you to search based on the asset priority ranking.

Important: You must personalize the Work Requests results table of Work Orders tab - Requests search page to include the Asset Criticality value in the drop-down list. Revise the EAM_REQ_ADVSEARCH_PAGE.xml; Package: EamAssetCriticality. See the Oracle Application Framework Personalization Guide for more information.

- Asset Full Description
- Created By - This field also contains the Person Name as defined in the Users window.
- Creation Date

To create a work request:

1. Navigate to the Work Requests tab.

2. Select the Create Work Request Sub-tab.

3. If it is indicated as a required field, select an Asset Number.

This determination is based on a setting in the eAM parameters. See *Defining eAM Parameters*, page 3-13 and *Defining Asset Numbers*, page 3-85.

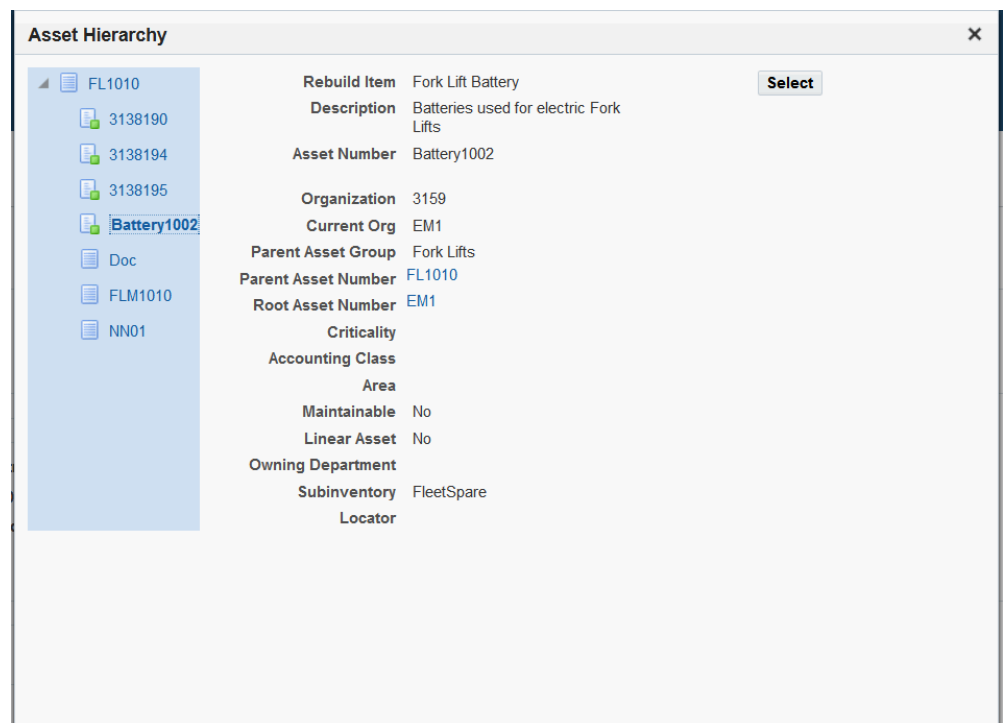
4. Click the Asset Hierarchy icon next to the Asset Number field to view the asset hierarchy.

Note: The Asset Hierarchy icon appears after the asset number has been selected.

1. Expand the asset to view child assets.

2. Select the child asset.

3. Click Select.



The value appears in the Asset Number field on the **Create Work Request** page.

The screenshot shows the 'Create Work Request' form. At the top, there's a tab labeled 'Create Work Request'. Below it, a legend states '* Indicates required field'. The 'Request Details' section contains several fields: 'Asset Number' with the value 'Battery1002', 'Assigned Department' (empty), 'Request By Start Date' with the value '10-Aug-2022 09:28:37', 'Requested For' with the value 'OPERATIONS', 'Priority' (empty dropdown), 'Work Request Type' (empty dropdown), 'Request By Completion Date' with the value '11-Aug-2022 10:05:34', and 'Asset Criticality' (empty dropdown). Asterisks (*) are placed next to the Asset Number, Assigned Department, Request By Start Date, Priority, and Request By Completion Date fields.

5. Select the Assigned Department (optional).

6. Select a Priority. See: Work Order and Work Request Priority Codes, page 3-58.

Based on selected priority, the Request by start date and Request by completion dates can be changed if a setup exists for the Request by Dates Setup.

After the priority has been selected, the following message appears, highlighting the revised dates:

Please verify the Request by dates, as they might change if Priority/Type is changed based on setup.

7. Enter a Request By Start Date.

The default value is current date, time + 1 hour.

Based on the Work Order Priority, Type and the Dates setup, the Request By start date will be recalculated based on the date tolerances defined.

Request by start Date = System date, time + Request by start date from system date (Hrs).

Important: The Request by Start Date cannot be earlier than system date, and cannot be later than the Request by Completion Date.

8. Enter a Request By Completion Date.

The default value is the Request by Start Date + 24 hours. However, the date value is recalculated based on the Request for Dates setup in the eAM parameters.

Request by completion date = (Calculated) Request by start date + Request by completion date tolerance (Hrs).

See Defining eAM Parameters, page 3-13.

9. Optionally update the Priority.

Based on the selected priority or type, the request by start date and Request by completion dates can be changed if a setup exists in the Request by Dates Setup. See Defining eAM Parameters, page 3-13.

After updating the priority or type, the following message appears, highlighting the revised dates:

Please verify the Request by dates, as they might change if Priority/Type is changed based on setup.

10. Select an Assigned Department.

See: Defining Departments and Resources, page 3-24.

11. Optionally update the Type.

Based on the selected priority and type, the Request by start date and Request by completion dates can be changed if a setup exists for the Request by Dates Setup.

After the Type has been selected, the following message appears, highlighting the revised dates:

Please verify the Request by dates, as they might change if Priority/Type is changed based on setup.

See: Work Request Types, page 3-56.

12. Optionally select a Requested For value.

13. Enter an Additional Description for the work request.

You can enter a maximum of 2,000 characters in this field.

14. Save your work.

You must first save the work request before you can add attachments in the Request Attachment region.

15. Optionally enter your phone number.

16. Optionally select a Contact Preference; values are E-mail or Phone Number.

17. Optionally enter your e-mail address.

18. Optionally select a Context Value.

19. Click the Apply button.

20. Click the OK button.

21. Save your work.

The status of the work request changes to Awaiting Work Order if the individual on the approval route has approved it. If the Auto-Approve Work Request functionality is enabled for the current organization, the status is automatically Awaiting Work Order.

Adding Attachments to Work Requests:

You can add attachments such as breakdown photos, work instructions, and so on when you create work requests.

Important: You must first save the work request before you can add attachments.

In addition, you can add attachments when you update a work request.

To add attachments when you create work requests:

1. After you have saved the work request, click the Return to Work Requests link.
2. Click or hover over the Add button in the Request Attachments region of the work request.

If you want to view the attachments, hover or click the View button.

The Add Attachment page appears.

You can attach file, URL, and text attachments.

The screenshot shows a web-based dialog box titled "Add Attachment". At the top left of the dialog is a button labeled "Add". Below this, the "Attachment Type" is set to "Text". The "Title" field contains the text "File". The "Category" dropdown menu is open, showing a list with "File", "Url", and "Text" (the last one is highlighted). Below the category list is a large text area for the description. At the bottom of the dialog are three buttons: "Save", "Add Another", and "Cancel".

3. In the Add drop-down list, select one of these values:
 - Desktop File/Text/URL
 - From Document Catalog
4. Enter a title for the attachment.
5. Enter a description of the attachment.

6. Select a category.

You can add attachments with a type of Miscellaneous or Work Request Attachments.

7. In the Define Attachment group box, select the Type of attachment that you want to add.

- If you are adding a File, browse to select the file.
- If you are adding a URL, type in the URL address.
- If you are adding plain Text, type the text in the field.

8. When you are finished, select one of these buttons:

- Cancel - if you do not want to add the attachment to the work request.
- Add Another - this action saves the current attachment to the work request and enables you to add another attachment.
- Apply - this action adds the attachment to the work request.

You will receive a confirmation that the attachments have been added successfully.

To update a work request:

1. Navigate to the Work Requests tab.

2. Populate at least one of the following fields:

1. Request Number
2. Asset Type: If you select Capital, work requests that are created for asset numbers appear. If you select Rebuildable Inventory, work requests that are created for rebuild able items appear.
3. Assigned Department
4. Status: See Work Request Statuses, page 17-3.
5. Asset Number: Enter a value for related work requests and work orders.

3. Click the Go button.

4. Click the Update icon next to the work request that you want to update.

The Source Work Order-Quality: This field appears if there is a Quality source work

order from which the work request is created during the collection plan result entry.

5. Optionally update the Request By Start Date.
6. Optionally update the Request By Completion Date.
7. Optionally update the Priority and Type.

After updating the priority and type, the following message appears, highlighting the revised dates:

Please verify the Request by dates, as they might change if Priority/Type is changed based on setup.

8. Optionally update fields in the Additional Details region. For example, you can add up to 2,000 characters in the Additional Description field.

Optionally enter an Additional Description.

You can enter a maximum of 2,000 characters in this field.

9. Optionally add an attachment to the work request by clicking the Add button in the Request Attachments region.

If there are existing attachments associated with the work request, the Attachments icon appears. Click the Attachments icon to view the list of existing work request attachments.

See Adding Attachments to Work Requests, page 17-12.

10. Optionally update the values in the Creation Information region.
11. Click the Apply button.
12. Click the OK button.

To view a list of work request attachments:

1. Navigate to the Work Requests tab.
2. Enter the search criteria for your work request to view the list of attachments.
3. Click the Go button.
4. Click the View icon in the Attachments column for the work request.

The Attachments page appears and displays the list of all attachments for the work request.

5. Optionally click the Add Attachment button to add more attachments.

6. If the View link is enabled, you can click this link to view the list of existing attachments associated with the work request.
7. Click the attachment link to view the attachment.
You can also save the attachment to a location on your computer.

To delete a work request attachment:

1. Navigate to the Work Requests tab.
2. Enter the search criteria for your work request to view the list of attachments.
3. Click the Go button.
4. Click the View link in the Request Attachments group box.
The Attachments page appears and displays the list of all attachments for the work request.
5. Click the Delete icon for the attachment that you want to delete from the work request.
6. Click Yes if you want to delete the attachment.

Using the Self-Service Assets Tab

This chapter covers the following topics:

- Using the Assets Tab
- Searching for Assets

Using the Assets Tab

Use the Assets tab to search and view capital and rebuild able inventory assets from an asset hierarchy. You can perform the following from either tab:

- Asset simple search
- Asset advanced search
- Text Search
- Save Search
- View Work Requests
- View drop-down list actions
 - Create Work Request: Select and click Go to access the Create Work Request page.
 - Hierarchy: Select and click Go to view the asset hierarchy.
 - Create My Work Order: Select and click Go to access the Create Work Order page.

Searching for Assets

To search for assets from the Self-Service responsibility:

1. Navigate to the Self-Service Work Requests responsibility.
2. Click the Work Requests link, and the Maintenance Home page appears.
3. Click the Assets tab, and the Asset Numbers page appears.
4. Enter an asset number, or perform an Advanced Search.
5. Click the Go button.

Maintenance Home **Assets** Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Capital Rebuildable Inventory Mass Meter Readings Mass Geocode Entry Asset Setups GIS Assets Map Workbench

Asset Numbers Create Asset Text Search Save Search

Simple Search

Note that the search is case insensitive Advanced Search

Asset Number

Category

Asset Route

Asset Status

Go Clear

Export Attribute WebADI Asset Number WebADI ***

Asset Number	Description	Asset Group	Category	Area	Owning Department	Criticality	Update Asset	Check In Out
(No items found)								

6. Select the specific asset number row, and click the **View Work Requests** button to view associated work requests.
7. Select the specific asset row, and click a value from the View drop-down actions list:
 - Create Work Request: Select and click Go to access the Create Work Request page.
 - Hierarchy: Select and click Go to access the asset Hierarchy page to view the asset hierarchy details.
 - Create My Work Order: Select and click Go to access the Create Work Order page.
8. Select the specific asset row, and click the **Export** button to export the asset details and save as a .csv file.
9. You can also perform a Check In or Check Out for an asset.

Part 5

Maintenance User

The Maintenance User is a maintenance person who is generally responsible for completing tasks that are assigned on a work order. This person reports maintenance problems using work requests, troubleshoots on jobs, and works on a team with other maintenance workers.

This part contains the following chapters:

- Maintenance User Workbench, page 19-1
- Wireless Maintenance User Workbench, page 20-1

Maintenance User Workbench

This chapter covers the following topics:

- Overview of the Maintenance User Workbench
- Viewing and Managing Your Work

Overview of the Maintenance User Workbench

You can quickly access your daily work information such as work orders and execution processes. After selecting the Maintenance User Workbench role, you are automatically logged into your own personalized user interface. The Maintenance User Workbench provides the information needed for you to evaluate the list of work that you need to complete, and to determine how to organize your workday.

A Key Performance Indicator (KPI) dashboard displays a summary of your work today, overdue work, and open work.

This section's tasks include:

- Viewing and Managing Your Work, page 19-1

Viewing and Managing Your Work

You can view your current workload, including all operations and work orders. You can view your Open, Past Due, and yesterday's work, as well as your work orders lined up for tomorrow. You can also view all the unassigned work orders for your department and resources. You can view attachments, work order details, asset details including asset criticality, material requirements, and other persons (employees, contingent workers and so on) assigned to your operations.

Important: You must personalize the Work Requests results table of Work Order Tab Requests search page to include the Asset Criticality value in the drop-down list. Revise the

EAM_REQ_ADVSEARCH_PAGE.xml, Package: EamAssetCriticality.
See the Oracle Application Framework Personalization Guide for more information.

You can enter completion comments, quality results and meter readings. You can also complete operations and work orders, charge resources, add notes, and assign yourself to work orders that are not yet assigned to other personnel.

To view your work:

1. Navigate to the My Work Queue page (Maintenance User Workbench).
2. Select an organization.
3. Click Go.
4. Select a value in the View By field:
 - *Open Work*: View all open work orders that are assigned to you.
 - *Overdue Work*: View all work orders that are overdue, based on their scheduling rules.
 - *Today's Work*: View all work orders that are assigned to you for today.
 - *Tomorrow's Work*: View all work orders that are assigned to you for tomorrow.
 - *Yesterday's Work*: View all work orders that were assigned to you yesterday.
 - *Work Pending Completion*: View all work orders that you have worked on and that are pending completion.
5. Click Go.

All work orders appear, according to what is populated in the View field.
6. The Key Indicators region displays current workload personal performance indicators, such as Today's Work, Overdue Work, and Open Work.

Optionally, select a link to display the respective work orders.

My Work Queue (1 of 1)

[Maintenance Home](#)

Work Queue











Organization **EM1**

Date and Time 29-MAR-2017 20:39:57

Search

Department
Asset Number
View By **Open Work**

Resource
Asset Group

Create Work Order		Create Work Request		Mass Time Entry		Crew Schedule		   			
Details	Work Order ▲	Op ▲	Op Description ▲	Start Date ▲	Due Date ▲	Priority ▲	Asset Number ▲	Op Attachments	Charge Time	Complete Operation	Assign Person
	322908	10	OP1	13-Mar-2013 08:26:50	13-Mar-2013 10:26:50		NN01				
											

Key Indicators

Today's Work [0 \(0.0 Hr\)](#)

Overdue Work [1 \(2.0 Hr\)](#)

Open Work [1 \(2.0 Hr\)](#)

Checked Out Assets [0](#)

7. The Shortcuts region enables you to quickly create a work request or work order.

Optionally, select Create Work Request or Create Work Order, respectively. See: eAM Work Orders, page 21-45 and Creating and Updating Work Requests, page 17-8.

8. Optionally select a work order row and then click the Complete Work Order button.

The Complete Work Order page appears where Completion Details can be entered in the text field provided.

Complete Work Order: 582720 Cancel Apply

Work Order 582720 Asset Type Capital Asset Group Office Equipment Status Released	Description Standard Preventive Maintenance for Copiers Asset Number HQ-B100-2-EQ10008 Department HQ-Ops
--	--

Enter completion data and meter readings, click 'Apply' to complete the work order.

Completion Details

* Indicates required data

Transaction Type Complete Job

* Completion Status Complete ▼

* Actual Start Date and Time 2007-02-02 08:00:00 📅
(example 2018-03-20 18:32:15)

* Actual Duration (hours) 7.25

Actual End Date and Time 2007-02-02 15:15:00 📅

Shutdown Start Date and Time 📅

Shutdown Duration (hours) 0

Shutdown End Date and Time 📅

Reconciliation Code 🔍

Completion Comments All work completed.

Completion Subinventory 🔍

Completion Locator 🔍

Completion Lot 🔍

9. In the My Work Queue region, you can optionally select show or hide work order details, by selecting Show or Hide, respectively.

You can view a summary of operation details such as target start and completion dates, material requirements and material request statuses.

Work Details

Create Work Order Create Work Request **Mass Time Entry** Crew Schedule ⚙️ 📄 🔄

Details	Work Order ▲	Op ▲	Op Description ▲	Start Date ▲	Due Date ▲	Priority ▲	Asset Number ▲	Op Attachments	Charge Time	Complete Operation	Assign Person
▲	322908	10	OP1	13-Mar-2013 08:26:50	13-Mar-2013 10:26:50		NN01				

Work Details

Asset Group NN	Asset Type Capital	
Asset Activity A2	Work Order Status Released	
Duration(hrs) 2	Assigned Department Operations	
Long Description	Resource R1	
Person Name Moll, Mr. Joe		

Material	Description	UOM	Required Qty	Open Qty
Shop Rags	Shop Rags for Clean up	Ea	1	0
NS01	NS01	Ea	1	0

< >

10. Optionally select a work order number to view its details.

The Operations sub-tab defaults as selected.

Operations | Materials | Quality Plans | Requests | Work Relationships | Approval History | Preventive Maintenance | Failure Information | Safety

Summary | **Details**

Select Row: [Dropdown] Go | Add | [Refresh]

Show All Details | Hide All Details

Details	Operation Description	Department	Resource	Required	Assigned Person or Units Equipment	Start Time	End Time	Duration (hours)	Flexfields	Attachments	Update
<input checked="" type="radio"/>	10 OP1	Operations	R1	2	1 Moll, Mr. Joe	13-Mar-2013 08:28:50	13-Mar-2013 10:28:50	2			

Operation

Scheduled Start Date	13-Mar-2013 08:28:50	Scheduled End Date	13-Mar-2013 10:28:50	Reconciliation Code	Completed No
Actual Start Date		Actual End Date			
Shutdown Type	Required	Long Description			
Completion Required	No	Standard Operation	OP1		

Resource

Start Date	13-Mar-2013 08:28:50	End Date	13-Mar-2013 10:28:50	Charged Units	2
------------	----------------------	----------	----------------------	---------------	---

View Dependency

Expand All | Collapse All

March

322908

10

Return To Maintenance Home

Complete Work Order | Update Work Order | Check Material Shortage | Estimate | View Costs

- This sub-tab enables you to view operations on the current work order.

The Completion Required field indicates if the operation must be completed before the work order is completed.

You can also view the operation dependencies in the View Dependency region. Operations are scheduled to run in parallel, sequence, or through dependent steps.

- It is important in asset management to capture both estimated and actual time spent on each operation of a work order. When resources are identified on a work order, there is a time estimate of how long it takes to perform the work. In many cases, the extent of the work load is unknown until the work starts. Resource charging enables you to post actual usage time for persons (including employees and contingent workers), equipment, and miscellaneous materials for specific operations on a work order.

To charge resources, select an Operation and then select Charge Time from the Select Operation list of values.

- Choose Go.
- Select a Resource Sequence.

The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) default, based on the selected resource sequence and the resources associated with the work order. For information on Resource Sequence, Resource, and Unit of Measure, See: Defining Resource

Requirements, page 4-47

- Optionally select the Work Performed Date to indicate the actual date the work was performed.
- Optionally select the Person that performed the work.
- Optionally select the Equipment used to perform the work.
- Optionally select the Charge Department to identify which department is charged for the person (including employees and contingent workers) and equipment usage.

You can display the list of values if the Person name or Equipment serial number fields are populated. The list of values displays all departments that the person or equipment is assigned to (See: Defining Department Resources, page 3-24). If you enter a Charge Department manually, the system validates that the department matches the assigned department for the current operation. If it does not, you will receive an error.

- Optionally select a Reason code to indicate the reason the resource is used.
- Optionally enter a Reference.
- Click the **Apply** button to save your work and return to the Work Order page.

11. Optionally choose Check Material Shortage.

The Material Shortage field updates to display whether there is a shortage of the material (at that moment in time) that is needed to complete work orders operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the associated BOM for the work order is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within associated BOM for the work order are received into Inventory. This process is normally set to automatically execute periodically, but you can execute it from the menu at any time.

12. Optionally select the Materials sub-tab to view or add items from the item list for the associated asset number.

When you enter a work order for an asset number, the associated activity attaches the required material (See: Setting Up Maintenance Bills of Material, page 3-134) and resources to complete its operations. The Inventory and Direct Item

requirements display. You can update, add, view, and delete material requirements for a specific operation.

1. You can optionally Request New Inventory Items.

- Select an Item.
- Enter a Required Quantity.
- Select a Date Required.

The system date and time defaults.

- Optionally select a Supply type.
- Optionally select an Auto Select Material value.

If you select Yes, Requisitions/Purchase Orders are created automatically, for the current Inventory Item, when the work order is Released.

- Optionally enter a Description.
- Optionally enter a Comment.
- Select whether to include this Inventory Item in the MRP Net.
- You can optionally enter values for the following fields:
 - Supplier
 - Supplier Site
 - Contact Name
 - Contact Phone
- Choose Apply to add the Inventory Item to the material requirements for the operation.

2. Optionally choose One Step Material Issue. A one-step material issue is a substitute for the Material Issue Request and Material Issue Verification activities; a separate request is not created.

- Optionally select the specific Operation to view results on existing One Step Material Issues that were issued to that operation. Operations existing within the selected work order are available.
- Optionally select a specific Material if your query is to view existing One Step Material Issues.

- Click the Go button.
All planned material appears in the Select Material(s) region. Planned material is material that exists in the material requirements for the work order. See: Defining Inventory Material Requirements, page 4-38.
- Within the Select Material(s) region, optionally select unplanned Material (material not part of the material requirements for the work order) to issue to the current work order.
- Select an Operation to issue the material. The UOM defaults to the UOM for the material.
- Select the Quantity of the material that you are issuing to the work order.
- Optionally select a Subinventory to pull the material from in Inventory.
- If you previously selected a Subinventory requiring a Locator, select a Locator.
- If the current material is lot controlled, select a Lot.
- If the current material is serial controlled, select From and To Serial numbers.
- Optionally select a Revision.
- If the material is Rebuildable Inventory, optionally choose the Replaced Rebuild Details icon to specify the replacement Rebuildable Item information for the current Rebuildable Item. After selected, you can indicate the following within the Replaced Rebuild Details page:

Rebuild Item - defaults as the current Rebuild Item; you can update it.
Rebuild Serial Number - optionally enter if you know what serial number is coming out (for serialized rebuilds).
Rebuild Activity - the activity you want to associate with the created rebuild work order
Rebuild Work Order - the name of the work order created for the replaced Rebuildable Item. If you specify a replaced rebuild able item, a work order generates for the replaced rebuild able item because it is most likely problematic and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the assets hierarchy and the configuration history updates. If nothing is specified within the Replaced Rebuild Details page, the replaced rebuild defaults as the same rebuild item that you are issuing. A work order is created for the replaced rebuild item.
- Optionally, select the Details Show/Hide toggle icon.
Optionally select a Reason for the current issue. Select the Date required for

the material to the work order. Today's date and time defaults. Optionally enter a Reference.

- Select the Select check box next to the lines you are issuing to the current work order.
 - Choose Issue.
3. You can optionally choose Request New Direct Items to add direct items to the operation material requirements. Direct items represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are considered "one off", bought directly from a vendor for a specific work order and operation. These items are delivered directly to the Shop Floor for maintenance work order execution. See: Defining Direct Item Material Requirements, page 4-43.
- Select a Direct Item Type.
Description Based Item: This direct item type is not stored in Oracle Inventory.
Non Stock Item: This direct item type is stored in Oracle Inventory. The Stockable check box for the master item is cleared.
 - If you selected a Non Stock Item Type, select an Item. This field is disabled if a Description Based Item Type was previously selected.
 - Enter a Description, if you previously selected a Description Based Item Type.
 - Enter a UOM. If you previously selected a Non Stock Item Type, this value defaults from the Master Item.
 - Enter a Need By Date. The system date defaults.
 - Optionally enter a Purchasing Category. See: Setting Up Purchase Order Category Associations for Direct Items, page 3-230.
 - Choose Apply.
4. Optionally select the Update icon to update the current material requirement information.
5. Optionally select the Request More icon to request more of the current material requirement to the operation.
6. Optionally choose Delete to delete the current material requirement.
7. To access iProcurement, choose Search Catalog.

13. Optionally select the Resources sub-tab to view or update the personnel and equipment resource requirement for the current work order. When you enter a work order for an asset number, the associated activity for the work order attaches the required material (See: Setting Up Maintenance Bills of Material, page 3-134) and resources to complete its operations.

For person resources, you can optionally choose Charge Time to charge time to the current resource.

Select a Resource Sequence.

The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) default, based on the selected resource sequence and the resources associated with the work order. For information on Resource Sequence, Resource, and Unit of Measure, See: Defining Resource Requirements, page 4-47.

1. Select a Resource to charge.
2. Select a Unit of Measure. The value defaults as the UOM for the current resource.
3. Enter a Quantity.
4. Optionally select the Work Performed Date to indicate the actual date the work was performed.
5. Optionally select the Person that performed the work.
6. Optionally select the Equipment used to perform the work.
7. Optionally select the Charge Department to identify which department is charged for the person (such as employees and contingent workers) or equipment usage.

You can display the list of values if the Person name or Equipment serial number fields are populated. The list of values displays all departments that the person or equipment is assigned to. If you enter a Charge Department manually, the system validates that the department matches the assigned department for the current operation. If it does not, you will receive an error.

8. Optionally select a Reason code to indicate the reason the resource is used.
9. Optionally enter a Reference.
10. Choose Apply.
11. For Person Resources, you can optionally choose the View Assigned Persons icon to view the specific employee numbers associated with the current resource.

12. Optionally choose the Delete icon to delete the current resource requirement.
14. Optionally choose the Quality Plans sub-tab to view the current work order and operation-quality collection plans. Collection plans appear that are associated with the asset number for the current work order. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 3-201.
 1. Optionally select the Enter Quality Results icon. Required Data fields depend on the collection element specifications for the collection plan. See: Quality Integration Setup, page 3-201.
 - Optionally choose Add to attach any necessary files, URLs, or text to the current Quality results. Each results entry can have an unlimited number of attachments. Choose Apply.
 - Choose Apply to save the results entry.
 2. Optionally select the View Quality Results icon to view or update existing Quality results already entered. Select Return to Work Order Details.
15. Optionally select the Requests sub-tab to view any service or work requests associated with the current work order.
16. Optionally select the Purchasing sub-tab to Direct Items or Outside Services for the current work order.
 1. Optionally select a specific Requisition Number to view its details.
 2. Optionally view details for a specific line.

Choose OK to return to the Requisition page.
 3. Choose OK.
17. Optionally select the Work Relationships sub-tab to view the schedules and details for the work order. Work order relationships enable you to manage a network of related work orders, enabling you to manage complex projects, such as planned or facility shutdowns. The different relationships provide separate scheduling rules that are used to manage large projects. A Gantt chart enables you to manage work by displaying work order schedules and a summary of work order details. See: Work Order Relationships, page 4-52.
18. Optionally select the Approval History sub-tab to view the work order approval history.

A work order might require approvals or notifications at different stages of its life

cycle. For example, organizations typically want an approval process in place before a work order is released. Work flow automates this process. You can initiate Work flow to generate notifications, approvals, transactions, and update a work order status. You can enable Work flow for Work Orders within the eAM Parameters (See: Defining eAM Parameters, page 3-13). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Work flow to indicate what events trigger Work flow. Seeded events that you can enable to trigger Work flow are: Work Order creation, Work Order release approval, Work Order completion, Work Order status change, and Operation completion. See: Setting Up Oracle Work flow, *Oracle Workflow User's Guide* and Setting Up the Business Event System, *Oracle Workflow User's Guide*.

19. Optionally select the Op Attachments View icon to view the attachments for the current operation. This icon appears if there are existing attachments.
 1. Optionally view an attachment by selecting the File Name. If the attachment has a Text Type, the View Attachment page appears. Otherwise, the specific file type opens.
 - Optionally update an attachment by selecting the Update icon.
 - After making changes, choose Apply to save them, or Cancel to return to the Attachments page.
 2. Optionally delete an attachment by selecting the Delete icon.
 3. Optionally choose Add Attachments to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.
 4. Choose Apply.
 5. Select Return to My Work Queue.
20. Optionally select the Op Attachments Add icon to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.
21. Optionally select the Charge Time icon to charge resource time to the current Operation. See: Transacting Resources, page 21-81.
22. Optionally select the Complete Operation icon to complete the current Operation. See Operation Completion, page 4-59.
 1. The Actual Start Date and Time defaults; you can optionally update it.
 2. Actual Duration identifies the total elapsed time of the work order. It is

automatically calculated as the difference between the Scheduled Start and End Dates for the operation.

3. Optionally select a Reconciliation Code to describe why you are completing this operation. For example, Operation Completed or Operation Partially Completed.
4. Optionally select a Reconciliation Code to describe why you are completing or uncompleting this operation.
5. Optionally enter a Reference.
6. Optionally choose Add to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.
7. Optionally select a Context Value.
8. Enter a segment1 flexfield value.
9. The Quality Plans region displays collection plans that are associated with the asset number for the current work order. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 3-201. If results entry is required for the collection plan, you are prompted to enter Quality results upon completing the operation.
10. Optionally select the Enter Quality Results icon. Required Data fields depend on the collection element specifications for the collection plan. See: Quality Integration Setup, page 3-201.
11. Optionally select the **Add** button to attach any necessary files, URLs, or text to the current Quality results.

Each results entry can have an unlimited number of attachments. Select the **Apply** button.
12. Select the **Apply** button to save the results entry or Cancel to return to the Complete Operation page.
13. Optionally select the View Quality Results icon to view or update existing Quality results already entered.
 - Optionally select the Update icon to update the current quality results.
14. Select the Return to Complete Operation link.

15. Select the **Apply** button to complete the operation or **Cancel** to return to the Work Order page.
23. If you belong to the resource department on the work order, you can assign the current Operation to you by selecting the Self Assign icon. This is useful if your maintenance organization schedules operations at the employee resource level and not the employee level.

Related Topics

Defining Inventory Material Requirements, page 4-38

Defining Direct Item Material Requirements, page 4-43

Wireless Maintenance User Workbench

This chapter covers the following topics:

- Using the Wireless Maintenance User Workbench

Using the Wireless Maintenance User Workbench

Users can log on to a mobile device and view all assigned work. You can view today's work orders, overdue work, and future work orders assigned to you.

To use the wireless maintenance user workbench:

1. Log on to your mobile device.

This page defaults to display your scheduled work today.

If you are using a Windows device or pocket PC emulator and are not able to login to the responsibility, this may be due to unsupported components by the underlying framework.

To login to the responsibility, use the following:

```
http://<EBSHost>:<Port>/OA_HTML/AuthenticateUser?  
username=<username>&password=<password>
```

Example: `http://test1234.xyz.com:4443/OA_HTML/AuthenticateUser?username=xxx&password=xxxxxx`

2. Optionally search for work that is specific to an asset.

User-defined work order statuses for your organization are available for selection.

1. Optionally select a specific Asset Number from the *Search Asset* list of values.
 2. Choose Go.
3. Optionally view work assigned to you, within different views.

1. Select one of the following:
 - Today's Work - work assigned to you that is due to start today
 - Yesterday's Work - work assigned to you that is due to start yesterday
 - Tomorrow's Work - work assigned to you that is due to start tomorrow
 - Overdue Work - work assigned to you that is due in the past
 - Open Work - all work that is assigned to you
 - My Department Work - all unassigned work that is assigned to your department. From this view, you can assign work to yourself
 - Work Pending Completion - work orders that have completed operations but not completed work
 - Completed Work - all of your completed work
2. Choose Show.
4. You can perform actions on the displayed Work Order/Operation combinations.
 1. Select a Work Order/Operation's radio button.
 2. Select one of the following actions from the *Select and...* list of values.
 - Complete Operation - complete the selected operation/work order combination

You can fill in the actual operation dates, reconciliation codes, and add attachments. When you completing an operation, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Operation screen, you can optionally select the Full List link to view all associated collection plans.

After completing the operation, you can optionally select to complete the work order, if all operations on the work order are complete. You can fill in the actual work order start and end dates, shutdown information, reconciliation code, and add attachments. When you completing a work order, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Work Order screen, you can optionally select the Full List link to view all associated collection plans.
 - Charge Time - charge time against the selected operation/work order

combination

- Enter Quality Results - enter collection plan results for the selected operation/work order combination
- Create Followup Work - create a follow-up work order for the selected operation/work order combination
- Issue Materials - issue material for the selected operation/work order combination
- Create Work Order
- Create Work Request

3. Choose Go.

5. Optionally view details of an operation listed, by selecting an operation's link.

You can scroll down to view the required materials for the operation. Within the Operation Details, you can view the assigned employees and equipment for the current operation.

To perform an action from the Operation Details screen

1. From the Operation Details, screen you can return to your work queue, complete an operation, view collection plans, and hand work over to another department. Select an action from the list of values:

- Return to Work Queue - return to your list of work
- Complete Operation - complete the current operation

View details such as if the completion of the operation is required prior to completing the work order.

- View Quality Plans - view the collection plans for the current operation and work order combination
- Handover - hand work over to another department, if you are unable to finish it.

You can optionally hand work over to a specific employee in another department.

2. Choose OK.

You can express issue any selected material or request new material, including Inventory, Non-stock Direct, or Description Direct Items.

1. Select one of the following options:
 - Express Issue Material
 - Inventory Item
 - Direct Nonstock Item
 - Direct Description Item
2. You can select values for these supplier fields:
 - Site
 - Contact
 - Phone
3. Choose Go.
6. From the Home Page work list, you can optionally view the details of a specific work order by selecting a work order link.
7. From the Home Page work list, you can optionally complete a work order.
 1. Select Complete Operation.



2. Choose Go.

You can fill in the actual operation dates, reconciliation codes, and add attachments. When you completing an operation, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Operation screen, you can optionally select the Full List hypertext link to view all associated collection plans.

8. From the Home Page work list, after completing all operations on the work order, you can optionally complete a work order by selecting Complete Work Order.

You can fill in the actual work order start and end dates, shutdown information, reconciliation code, and add attachments. When you completing a work order, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Work Order screen, you can optionally select the Full List hypertext link to view all associated collection plans.

9. Optionally complete multiple work orders at once by selecting Express Complete.

You can update details on the work order or operation, before performing the express completion. You can also scroll down to enter any mandatory collection plan results that were not entered during work execution.



10. From the Home Page work list, you can optionally select Charge Time to enter the amount of time spent on an operation.



11. From the Home Page work list, you can optionally select View Checked Out Assets to view the assets that you have checked out.



If a particular asset is not checked out, you can check out the asset. You can check in an existing asset that you previously checked out. You can record quality plans and meter readings as part of the check in/check out process. If you select Yes from the Create Work Request drop-down list, the check in/check out transaction saves, and you are prompted to report a new problem.

Related Topics

For information on setting up Check In and Check Out collection plan transactions, see: Creating eAM Quality Collection Plans, page 3-206.

Asset Operational Logging, page 21-27

Part 6

Maintenance Super User

The Maintenance Super User is generally a maintenance planner or supervisor and is often defined as a "super user". A Maintenance Planner plans and schedules maintenance jobs, manages and balances workloads over time, manages preventive maintenance strategy and scheduling, manages material requirements, monitors availability, and coordinates strategies with other departments, such as Operations, Purchasing, and Inventory. A supervisor manages a crew of maintenance workers, assigns jobs based on workers' abilities and availability, inspects and verifies work, communicates with other departments, knows the current status of all jobs and assets, and is responsible for environmental health and safety.

This person has extensive knowledge of the Enterprise Asset Management system and is responsible for creating and scheduling work orders, including Preventive Maintenance work orders. This person updates work orders, orders parts, and completes operations and work orders.

This part contains the following chapters:

- Maintenance Super User, page 21-1
- GIS Assets, page 22-1
- GIS Assets Map Integration, page 23-1
- Google Maps Integration, page 24-1
- ESRI Integration, page 25-1
- GIS: Custom Mapviewer, page 26-1
- Stores, page 27-1
- Failure Analysis, page 28-1
- Construction Units, page 29-1
- Safety Management, page 30-2
- Reports and Processes, page 31-1

Maintenance Super User

This chapter covers the following topics:

- Introduction
- Maintenance Home
- Assets
- Creating Capital or Rebuildable Assets
- Updating Asset Numbers Using MSU
- Creating and Updating Asset Numbers Using the Asset Number WebADI Feature
- Creating and Updating Asset Attributes Using the Attribute WebADI Feature
- Obtaining Asset Number Information
- Managing Asset Routes
- Managing Asset Routes at a Work Order Level
- Viewing Asset Number Information
- Entering Mass Meter Readings
- Using the Asset Move Workbench
- Work Requests
- Work Orders
- Stores
- Budget Forecasts
- Failure Analysis
- Safety Management
- Using Asset Performance Metrics

Introduction

This chapter discusses the eAM Maintenance Super User responsibility and its web based user-interface.

Maintenance Super User is an internet based user-interface for maintenance personnel. This responsibility offers you an easier approach to enter and search for information from any browser. Its step-by-step process requires minimal training and is intuitive enough for you to find and update information.

Maintenance Super User is designed for the casual maintenance user (for example, trades people such as fitters, mechanics, and electricians) in a plant or facility. Responsibilities can be assigned by employee or by role: this determines the information you can view and update.

Maintenance Home

The Maintenance Super User Maintenance Home tab enables you to change organizations, as well as view and transact purchase order and work request notifications.

Note: If Oracle Endeca is installed and licensed in your environment, then refer to the *Oracle E-Business Suite Information Discovery Integration and System Administration Guide* for detailed information about the Endeca enhancements to your product.

You can indicate whether work requests are automatically approved upon creation. Within the eAM Parameters, if the Auto Approve check box is selected, work requests are created in an Awaiting Work Order (approved) status (See: Defining eAM Parameters, page 3-13). Otherwise, if the check box is not selected, work requests are created in an Open status. If an organization has selected Work Request Approval through Oracle Work flow Management, the system will notify all users that belong to that approval group to take action on the work request created (See: Defining Department Approvers, page 3-28). After an individual has taken action, the notification is removed from other approvers' notification lists belonging to that same approval group.

From the Maintenance Home page in the Maintenance Super User responsibility, an approver can select a work request approval notification, and then click the Work Request Details link on the notification page to access the View Work Request page to view all the details.

A list of any items that have been checked out for your organization also displays.

You can see any notifications routed for your responsibility such as work order employee assignments, PO approvals, and so on.

(See: Defining Department Approvers, page 3-28).

To select an organization to view notifications:

1. Navigate to the **Maintenance Home** page (Maintenance Super User: Maintenance Home tab).

Note: First choose an eAM organization before you can select additional tabs. See: Organization Setup, page 3-6.

Maintenance Home
Assets
Work Requests
Work Orders
Stores
Budget Forecasts
Failure Analysis
Construction Units
Safety Management
Reports

Welcome Stock, Ms. Pat
Organization: EM1
Go

My Work Requests

My Checked Out Assets

Create Work Request
View All Work Requests

Check Out Asset

Work Request Number	Asset Number	Asset Description	Request Description	Status	Department
26224	FL1020	Fork Lift 1020	TEST	Awaiting Work Order	W-Maint
28224	FL1020	Fork Lift 1020	TEST THE MASTER	Awaiting Work Order	W-Maint
29224	FL1020	Fork Lift 1020	TEST IN MASTER ENV	Awaiting Work Order	W-Maint

Asset Number	Asset Description	Date
ST123	test as	28-I
ZMT_AssetNumber	Asset Number Created by UI Automation	21-I
YVJ_AssetNumber	Asset Number Created by UI Automation	23-I
TS1	test 1	10-I

Table Diagnostics

Table Diagnostics

Notifications

Below is a list of your most important notifications. Select the subject to respond or select "Full List" to see all your notifications.
Full List (251)

To	Type	Subject	Sent	Due
Moll, Joe	Work Order Operation Assignment	Work Order Operation DGMWO_A_017 - 10 is assigned to you	02-Jun-2020	
Moll, Joe	Work Order Operation Assignment	Work Order Operation DGMWO_A_017 - 10 is assigned to you	02-Jun-2020	
Moll, Joe	Work Order Operation Assignment	Work Order Operation DGMWO_A_017 - 10 is assigned to you	02-Jun-2020	
Moll, Joe	Work Order Operation Assignment	Work Order Operation DGMWO_A_017 - 10 is assigned to you	02-Jun-2020	
Moll, Joe	Work Order Operation Assignment	Work Order Operation DGMWO_A_017 - 10 is assigned to you	02-Jun-2020	

2. In the Subject column, select the notification to open.
In this example, a work order is being routed for approval.

Maintenance Home >

Information

This notification does not require a response.

Work Order Operation DGMWO_A_017 - 10 is assigned to you [Approve](#) [Reject](#) [Request Information](#) [Reassign](#)

From	Stock, Pat	WorkOrder	DGMWO_A_017
To	Moll, Joe	Operation	10
Sent	02-Jun-2020 09:45:09	Operation Description	Operation One
ID	6835856	Department	W-Maint
		Operation Start Date	02-Jun-2020 09:22:00
		Operation End Date	02-Jun-2020 09:22:00
		Resource Start Date	02-Jun-2020 09:22:00
		Resource End Date	02-Jun-2020 09:22:00

Work Order Operation DGMWO_A_017 - 10 [Work Order Details](#) is assigned to you

Action History

Num	Action Date	Action	From	To	Details
1	02-JUN-2020 09:45:09	Submit	Stock, Pat	Moll, Joe	

[Return to Worklist](#)

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3. Approvers who receive notifications can:

- Click **Approve** to approve the notification without making any changes.
- Click **Reject** to reject the notification.
- Click **Request Information** to enable the initiator to update the work order using the Update Work Order page.

The following reflects the work flow process:

1. The approver clicks the **Request Information** button in the notification.
 2. The system changes the status to Unreleased By Approver.
 3. Initiator receives an FYI notification for the action, and can view the notification details by clicking the notification in the Worklist.
 4. Initiator updates the work order, and releases the revised work order to initiate the approval process.
 5. The approver receives a notification that includes the update details made by the initiator.
 6. The approver requests additional information, if necessary.
 7. The approver reassigns, rejects, or approves the work order.
- Click **Reassign** to reassign the request approval to another approval group.

1. Click **Submit** to assign the notification to the new assigned person.
2. Click **Cancel** to navigate to the notification list.
4. Optionally close the approval request by clicking Return to Worklist.

Assets

The Assets tab enables you to identify asset numbers using capital and Rebuildable Inventory navigators. By obtaining detailed asset number information, you can either view details or launch pages to view current or historical configurations of the asset number. As serialized rebuildables are installed and removed from a particular asset, the genealogy automatically updates.

You can also access the Mass Geocode Entry tab which enables you to enter geocode information for the assets. This information is used to display assets and work on the chosen map viewer.

Click the Asset Setups tab to access the following common setup tasks for discrete and GIS assets:

- Asset Statuses
- Icons
- Line Styles
- Map Visualization Setup
- Map Manager
- Map Actions
- Functional Hierarchy

For more information on the setup tasks for functional location hierarchies for assets, see *Defining Lookups, Oracle Enterprise Asset Management Implementation Guide* and *Defining Location Hierarchies for Assets*, page 3-97.

See GIS Assets, page 22-1 for more information on the setup tasks for GIS assets.

In addition, you can access the GIS Assets tab which enables you to enter and create line and area asset information. GIS assets can be viewed on a map viewer. See GIS Assets and EAM, page 22-1 for more information on viewing GIS assets on a map viewer.

To search for assets, use the Simple or Advanced search:

- Simple Search: Enter criteria for Asset Number, Category, Asset Route (Yes or No) and Asset Status.

- Advanced Search: Select additional search values such as Asset Group, GIS Asset (Yes or No), Segment Code, Segment Description, Owning Department, and so on.

This section's tasks include:

- Creating Capital or Rebuildable Assets, page 21-6
- Updating Asset Numbers Using MSU, page 21-8
- Creating and Updating Asset Numbers Using the Asset Number WebADI, page 21-13
- Creating and Updating Asset Attributes Using the Attribute WebADI, page 21-15
- Obtaining Asset Number Information, page 21-17
- Managing Asset Routes, page 21-19
- Managing Asset Routes at a Work Order Level, page 21-21
- Viewing Asset Number Information, page 21-23
- Entering Mass Meter Readings, page 21-41
- Using the Asset Move Workbench, page 21-43

Creating Capital or Rebuildable Assets

You can create capital or rebuild able assets through the Maintenance Super User Responsibility.

To create assets using the Maintenance Super User responsibility:

1. Navigate to the Create Asset window (Maintenance Super User > Home > Assets >Capital (or Rebuildable Inventory) link.

Click the Create Asset button, and the Create Asset window appears.

2. Enter or select values for the following required fields:
 - Type: Capital or Rebuildable
 - Asset Group
 - Asset Number
 - Serial Number: Default value associated with asset group if it is serial controlled

3. Enter values for the following optional fields:

- Asset Description
- Owning Department
- Criticality
- Parent Asset Type
- Parent Asset Number

Create Asset [X]

[Save and Add Details] [Cancel] [Apply]

Type Capital

* Asset Group [dropdown] [search]

* Asset Number [text input]

* Serial Number [text input]

Asset Description [text input]

Owning Department [dropdown] [search]

Criticality [dropdown] [search]

Organization EM1 [dropdown] [search]

Parent Asset Type Capital [dropdown]

Parent Asset Number [dropdown] [search]

☐ Asset Route

☐ GIS Asset

4. Optionally select the Route check box to create an asset route for the asset.

Note: You cannot create an asset route for a GIS asset. If you select the Route check box, the GIS check box is unavailable.

For more information, see *Defining Asset Routes*, page 3-101.

5. Optionally select the GIS Asset check box to indicate that this is a linear or an area asset.

For more information, see *Defining GIS Asset Numbers*, page 22-2.

6. Click the Save and Add Details button.

Upon saving, a confirmation message displays that the asset has been created. The Update Asset page appears where you can edit asset details.

For information regarding the Update Asset page, see Updating Asset Numbers Using MSU, page 21-8.

Related Topics

Defining Asset Numbers, page 3-85

Defining Rebuildable Serial Numbers, page 3-145

Activity Association Templates, page 3-76

Defining Meter Templates, page 3-156

Defining a Preventive Maintenance Template, page 3-164

Updating Asset Numbers Using MSU

You can update capital and rebuild able asset numbers using the Maintenance Super User responsibility.

1. Navigate to the Update Asset page (Maintenance Super User > Assets < Asset Numbers).
2. Enter or select values for any of these fields on the Details page.
 - **Type**
 - **Asset Group** Updating Asset Groups for Asset Numbers, page 21-12 for more information.
 - **Group Description**
 - **Asset Number** and **Asset Description**
 - **Serial Number**
 - **Category** and **Category Description**
 - **Owning Department**
 - **Criticality**
 - **WIP Accounting Class**
 - **Additional Information** such as Attachments

- **Parent**
- **Location**
 - **Address:** Update the address for the asset as necessary.
 - **Map Type** - Select one of the following options:
 - **Indoor GIS Workbench:** Select this option so that it can be tracked visually using the Indoor Map Workbench.

ESRI Feature Class drop-down list contains the feature classes that are defined as being tracked using the Indoor Map Workbench.

For more information, see Using the Map Manager and Using the Indoor Map Workbench, page 22-40.
 - **Outdoor GIS Workbench:** Select to define the asset with a specific location so that it can be displayed using the GIS Asset Workbench. See Using the GIS Asset Workbench, page 22-24.
- **Functional Hierarchy:** Select values in the fields for Hierarchy Type and Position Code.

For more information regarding functional location hierarchies, see Viewing Asset Number Information, page 21-23.

Update Asset - Details

Update Asset: FL1010

Save Cancel Apply

Details

Details

Activities

Attributes

Meters

Associations

Details

Main

Type

Capital

* Asset Group

Fork Lifts

* Asset Number

FL1010

* Serial Number

FL1010

Category

ForkLift.Electric

Owning Department

W-Maint

Criticality

Normal

WIP Accounting Class

MaintWAC

GIS

Asset Route

Organization

EM1

Group Description

Fork Lift Asset Group

Asset Description

Fork Lift 1010

Area

Warehouse

Category Description

Electric Fork Lifts

Warranty Expiration Date

(example 11-May-2016 16:59:16)

* Status

Latest

Active

Maintainable

Operation Log Enabled

Checked Out

Additional Information

Asset Attachments

Parent

Parent Asset Type: Parent Asset Number:

Parent Asset Group: Parent Asset Description:

Location

Subinventory: Map Type:

Locator: ESRI Feature Class:

Address: ESRI Feature ID:

Location Code: Degrees Minutes Seconds Direction

Latitude:

Longitude:

Functional Hierarchy

Hierarchy Type: Hierarchy Type Description:

Position Code: Position Code Description:

Parent Position Code: Parent Position Code Description:

- Click the Activities link on the left side of the page.

A list of activities with all applicable activity default values for the current asset displays.

You can add activities, priority, effective dates, shutdown type, work order type, and so on.

Activities

Activity	Description	Priority	Effective From	Effective To
<input checked="" type="radio"/> Change Fork Lift Battery	Change the battery in electric fork lifts	Medium	31-Oct-2002 <input type="text"/>	<input type="text"/>
<input type="radio"/> Lubricate Fork Lift Mast	Lubricate Fork Lift Mast		18-Jul-2003 <input type="text"/>	<input type="text"/>

Details

Type	Replacement	Work Order Type	
Cause	Normal Wear	WIP Accounting Class	<input type="text"/>
Source	Routine	Owning Department	W-Maint <input type="text"/>
Shutdown Type	Required	Planner	
	<input type="checkbox"/> Tagging Required		<input type="checkbox"/> Planned
	<input type="checkbox"/> Firm		<input type="checkbox"/> Notification Required

- (Optional) Click the Attributes link to view any associated attribute groups.

Attributes

Attribute Group	Description	Attribute Values	Delete
Fork Lift Classifications	Fork Lift Data		
Warranty Data	Warranty Data		

5. (Optional) Click the Meters link to edit or add meter information such as:

Update Asset: FL1010

SaveCancelApply

Details

Activities

Attributes

Meters

Associations

Safety

Meters

Meter	Description	Primary Required	Used In Scheduling	Counter Instance Association Flexfield	Delete
<input checked="" type="radio"/> FL1010 Hour Meter	Fork Lift 1010 Usage Hour Meter	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="radio"/> LIAMeter-A-01	eAM and IB Integration for Meter Reading	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="radio"/> TAUmeter-A-01	eAM and IB Integration for Meter Reading	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Details

Type	Absolute	Rate Per Day	8
UOM	Hour	Use Past Reading	260
Source Meter		Initial Reading	
Factor		Initial Reading Date	
Value Change	Ascending	Effective From	24-Oct-2002
		Effective To	

6. (Optional) Click the Associations link to edit or add associations.

Details

Activities

Attributes

Meters

Associations

Safety

Associations

Fixed Asset

Category

VEHICLE-OWNED HEA

Number

102014

☐ Synchronized

Production Equipment

Production Organization

Equipment Item

Equipment Serial Number

Property Management

Location Name

Location Code

7. (Optional) Click the Safety link to add or edit safety information for positional or lockout devices.

Update Asset - Safety

Update Asset: FL1010 Save Cancel Apply

Details

Activities

Attributes

Meters

Associations

Safety

Safety

Positional

☐ Positional

Operating Position

Operating Tag

Shutdown Position

Shutdown Tag

Lockout Device

Lockout

☐ Lockout Device

Device

8. Click the Save button.

Updating Asset Groups for Asset Numbers:

You can update the asset group for an asset number after it has been created and saved. This update can be performed using the Define Asset Number form and Update Asset Number HTML page. See *Updating Asset Groups for Asset Numbers*, page 3-99.

You can update an asset group even if the following setups or associations exist for the asset number:

- Asset attributes have been defined.
- Quality results have been entered.
- Activity association has been made.
- Meter association has been made and meter readings have been entered.
- PM schedule has been defined.
- Asset number is part of an asset hierarchy (parent or child)
- Asset number has a relationship with other discrete, linear or area assets.

However, you cannot update the asset group if:

- The asset number is in inventory.

- The asset number has an equipment association.
- The asset number has a Property location association.
- The asset number has a Fixed Asset association.

Note: You cannot update an asset group for an asset route.

1. Navigate to the Update Asset page (Maintenance Super User > Assets > Asset Numbers).
2. Enter an asset number and click Search.
3. Select the new asset group.
4. Click Save.
5. Upon save, the following occurs:
 - If the asset is serial controlled, the original asset serial number does not change.
 - A new item instance is created in Oracle Installed Base.

Creating and Updating Asset Numbers Using the Asset Number WebADI Feature

You can use this feature to create or update multiple asset numbers. Using this feature, you can:

- Download a Microsoft Excel template populated with asset numbers.
- Create or update asset numbers, including parent asset associations, in the Excel spreadsheet.
 - A parent number association can be added for the existing asset in the system, or it can be included in the upload file.
 - An existing parent asset number can be selected from the upload file values.
 - To create a parent asset and also associate to the asset in the upload file, follow this order:
 1. Parent asset
 2. Asset association
- Upload the revised data from the Excel spreadsheet into the application.

You can access this feature by clicking the Asset Number WebADI button on the following pages:

- Assets > Capital Asset: Simple Search
- Assets > Capital Asset: Advanced Search
- Assets > Rebuildable Inventory: Simple Search
- Assets > Rebuildable Inventory: Advanced Search

To create multiple asset numbers using the Asset Number WebADI feature:

1. Navigate to the Asset Numbers page (Maintenance Super User > Home > Assets).
2. Enter the search criteria for the asset.
3. Click the Asset Number WebADI button.
The Select Viewer page appears.
4. Select the specific version of Excel from the Viewer list.
5. Click Next, and the Desktop Integration Manager window appears.
A message appears that a file is ready to be downloaded.
6. Save the file.
7. Open the file in Excel.
Enable the macro for the Excel template.
8. Revise the data and save your work.
9. Optionally, click the Download button to re-download the data if you do not want to upload the saved changes. This process retrieves the data using same criteria entered in the web page.
10. Save your work.
The UpI column will contain an indicator if the row has been updated. The system recognizes this flag and uploads the rows with changes.
11. Click the Upload button.
The Upload Parameters page appears.
12. Optionally select Automatically Submit Import check box to automatically submit the Import Asset Number concurrent program.

If the option is unselected, the system uploads the modified data into the staging table, and the user can submit the request in the Import Asset Number interface at a later time.

13. In the Commit Rows region, select one of the options:

- All Rows: Commit all rows at the same time. If one row fails, the commit process fails.

Each Row: Commits each row independently. If one row fails, the commit process continues.

14. Click the Upload button.

15. A confirmation message appears indicating that the upload was successful. The number of rows uploaded and request ID for the process appear in the message.

16. Click the Close button to return to the spreadsheet.

17. Use the Monitor Requests page to check the status of the request process.

Creating and Updating Asset Attributes Using the Attribute WebADI Feature

You can use this feature to create and update asset attributes associated with multiple asset numbers.

You can access this feature using the Asset Number WebADI button on the following pages:

You can use this feature to create or update attributes for multiple asset numbers. Using this feature, you can:

- Download a Microsoft Excel template populated with asset numbers.
- Create or update asset numbers in the Excel spreadsheet, and upload the data into the application.
- Upload the revised data from the Excel spreadsheet as the original search criteria.

You can access this feature by clicking the Attribute WebADI button on the following pages:

- Assets > Capital Asset: Simple Search
- Assets > Capital Asset: Advanced Search
- Assets > Rebuildable Inventory: Simple Search

- Assets > Rebuildable Inventory: Advanced Search

To create asset attributes for multiple asset numbers using the Attribute WebADI feature:

1. Navigate to the Asset Numbers page (Maintenance Super User > Home > Assets).
2. Enter the search criteria for the asset.
3. Click the Asset Attribute WebADI button.
The Select Viewer page appears.
4. Select the specific version of Excel from the Viewer list.
5. Click Next, and the Desktop Integration Manager window appears.
A message appears that a file is ready to be downloaded.
6. Save the file.
7. Open the file in Excel.
Enable the macro for the Excel template.
8. Revise the data and save your work.
9. Optionally, click the Download button to re-download the data if you do not want to upload the saved changes. This process retrieves the data using same criteria entered in the web page.
10. Save your work.
The Upl column will contain an indicator if the row has been updated. The system recognizes this flag and uploads the rows with changes.
11. Click the Upload button.
The Upload Parameters page appears.
12. Optionally select Automatically Submit Import check box to automatically submit the Import Asset Number concurrent program.
If the option is unselected, the system uploads the modified data into the staging table, and the user can submit the request in the Import Asset Number interface at a later time.
13. In the Commit Rows region, select one of the options:
 - All Rows: Commit all rows at the same time. If one row fails, the commit process fails.

Each Row: Commits each row independently. If one row fails, the commit process continues.

14. Click the Upload button.
15. A confirmation message appears indicating that the upload was successful. The number of rows uploaded and request ID for the process appear in the message.
16. Click the Close button to return to the spreadsheet.
17. Use the Monitor Requests page to check the status of the request process.

Obtaining Asset Number Information

You can query asset numbers that you would like to view associated details, hierarchal information, cost information, associated work and service requests, enter and view meter readings, and Quality information. You can use a Simple or Advanced Search to obtain your desired asset numbers.

For assets that transferred from one organization to another, each organization can view only the work order costs on those assets that were incurred by itself.

To obtain asset number information:

1. Navigate to the Assets tab.
2. Select the Capital or the Rebuildable Inventory sub-tab to view information on capital asset numbers or serialized rebuild able asset numbers.
3. If you have previously saved some search criteria, the Views mode appears.

You might use this mode if you frequently search for asset number information with specific criteria, such as Owning Department or Asset Group, among many. You can personalize a view to narrow your search criteria.

1. The View list of values contains already existing views. You can optionally select an existing view.

You can also select the Create Express Work Order value from the View drop-down to access the Express Work Orders page. For more information regarding express work orders, see Creating Express Work Orders, page 21-57.

2. Optionally choose Go to display the asset number information that applies to the current View's search criteria rules.
3. Optionally choose Personalize to update, delete, or duplicate an existing View. You can also create a new View.

4. Optionally select a View Name and then choose Duplicate to default all of the selected View's values to a new View.
 5. Optionally choose Create View to create a new view.
 - Enter a View Name.
 - Optionally select the Number of Rows Displayed.
 - Optionally select the Set as Default check box to indicate that this view is the default view.
 - Optionally enter the View's Description.
 - Specify whether the search results for the current View must contain all of, or may contain any one of, the following values entered, by selecting the appropriate radio button, respectively.
 - Optionally enter an Asset Number.
 - Optionally select an Asset Group.
 - Optionally select whether the asset numbers have an associated Asset Route.
 - Optionally select an Owning Department.
 - Optionally select additional search criteria from the Add Another list of values.
 - Choose Cancel, Revert, Apply and View Results, or Apply.
 6. The Display List value determines whether the current View exists within the View list of values.
 7. Optionally select the Update icon to update the values for the current View.
 8. Optionally select the Delete icon to delete the current View.
 9. Optionally choose Cancel to exit the Personalize Views page, without selecting a View
 10. Optionally select one or many Views to add to the Views drop down list, and then choose Apply to exit the Personalize Views page.
-
4. By default, you are in the Simple Search mode. You can search for Asset Number, Category, Asset Route (Yes or No), and Asset Status.

5. Optionally enter an asset number.
You can enter a portion of an asset number and append a % (wildcard) to display multiple asset numbers with similar names.
6. If the Capital sub-tab is selected, you can optionally select a Category to narrow your selection criteria.
7. If the Rebuildable Inventory sub-tab is selected, you can optionally select an Asset Group.
8. If the Capital sub-tab is selected, you can optionally select whether to display asset numbers with associated asset routes (tasks). Values are Yes and No. See: Defining Asset Routes, page 3-101.
9. Optionally choose Advanced Search to further narrow your selection criteria, to values such as Asset Group, Asset Route, Area Asset, Linear Asset, Segment Code, Segment Description, Owning Department, Category, Area, Accounting Class, Fixed Asset Number, Criticality, Maintainable, Description, Attributes, Production Organization, Equipment Item, Equipment Serial Number, Property Location Code, Property Location Name, and EAM Asset Status. For information on these values, see: Defining Asset Numbers, page 3-85.
10. Click the Go button.

Managing Asset Routes

You can manage asset routes using the Manage Asset Route page from the Maintenance Super User responsibility. Use the Manage Asset Route page to update the default values set during the asset route definition.

This page enables you to:

- Add sequence numbers to associated assets of the asset route.
- Add setup controls to allow route update at work order and cost distribution percent update at work order.
- Add setup control to allow the capture of Quality results at work order completion for associated assets of the asset route.

Important: You must use the Defining Asset Route form to define an asset route. See Define Asset Routes, page 3-101

1. Navigate to the Manage Asset Route page (Maintenance Super User > Assets > Capital).

2. Enter criteria to search for an asset.
3. Click the Go button.
4. Select the radiobutton for the asset number.
5. Select the Manage Asset Route in the View drop-down list.
6. Click the Go button, and the Manage Asset Route page appears.

Assets: Capital > Asset Details: Fork Lift Daily Maintenance >

Manage Asset Route Cancel Save Apply

Asset Route: Fork Lift Daily Maintenance
 Description: Daily maint for all fork lifts / propane and electric

Asset Group: Fork Lifts
 Asset Group Description: Fork Lift Asset Group

☐ Allow Route Updates At Work Order
☐ Enable Cost % Updates At Work Order

☒ Route Cost Allocated Equally
☐ Enable Route Assets Quality Results

Associated Asset Numbers

Seq Number	Asset Group	Asset Group Description	Asset Number	Asset Description	Cost Distribution %	Active Start Date	Active End Date
	Fork Lifts	Fork Lift Asset Group	FL1010	Fork Lift 1010		16-Oct-2002	
	Fork Lifts	Fork Lift Asset Group	FL1020	Fork Lift 1020		16-Oct-2002	
	Fork Lifts	Fork Lift Asset Group	FL1030	Fork Lift 1030		16-Oct-2002	
	Fork Lifts	Fork Lift Asset Group	FL1040	Fork Lift 1040		16-Oct-2002	
	Fork Lifts	Fork Lift Asset Group	FL2010	Fork Lift 2010		16-Oct-2002	
	Fork Lifts	Fork Lift Asset Group	FL2020	Fork Lift 2020		16-Oct-2002	
	Fork Lifts	Fork Lift Asset Group	FL2030	Fork Lift 2030		16-Oct-2002	

7. Optionally select one of the following check boxes:
 - Allow Route Updates At Work Order:
 - Select this option to modify the asset route at the WO level , by adding assets to the route or by deleting existing assets from the route. These changes apply to the work order route and does not impact the asset route definition.
 - If you do not select this option, then you cannot add or delete associated assets.
 - Enable Cost % Updates At Work Order:
 - Select this option to update and save the cost percentage of associated assets at the work order level, which will take effect only for the only respective WO cost allocation. Routes defined with equal cost allocation also can be updated at the WO.

- If you do not select this option, then the cost percentage update for assets at the work order level is not available. The cost allocation will be based on the percentage values defined at the asset route definition.
 - Enable Route Assets Quality Results:
 - Select this option to capture Quality Results for associated assets during work order transactions such as operation completion and work order completion. You will be able to enter quality results on the Work Order Completion and Operation Completion pages.
 - If you do not select this option, you will be able enter quality results for the *asset route only*. You will not be able to enter quality results for the associated assets.
8. Enter a unique value in the Sequence Number for the existing associated asset.
Click the Add 3 Rows icon to add associated assets to the route. Enter a sequence number for the new asset.
 9. Enter a percentage value in the Cost Distribution % for each of the associated assets.
 10. Click the Allocate Route Cost Equally button to set or reset the cost percentage value to be equal for all assets in asset route.
The Route Cost Allocated Equally check box is selected after you click the Allocate Route Cost Equally button.
 11. Optionally change the Active Start Date and Active End Dates. The default values come from the asset route definition.
 12. Save your work.

Managing Asset Routes at a Work Order Level

You can manage the asset route from the Update Work Order - Route Details page. You can perform the following tasks:

- Enter and update sequence numbers to associated assets of asset route at the work order level.
- Enter and update Cost Distribution % for associated assets, if applicable based on the asset route setup (Manage Asset Route - Enable Cost % Updates at Work Order).
- Create a dynamic work order route by adding and deleting associated assets of the asset route, if applicable based on the asset route setup (Manage Asset Route -

Allow Route Updates at Work Order).

- Capture Quality results at the work order level for associated assets of the asset route (Manage Asset Route - Enable Route Assets Quality Results).
1. Navigate to the Work Order Route Details page (Maintenance Super User > Work Orders > Update Work Order).
 2. Enter search criteria such as:
 - Work Order
 - Asset Group
 - Include Route Work Order
 - Asset Status
 3. Click the Go button.
 4. The Allow Route Updates At Work Order: Indicates if the asset route can be modified at the WO level, by adding new assets to the route or by deleting existing assets from the route. These changes apply to the respective work order route.

This value comes from the Manage Asset Route page.

See Managing Asset Routes, page 21-19 for information regarding these check boxes.
 5. Route Cost Allocated Equally: Indicates if you can set and reset the cost percentage value to be equal for all assets in the asset route, if the Enable Cost % Updates at Work Order option is selected at the asset route definition.

This value comes from the Manage Asset Route page.
 6. Route Details Modified at Work Order: System updated field that indicates if the asset route has been modified at the work order for the associated assets or the cost percentage updates.
 7. Enable Cost % Updates at Work Order: Indicates if the cost percentage of associated assets can be updated and saved at the work order level, which will take effect only for the only respective work order cost allocation. Routes defined with equal cost allocation also can be updated at the work order level. This value comes from the Manage Asset Route page.

If this check box is not selected, then the cost allocation is based on the percentage values set during the asset route definition.
 8. Enable Route Assets Quality Results: Select or clear this check box to capture

Quality Results for associated assets during work order transactions, Operation Completion and Work Order Completion. A new region will be brought up in Work Order, Operation Completion pages that will list the Quality Results relevant for the member assets of the route and will allow their results entry.

Setting this to 'No' will retain existing behavior for asset route work orders. Users will be able enter quality results for the asset route only. There will be no provision to enter results for member assets' Quality Plans.

9. Enter a unique value in the Sequence No (number) for the existing associated asset.
Click the Add 3 Rows icon to add associated assets to the route. Enter a sequence number for the new asset.
10. Select or update the Asset Group, Description, and Asset Number.
11. Enter a percentage value in the Cost Distribution % for each of the associated assets.
12. Save your work.

Viewing Asset Number Information

You can display specific details about an asset number, such as configuration history, costs, asset hierarchy information, associated meter readings, quality information, associated work orders, and associated work requests. You can also view the associated asset group, parent, parent group, location hierarchy, Category, Owning Department, Area, Accounting Class, Criticality, maintainability, the associated equipment serial number, attachments, associated activities, and asset attributes such as asset status.

The asset number, description, criticality and work order priority are copied (in a concatenated format) from the work order to the Justification field on the purchase requisition.

Obtaining Asset Number Information, page 21-17

To display asset number details:

1. Navigate to the Asset Details page (Maintenance Super User > Assets > Asset Numbers).


The Simple Search page appears by default where you can search based on Asset Number, Category, Asset Route (Yes or No), and Asset Status. You can also use the Advanced Search and select criteria such as Hierarchy Type, Linear/Area Asset (Yes or No), Asset Status, Parent Asset Number, Segment Code, Segment Description, and so on.

Note: The Parent Asset Number field displays only the immediate child asset for the parent asset.

2. Select an asset number to view.
3. You can select the specific asset number or you can select Details from the View list of values to view associated asset number information such as functional (location) hierarchy, attached asset routes, attributes, and activities.

You can also select the Create Express Work Order value to access the Express Work Orders page. For more information regarding express work orders, see *Creating Express Work Orders*, page 21-57.

4. Optionally click:
 - Attached Asset Route icon to access the Asset Route Details page to view asset route details such as Asset Route, Description, Asset Group and Asset Group Description.

Asset Route Details				
Asset Number		FL1010		
Description		Fork Lift 1010		
Route Details				
...				
Asset Route	Description	Asset Group	Asset Group Description	Manage Asset Route
Fork Lift Daily Maintenance	Daily maint for all fork lifts / propane and electric	Fork Lifts	Fork Lift Asset Group	

- Manage Asset Route icon to update the asset route. See *Managing Asset Routes*, page 21-19.
5. Click Go, and the Asset Details page appears.

Asset Details

Maintenance Home
Assets
Work Requests
Work Orders
Stores
Budget Forecasts
Failure Analysis
Construction Units
Safety Management
Reports

Capital
Rebuildable Inventory
Mass Meter Readings
Mass Geocode Entry
Asset Setups
GIS Assets
Map Workbench

Assets: Capital >

Asset Details: FL1010
View
Work Requests
Go

Asset Number	FL1010
Description	Fork Lift 1010
Serial Number	FL1010
Asset Group	Fork Lifts
Asset Group Description	Fork Lift Asset Group
Parent Asset Number	All Lifts
Parent Asset Group	Fork Lifts
Root Asset Number	EM1
Fixed Asset Number	102014
Category	ForkLift.Electric
Accounting Class	MaintWAC
Maintainable	Yes
GIS Asset	No
Equipment Serial Number	
Asset Route	No
Attached Asset Route	
Supplier Warranty Expiration Date	
Attachments	None
Failure Set	Equipment Failure Set

Asset Health

Open Work Requests	3
Open Work	32
Planned Work	
Planned Work Date	
Shutdown	No
Criticality	Normal
Asset Status	Latest
Owning Department	W-Maint

Asset Location

Current Org	EM1
Subinventory	
Area	Warehouse
Location	3455 108th Ave.,King,98101,US
Latitude	
Longitude	
Show On Map	

Tip D,M and S used against the numerals in Latitude and Longitude stand for Degrees Minutes and Seconds respectively

Descriptive Information

Attributes

Attribute Group	Description
Fork Lift Classifications	Fork Lift Data
Warranty Data	Warranty Data

Table Diagnostics

Activities

Activity				Owning Department	Priority	Effective		Last Service		Next Service	
Name	Type	Cause	Source			Start Date	End Date	Start Date	End Date	Start Date	End Date
Lubricate Fork Lift Mast	Lubrication	Normal Wear		W-Maint		18-Jul-2003		03-Jul-2022 21:36:03	03-Jul-2022 21:38:49		
Change Fork Lift Battery	Replacement	Normal Wear	Routine	W-Maint	Medium	31-Oct-2002		14-Dec-2006 10:43:00	14-Dec-2006 12:01:00		

- Optionally choose View Equipment Details if the current asset number has associated equipment details.

This link is next to the Equipment Serial Number field, and is available if there are associated equipment details. You can view all equipment details in the production organization.

- Optionally choose the View Resource Usage glasses icon to view all work orders created against the asset number for the current equipment resource.

This enables you to view resource demand (work orders) associated with the asset number. This information is eAM's integration with Process Manufacturing.

To view the functional location hierarchy for an asset:

A functional location is an organizational unit that structures the maintenance objects of an organization to functional, process-related or spatial criteria. In Oracle Enterprise Asset Management, a functional location represents the place at which a maintenance task is to be performed. The functional location hierarchy represents the list of assets that are impacted by the maintenance tasks based on a physical location.

Benefits of functional location hierarchies:

- Ability to locate assets and add to work orders.
- Ability to track life cycle costs for functional nodes where assets reside.
- Roll up costs to any level in the structure.
- Organize systems, subsystems to simplify reporting of any failure data.

You can search for assets with a functional location hierarchy using the following navigations:

- Maintenance Super User > Maintenance Home > Assets > [Search for an asset] > Go > View (action) > Functional Hierarchy > Go
 - Maintenance Super User > Maintenance Home > Assets > [Search for an asset] > Update Asset icon > Details > Functional Hierarchy
 - Maintenance Super User > Maintenance Home > Assets > [Search for an asset] > Go > View (action) > Costs > Go
 - Maintenance Super User > Maintenance Home > Work Orders > Advanced Search > {Add Hierarchy Type} > Go > Search for a work order > Go
 - Maintenance Super User > Maintenance Home > Failure Analysis > [Enter value for asset] > Select Include Position Control option > Go
1. Navigate to the Asset Number search page (Maintenance Super User > Maintenance Home > Assets).
 2. Search for an asset, and click Go.
 3. Select Functional Hierarchy from the View action list.
The Update Asset page appears.
 4. View the functional hierarchy information.

Functional Hierarchy

Hierarchy Type

Plant

Position Code

MCH-1

Parent Position Code

Hierarchy Type Description

Plant

Position Code Description

Machine Shop 1

Parent Position Code Description

Save

Cancel

Apply

To view asset hierarchy information:

You can view asset hierarchy information such as:

- Parent asset number
- Root asset number

1. Navigate to the Asset Hierarchy page: Maintenance Super User > Home > Assets > Search for an asset > Select Hierarchy from the View drop-down, and click Go.

Maintenance Home

Assets

Work Requests

Work Orders

Stores

Budget Forecasts

Failure Analysis

Construction Units

Safety Management

Reports

Capital

Rebuildable Inventory

Mass Meter Readings

Mass Geocode Entry

Asset Setups

GIS Assets

Map Workbench

Assets: Capital > Asset Details: FLM1020 >

View

Work Requests

Go

FLM1020

Asset Number

FLM1020

Description

Fork Lift Motor for Fork Lift 1020

Serial Number

FLM1020

Asset Group

Fork Lifts

Asset Group Description

Fork Lift Asset Group

Parent Asset Number

[FL1020](#)

Parent Asset Group

Fork Lifts

Root Asset Number

[EM1](#)

Fixed Asset Number

Category

ForkLift.Motor

Accounting Class

MaintWAC

Maintainable

Yes

Linear Asset

No

Equipment Serial Number

Asset Route

No

Supplier Warranty Expiration Date

Attachments

None

Failure Set

[Equipment Failure Set](#)

Return to Search

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About this Page

2. Optionally click the Parent Asset Number link to view additional details for the immediate parent.
3. Optionally click the Root Asset Number link to view details relating to the root asset number used to create this child asset.

To track asset operational statuses:

Maintenance organizations must track current and past operating statuses of their equipment, such as asset maintenance downtime and Check In and Check Out statuses. Maintenance organizations must track operational downtime and other critical

information about an asset for a better understanding of its operations statuses and history. You can view current statuses, show operation and shutdown history, check in and check out assets, and view an Asset Operational log for analysis.

1. Navigate to the Asset Numbers page, and search for an asset number.
2. Select Asset Operational Log from the View list of values to view all current and past asset operational information, such as Check Out, Check In, associated work requests and work orders.

You can remove or add a child asset, remove a parent asset, activate or deactivate the asset, transfer the asset to another location, and receive or issue the asset into and from Inventory. By default, logging is turned off for an asset (See: Defining Asset Numbers, page 3-85 and Defining eAM Parameters, page 3-13).

You can optionally select Create Express Work Order from the View drop-down to create an express work order. For more information about express work orders, see Creating Express Work Orders, page 21-57

1. Select *Asset Operational Log* from the View drop-down list.
2. Click the Go button.
3. Optionally query information by a date and time period or Event. Choose Go.

The screenshot displays the Oracle Enterprise Asset Management (eAM) interface. The top navigation bar includes links for Maintenance Home, Assets, Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, and Reports. Below this, a sub-navigation bar shows Capital, Rebuildable Inventory, Mass Meter Readings, Mass Geocode Entry, Asset Setups, GIS Assets, and Map Workbench. The main content area is titled "Asset Operational Log: DTF35000". It features a "Simple Search" section with a "View Event" dropdown, "From" and "To" date/time fields, and "Go" and "Clear" buttons. To the right, an "Asset Details" sidebar lists various attributes for asset DTF35000, including Asset Number, Asset Description, Asset Group, Area, Department, Asset Criticality, Asset Status, and Parent Asset. Below the search section, there is a table of asset events with columns for Date, Event, Reference, Operable, Reason Code, Comments, and Person. The table lists several events, including "Asset Checked In", "Meter Reading Entered", "Asset Checked Out", "Work Order Completed", and "Asset Checked Out", with corresponding dates, references, and personnel.

Date	Event	Reference	Operable	Reason Code	Comments	Person
11-Jan-2007 21:18:33	Asset Checked In	Stock, Ms. Pat	Yes			Moll, Mr. Joe
11-Jan-2007 21:18:33	Meter Reading Entered	DTF35000 Odometer				Moll, Mr. Joe
20-Dec-2006 19:13:42	Asset Checked Out	Stock, Ms. Pat	Yes			Stock, Ms. Pat
15-Dec-2006 18:45:17	Work Order Completed	WO243859				Moll, Mr. Joe
14-Dec-2006 20:48:36	Meter Reading Entered	DTF35000 Odometer				Moll, Mr. Joe
01-Dec-2006 17:54:37	Asset Checked In	Moll, Joe	Yes			Moll, Mr. Joe
01-Dec-2006 17:54:37	Meter Reading Entered	DTF35000 Odometer				Moll, Mr. Joe
30-Nov-2006 17:25:15	Asset Checked Out	Moll, Joe	Yes			Moll, Mr. Joe

4. Optionally choose Create Events to create events that occur for the asset. This information is important and needed to help you analyze the asset life cycle. Choose Apply when finished. These events are extensible; you can add to them.
5. Select the *Return to Search* link to return to the Asset Numbers page.
3. Optionally select the Check Out icon to check out an asset from the Asset Search

page. You can view asset details such as Plan Name, Plan Type, and Plan Information. You can also enter meter information and optionally create a work request from this page.

Click the Enter Quality icon to access the Quality Workbench to enter collection plan data.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and enforce signature flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

4. Choose Apply.
5. Optionally select the Check In icon to check this asset in.
6. Choose Apply.

To display configuration history:

You can view specified parent and child information in a tabular format, as well as dynamically add parents and children to a hierarchy.

1. Navigate to the Asset Numbers page, and query an asset number.
2. Select Configuration History from the View list of values.

You can optionally select Create Express Work Order from the View drop-down to create an express work order. For more information about express work orders, see *Creating Express Work Orders*, page 21-57

3. Click Go.
4. Select whether to show the parent or child information. The page defaults showing Children information. If you select Parents, choose Go to display the associated information.

Configuration History

Maintenance Home **Assets** Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Capital Rebuildable Inventory Mass Meter Readings Mass Geocode Entry Asset Setups GIS Assets Map Workbench

Assets: Capital >

Configuration History: DTF35000 View Work Requests Go

Asset Number [DTF35000](#) Asset Group Vehicles

Description Delivery Errand Truck 35000

Configuration History View Options

Show ☐ Parents ☒ Children

From Date (example 11-Jul-2019 19:50:15)

To Date

Go

[Associate Child](#) [Export Configuration Results](#) | ...

Asset group ^	Asset Number ^	Asset Type ^	Start Date ▼	End Date ^	Update ^
F350Y2000 Rblt Motor	F350Y2000RBLTMTR02	Rebuildables	02-Nov-2005 22:21:47		
F350Y2000 Rblt Motor	F350Y2000RBLTMTR01	Rebuildables	08-Nov-2002 20:36:21	02-Nov-2005 22:21:47	
Vehicles	CDTF35000	Capital	26-Sep-2002 18:49:14		
Vehicles	TDTF35000	Capital	26-Sep-2002 18:47:56		

5. Optionally narrow your selection criteria by selecting a date range.
6. Optionally choose Associate Child or Associate Parent (depending on whether you are showing Parent or Children information) to dynamically add a Child or Parent to the current asset number hierarchy.
 1. Select an asset number.
 2. Enter a Start Date that this new configuration is effective. The system date defaults.
 3. Optionally enter an End Date.
 4. Choose Apply to save your work.
 5. Choose Cancel to return to the Configuration History window.
7. Optionally select the Update icon to update configuration history information for the current asset number.
8. Optionally save and export your configuration results to a spreadsheet by selecting Export Configuration Results.

To view asset cost information:

eAM integrates with Oracle Cost Management, honoring all costing rules set at the organization level, for example, the costing method used. You can view the costs of

Material, Labor, and Equipment for maintenance work orders, associated with the current asset number. You can view different types of transactional cost information, including actual, estimated, variance, and summary. eAM maintains the hierarchy integrity. For example, when viewing the parent asset number, you can view the costs of the parent, including all child costs rolled up to the parent level.

1. Navigate to the Asset Numbers page, and query an asset number.
2. Select Costs from the View list of values.
3. You can optionally select Create Express Work Order from the View drop-down to create an express work order. For more information about express work orders, see *Creating Express Work Orders*, page 21-57
4. Choose Go.
5. Select an asset number.
6. Choose Go.
7. In the Cost View Options region, you can narrow your selection criteria.

1. From the View drop down list, select the type of cost information to view. Valid values are Actual Costs, Estimated Costs, Variance Costs, and Cost Summary.

Actual Costs: This is the accumulation of all cost for material and resource transactions for associated maintenance work orders, based on a specified period, or any specified selection criteria you entered in the Cost View Options region. When you select the Actual Costs from the list of values, the actual cost information for your specified criteria is provided. The Cost Manager process runs in the background to provide updated, actual cost information at user defined, periodic intervals, and/or when it is launched from the menu.

Estimated Costs: A BOM (material parts list) and routing (resources) can be associated with a work order. When you select Estimated Costs, the estimated costs of all materials and resources associated with a work order display, enabling you to budget costs. The Work Order Cost Estimation process runs in the background to provide updated, estimated cost information at user defined, periodic intervals, and/or when it is launched from the menu. Estimated and actual costs might differ because all materials or resources associated with a work order might not actually be used when the work order is executed.

Variance Costs: When you select Variance Cost, the difference between the actual and estimated costs appear.

Cost Summary: When you select Cost Summary type, the cost information from all work orders associated with the current asset appear.

2. From the View Cost By drop down list, select how you would like to view your

cost information. Valid values are Period and Cost Category.

- If you selected Cost Category, you can view cost information by defined categories, such as Maintenance, Contract, or Operations.

Material: All material and material overhead transaction costs appear

Labor: All employee resource and resource overhead transaction costs appear.

Equipment: All material resource and resource overhead transaction costs appear.

- If you selected Period, optionally enter the Period From and Period To. Accounting Periods are defined within Oracle Inventory (See: Maintaining Accounting Periods, *Oracle Inventory User's Guide*).

8. Optionally select the Include Child Assets or Include Related Assets option. You cannot select both options.

9. Select the Include Child Assets check box to roll up all costs for the current asset number and its children. See: Defining Asset Numbers, page 3-85 to review how hierarchies are created.

10. Select a relationship type in the Include Related Assets drop-down.

Relationships form a functional grouping or network of GIS assets or discrete assets. This option enables the reporting and tracking of asset costs at a network or group level.

Note: You can view related assets costs for only one relationship at time.

11. Choose Go to view cost element information. Summary totals, of material, labor, and equipment costs, appear.

12. Optionally save and export your cost information to a spreadsheet by choosing Export.

13. Optionally view asset cost information, broken down by specific work order, by choosing Work Order Cost Details.

These cost values are based on the respective work order route percentage assigned for the associated asset.

1. Optionally select the Actual Cost link to view the actual cost details by Period/Cost Category for the work order.

2. Optionally choose View Transactions to view the transaction details.
3. Optionally select the Work Order Cost Details link at the top of the page.
4. Optionally choose View Estimated Cost Details to estimated cost details by Period/Cost Category.
5. Select the Work Order Cost Details link at the top of the page to exit.
6. Optionally select the Variance Cost link to view the variance between the estimated and actual costs.

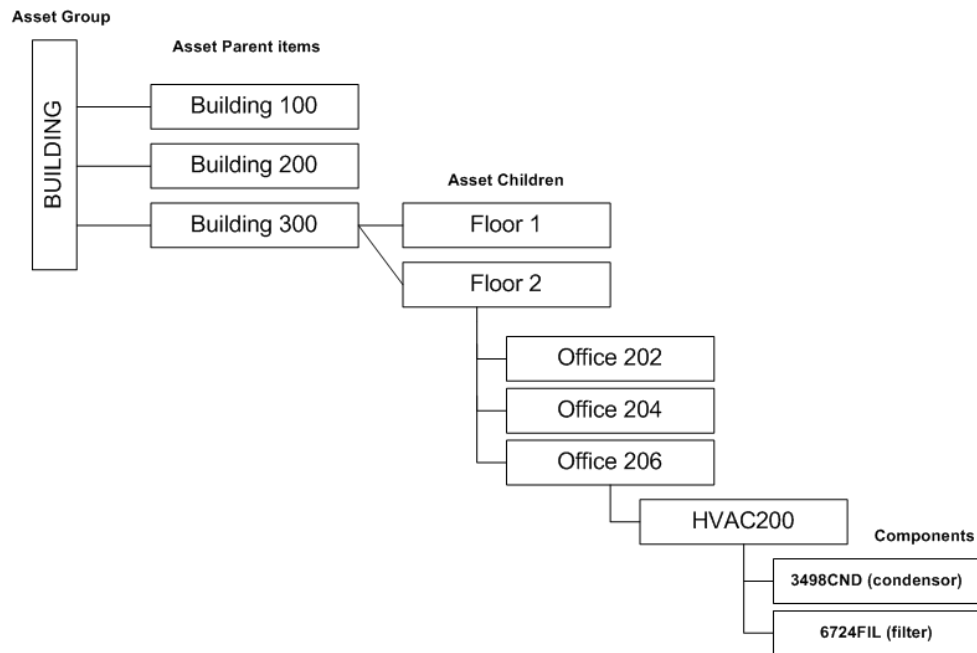
To display the asset hierarchy:

You can view asset number hierarchy information, enabling you to identify asset numbers using a navigator and the details of each asset number belonging to the hierarchy.

As Serialized Rebuildables are added and removed from a particular hierarchy, the asset genealogy is dynamically updated.

1. Navigate to the Asset Numbers page, and query an asset number.
2. Select Hierarchy from the View list of values.
3. Choose Go. The associated hierarchy for the current asset number appears in the shaded region.

Asset Hierarchy Example



4. Optionally select any asset number in the hierarchy to view its details.
5. Optionally select the Parent Asset Number to view the complete hierarchy at the parent level.
6. Choose Return to Search to exit.

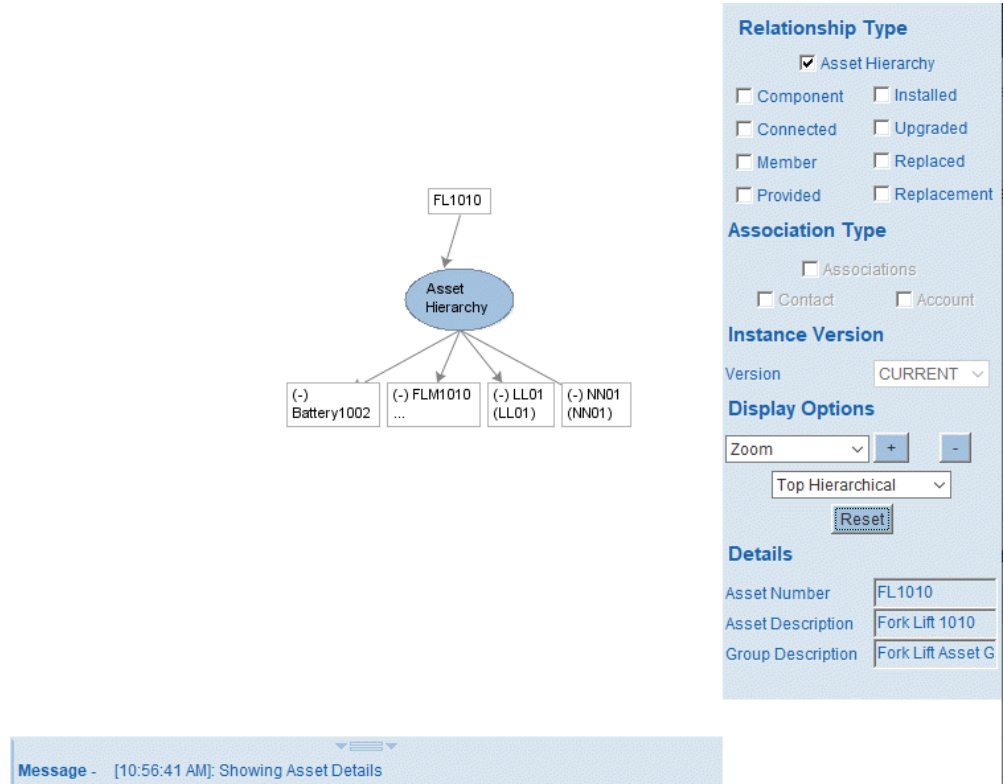
To view asset relationships graphically:

You can view asset relationships in a graphical format using Oracle eAM.

Use this procedure to view asset relationships graphically:

1. Navigate to the Asset Search page, and query for a specific asset.
2. Select Graphical Hierarchy from the View list of values.
3. Click the Go button.

The Viewer appears displaying the asset relationship in a graphical format.



4. View the asset relationships.

You cannot view instance relationships.

Note: You can only view asset relationships using this navigation. If you want to add child assets or create other relationships for the asset, you must access the asset through Oracle Asset Tracking or Oracle Installed Base.

For more information about viewing asset relationships, see Viewing Item Instance and Asset Network Relationships, *Oracle Installed Base User's Guide*.

5. Right-click an asset relationship node to view the asset details.

To enter or view meter readings:

Meters are defined and associated with asset numbers to measure the usage of an asset or rebuild able item such as odometers or counters. Meters are used in Preventive Maintenance Scheduling to schedule and generate Preventive Maintenance work orders.

You can enter and view meter readings for the current asset number.

1. Navigate to the Asset Numbers page, and query an asset number.
2. Select the asset number, and then select Meter Readings from the View list of values.
3. Click the Go button.

Meters that are associated with the current asset number appear. See: Associating Meters with Asset Numbers, page 3-162.
4. Optionally enter any necessary Comments.
5. Enter a Value or Change Reading value for new meter readings, depending on the meter type.

If the meter is an Absolute type, the Value column is enabled. If the meter is a Change type, the Change column is enabled.
6. Optionally enter Reset information.
 1. If you enter a Reset Reading value, you are resetting the source meter to this value. For example, if a motor must be replaced, you can reset the meter reading value of the pump, associated with the motor.

Companies can associate a source meter to an asset number and meter association. The Source Meter reading subsequently feeds corresponding meters that are associated with assets within the meter hierarchy (See: Defining Meters, page 3-159 for more information on meter hierarchies).
 2. Optionally select the Include Target Reset check box to reset the target meter to the Reset Reading for the source.
 3. Optionally enter a Reset Comment.
7. Choose Apply to save your work.
8. Optionally select the History icon to view all meter readings for the selected meter and current asset number. This helps you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading.

Meter Reading History

Assets: Capital > Enter Asset Meter Readings: DTF35000 >

Meter Reading History DTF35000 Odometer

Reading From Date (26-Jun-2019 19:45:00) ☐ Show Average reading in Date Range
 Reading To Date ☐ Show Disabled Readings
 Go Clear

Meter Readings

Export | ...

Date ^	Reading		Comments	Reset Comments	Flexfields	Disable
	Value ^	Net Life to Date				
<input checked="" type="radio"/> 11-Jul-2019 21:07:50	165000	165000 165000				
<input type="radio"/> 11-Jan-2007 21:18:33	145200	145200 145200				
<input type="radio"/> 14-Dec-2006 20:48:36	145100	145100 145100				
<input type="radio"/> 01-Dec-2006 17:54:37	130200	130200 130200				
<input type="radio"/> 25-Mar-2005 15:15:00	130100	130100 130100				
<input type="radio"/> 17-Jul-2003 15:49:19	120100	120100 120100				
<input type="radio"/> 11-Nov-2002 23:06:31	120000	120000 120000				

View information such as:

- Source: The work order used for meter readings entered during the work order completion transaction. For example, Standalone Meter Reading Entry, Asset Check In or Check Out.
 - Source Reference: The work order number used for meter readings entered during the work order completion transaction. For example, Standalone Meter Reading Entry, Asset Check In or Check Out.
 - Entered By: The login user name of the individual who entered the meter readings.
9. Optionally select the Disable icon to disable a past meter reading for the current Reading.

If meter readings are entered before resetting the meter, you cannot disable those meter readings. The most current reading before the meter is reset cannot be disabled, unless the meter reset reading entry is disabled.

Note: Preventive Maintenance Scheduling does not use any disabled information. After a meter reading is disabled, you cannot re-enable it.

To view quality information:

You can view a list of Quality collection plans and enter quality results for the current asset number.

1. Navigate to the Asset Numbers page, and query an asset number.

2. Select the asset number, and then select Quality from the View list of values.
3. Choose Go.
4. A list of collection plans, associated with the current asset number and requiring completion, appear (See: Creating eAM Quality Collection Plans, page 3-206). When the collection plan was created, it was specified whether the collection plan required completion. Also, during the eAM collection plan creation process, triggers are specified to make specific asset numbers eligible for the collection plan (See: Creating eAM Quality Collection Plans, page 3-206). See: Quality Integration Setup, page 3-201
5. Optionally enter quality results by selecting the Enter Quality Results icon. You can enter quality results for a collection plan, or update the quality results for a collection plan multiple times.
 1. Required fields depend on the collection element specifications for the collection plan (See: Creating eAM Quality Collection Plans, page 3-206).
 2. Optionally choose Add to attach any necessary files, URLs, or text to the chosen collection plan. Each collection plan can have an unlimited number of attachments.
 3. Choose Apply to save your work or Cancel to return to the Quality Plans page.
6. Select the View Quality Results icon to view or update any results entered for the current collection plan.
 1. Select either the *Show table data when all conditions are met* or *Show table data when any condition is met* radio button.
 - *Show table data when all conditions are met*: Quality results containing all of the following entered parameters appear in the results set table.
 - *Show table data when any condition is met*: Quality results containing any of the following parameters appear in the results set table.
 2. Optionally specify parameters to filter the data displayed. The parameters are the collection elements defined for the current collection plan. See Creating eAM Quality Collection Plans, page 3-206.
 3. Optionally select an additional parameter from the Add Another list of values. Choose Add.
 4. Choose Go to view the entered parameters' results. Optionally choose Clear to enter new parameters.

5. Optionally select the Attachments icon to attach any necessary files, URLs, or text to the chosen collection element (result entry). Each collection element in the collection plan can have an unlimited number of attachments.
 6. Optionally select the Update icon to update the current entry.
 7. Select the Return To List Of Plans Page link at the bottom of the page to return to the list of quality collection plans.
7. The Visited column indicates whether the associated collection plan has been updated.

Note: Quality results are entered at work order completion for required collection plans associated to an asset number.

To view or create work requests for an asset:

You can view associated work requests, create new work requests, or update existing work requests for the current asset.

1. Navigate to the Asset Numbers page, and query an asset.
2. Select an asset number, and then choose View Work Requests.
3. Optionally select a work request Number to view its details, such as the log explaining the issue reported and priority code.

Existing Work Requests: DTF35000 View Asset Operational Log Go

Asset Number: [DTF35000](#) Asset Group: Vehicles

Description: Delivery Errand Truck 35000

[Create Work Request](#) [Export Work Requests](#) | ...

Details	Number	Description	Asset Type	Asset Group	Asset Number	Status	Request By Date	Originator	Update
▶	14223	Truck will not start	Capital	Vehicles	DTF35000	Complete	03-Nov-2005 19:44:00	MNT	

4. Optionally choose Update if you are within the details of the work request, or you can select the Update icon on the Existing Work Requests page.
 1. Update fields as needed.
 2. Choose Apply to save your work.
 3. Choose Cancel to return to the Existing Work Requests page, without updating the work request.

5. Optionally choose Create Work Request to create a new work request, or select the Create Work Request from the View drop-down list if you are viewing an existing work request.
 1. If required, select an asset number. Depending on the current organization parameter, defining an asset number on work requests may be optional. See: Defining eAM Parameters, page 3-13.
 2. Select a Priority, for example High, Medium, or Low.
 3. Select a Request By Date. The system date defaults.
 4. Select an Assigned Department. The Assigned Department default value appears. See: Defining Asset Numbers, page 3-85.
 5. Optionally select a Work Request Type.
 6. Optionally select the user the work request is Requested For. The current user defaults.
 7. Enter the detailed information about the work requested in the Additional Description field.
 8. Enter your Creation Information, such as Phone Number, E-Mail address, and Contact Preference.
 9. Optionally select a Context Value.
 10. Choose Apply to create the work request.
 11. Choose Cancel to return to the Existing Work Requests page, without creating a work request.
6. Optionally select Show in the Details column to display work orders linked to the current work request.
 1. Optionally select the work order number to view the work order details.
 2. Choose Return to Existing Work Requests to return to the previous page.
7. Optionally save and export the work request information to a spreadsheet, by selecting Export Work Requests.

Related Topics

Viewing Resource Usage, page 11-2

Defining Asset Numbers, page 3-85

Meters, page 5-2

Entering Meter Readings, page 5-3

Overview of Cost Management, *Oracle Cost Management User's Guide*

Submitting a Request, *Oracle Applications User's Guide, Oracle Applications User's Guide*

Overview of Collection Plans, *Oracle Quality User's Guide*

Overview of Quality Self-Service, *Oracle Quality User's Guide*

Entering Mass Meter Readings

Meters are defined and associated with asset numbers to measure the usage of an asset or rebuild able item such as odometers or counters. Meters are used in Preventive Maintenance Scheduling to schedule and generate Preventive Maintenance work orders.

You can enter readings for all meters that are associated with an asset. You can enter readings for all assets that are associated with a queried meter. This page enables you to enter multiple readings from one screen.

The Meter Reading window invokes with a Disable button based on the Disable Meter Reading function security setting. If you do not have access to the function security, eAM Disable Meter Reading, then the Disable button does not display and you cannot disable a meter reading.

To enter mass meter readings:

1. Navigate to the Mass Meter Readings page (Maintenance Super User: Assets > Mass Meter Readings).

Mass Meter Readings

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Capital Rebuildable Inventory **Mass Meter Readings** Mass Geocode Entry Asset Setups GIS Assets Map Workbench

Mass Meter Readings Cancel Apply

Search

Meter Name Asset Number DTF35000 Go

Meter Readings

Details		History		Source		New Readings		Last Reading		Flexfields		History	
Meter Name		Meter Name		Reading Type	Value	Direction	UOM	Date	Value	Date			
DTF35000 Odometer		DTF35000 Odometer		Absolute		Ascending	Mile	05-Jul-2019 18:10:25	145200	11-Jan-2007 21:18:33			

2. Optionally enter a Meter Name and then choose Go.

3. Optionally enter an asset number and then choose Go. All meters that are associated with this asset appear (See Associating Meters with Asset Numbers, page 3-162.)
4. Enter a Value or Change Reading value for new meter readings, depending on the meter type. If the meter is an Absolute type, the Value column is enabled. If the meter is a Change type, the Change column is enabled. The Change field indicates the difference between the last reading and the current reading; it defaults when the Value field is populated. The Change field indicates the difference between the last reading and the current reading. The Change value is used to calculate the Life To Date Reading, within the Latest tabbed region.
5. Optionally enter any necessary Comments.
6. Optionally enter Reset information.
 1. If you enter a Reset Reading value, you are resetting the source meter to this value. For example, if a motor must be replaced, you can reset the meter reading value of the pump, associated with the motor.

Companies can associate a source meter to an asset number and meter association. The Source Meter reading subsequently feeds corresponding meters that are associated with assets within the meter hierarchy (See: Defining Meters, page 3-159 for more information on meter hierarchies).
 2. Optionally select the Include Target Reset check box to reset the target meter for the current asset to the Reset Reading for the source meter.
 3. Optionally enter a Reset Comment.

Note: You cannot reset past meter readings if a meter reading is entered after the reading date.
7. Click the **Apply** button to save your work.
8. Optionally select the History icon to view all meter readings for the selected meter and current asset number. This helps you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading.
9. Optionally select the Disable icon to disable a past meter reading for the current Reading. If meter readings are entered before resetting the meter, you cannot disable those meter readings. The most current reading before the meter is reset cannot be disabled, unless the meter reset reading entry is disabled.

Note: Preventive Maintenance Scheduling does not use any disabled information. After a meter reading is disabled, you cannot re-enable it.

Using the Asset Move Workbench

You may need to move assets from one organization (often a different location) to another organization for different reasons, to replace a failed asset , or to borrow an asset for a particular job or project.

The Asset Move Workbench enables you to transfer an asset and its child assets from one maintenance organization to another as a single unit, and the parent child asset relationships are preserved.

This feature also enables you to move assets using the EAM user interface by minimizing the dependency on the Inventory user interface to carry out asset transfer transactions. You can perform a miscellaneous receipt of the assets within EAM, using the Asset Move page. EAM performs a miscellaneous receipt of an asset if there is no quantity available in the expense subinventory. This process does not track the quantity for the asset. These miscellaneous receipts are done at zero cost, and are placed in an expense intermediate subinventory.

The following entities will also move with the asset:

- Activities: if the Activity Definition is assigned to the destination organization. If not, you will need to use the Activity Workbench to assign an activity to the new organization.
- PM schedules
- Meters
- Failure history and setup

These entities do not move with the asset:

- Work orders
- Routing
- Cost history
- Collection plans

You can move assets, including any child assets, between organizations and sub-inventories only.

After you have performed the asset move, you can manually adjust the asset hierarchy

using the Asset Hierarchy page or the Graphical Network Page.

To move assets using the Asset Move Workbench:

1. Navigate to the Maintenance Home page.
2. Select a value from the Organization drop-down and click the Go button
3. Click the Assets tab.
4. Enter search criteria for the asset to be moved. You can add Asset Status to the Assets result table by using personalization.
5. Click the Go button.
6. Select the Move Asset value in the View drop-down list, and click the Go button.

The screenshot displays the 'Asset Move Workbench' interface. At the top, there is a navigation bar with tabs: Maintenance Home, Assets (selected), Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, and Reports. Below this is a sub-navigation bar with links: Capital, Rebuildable Inventory, Mass Meter Readings, Mass Geocode Entry, Asset Setups, GIS Assets, and Map Workbench. The main section is titled 'Asset Numbers' and includes buttons for 'Create Asset', 'Text Search', and 'Save Search'. Under 'Simple Search', there is a note: 'Note that the search is case insensitive'. Search fields include 'Asset Number' (with value EAM-AG3/003), 'Category', 'Asset Route' (a dropdown), and 'Asset Status'. There are 'Go' and 'Clear' buttons. An 'Advanced Search' button is also present. Below the search fields, there is a row of buttons: 'Select Asset Number:', 'View Work Requests', 'View Work Orders', 'View', 'Move Asset' (selected), 'Go', 'Map All', 'Export', 'Attribute WebADI', and 'Asset Number W'. At the bottom, a table lists assets with columns: Asset Number, Description, Asset Group, Category, Area, Owning Department, Criticality, and Update As. The first row shows 'EAM-AG3/003' with description 'EAM-AG3' and an edit icon.

Asset Number	Description	Asset Group	Category	Area	Owning Department	Criticality	Update As
EAM-AG3/003	EAM-AG3						

7. Select a value from the Move Type field, Inter-Org Transfer or Sub-Inventory Transfer. This a required field.
8. Enter the destination organization (required).
9. Enter a destination sub-inventory.
10. Select Yes or No in the Include Child Assets field (required).
11. Optionally select a destination locator.

Note: The current asset information relating to the organization, sub-inventory, and location displays.

Move Asset: EAM-AG3/003 Cancel Apply

*** Move Type** Sub-Inventory Transfer

*** Destination Sub-Inventory**

*** Include Child Assets** Yes

Destination Locator

Current Organization EM1

Current Sub-Inventory Spares

Current Location 3455 108th Ave., King, 98101, US

Export |

Expand All | Collapse All

Focus Asset Number	Description	Asset Group	Asset Type	Current Organization	Current Sub-Inventory
EAM-AG3/003		EAM-AG3	Asset	EM1	Spares

[Return to Search](#)

12. Click the Apply button.
13. You will receive a confirmation message that the assets have been moved.

Work Requests

A work request serves a different function than a work order; it is a request for maintenance on an asset (Capital or Rebuildable Inventory). eAM enables operations and maintenance staff to report any problems with an asset. A supervisor can approve, request additional information, or reject a work request. A work request requires approval before it is generated into a work order. The Work Requests tab enables you to query existing, and create new work requests for an asset. See: Overview of Work Requests, page 21-45 and Creating and Updating Work Requests, page 17-8.

Work Orders

The Work Orders tab is designed for users such as crew supervisors, who execute work plans generated by a planner. You can manage operations on a work order. You can search for skills across departments, assign persons (employees, contingent workers) to a work order based on competence type and competence, adjust crew schedules, complete operations, hand work over to another department, complete a work order, request material, and enter quality plan information, such as inspection data. The Work Orders tab enables you to query and create work orders, view and update work order details, view assigned employees, and create relationships among work orders. (See: Work Order Relationships, page 4-52). After executing a work order search, you can drill into a specific work order. The Work Orders page contains content containers, providing work order header information, asset details information, and work order details information.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and enforce signature

flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

You can query service and work requests, view the requests' associated work orders, and create and assign work orders to the requests.

Tasks in this section include:

- Creating Work Orders, page 21-46
- Generating Preventive Maintenance Work Orders, page 21-56
- Generating Preventive Maintenance Work Order Reports, page 5-8
- Creating Express Work Orders, page 21-57
- Using the OAF Scheduler Workbench, page 21-46
- Viewing Work Orders, page 21-64
- Updating Work Orders, page 21-83
- Assigning Persons to Work Orders, page 21-91
- Assigning Persons to Mass Work Orders, page 21-96
- Creating Handover Operations, page 21-97
- Managing for Mass Work Orders, page 21-102
- Completing Work Orders, page 21-106
- Adding Completion Details to Work Orders, page 21-110
- Printing Work Orders, page 21-103
- Printing Work Packets Using AutoVue, page 21-104
- Closing Work Orders, page 21-112

Creating Work Orders:

Work orders are normally created by a planner from the Maintenance Workbench. (See: Using the Maintenance Workbench, page 4-70), and are also created within the Maintenance Super User responsibility. Material and resource planning (See: Overview of Planning and Scheduling, page 6-1) is used at each status of the routine work order. (See: eAM Work Order Statuses, page 4-24).

1. Navigate to the Work Orders page.
2. Click the Create Work Order button.

Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See *Implementing Function Security, Oracle Applications System Administrator's Guide - Security*.

The header information displays general information about the asset number and the type of work required. The Asset Details region contains information such as Asset Description, Area, Department, Asset Criticality, Status and Parent Asset.

You can update the default value for the Work Order Status to a different user-defined status assigned to your organization.

3. The work order number is assigned, but you can update it.
4. Enter an asset number (or Serialized Rebuild) requiring maintenance. The Asset Group (or Rebuildable Item) defaults (See: Defining Asset Numbers, page 3-85).

Create Work Order

5. Click the Asset Hierarchy icon next to the Asset Number field to select an asset that is part of the asset hierarchy.

Note: The Asset Hierarchy icon appears after the asset number has been selected.

1. Expand the top level asset to view child assets.

2. Click the asset that you want to use.
3. Click Select.

Field	Value
Rebuild Item	Fork Lift Battery
Description	Batteries used for electric Fork Lifts
Asset Number	Battery1002
Organization	3159
Current Org	EM1
Parent Asset Group	Fork Lifts
Parent Asset Number	FL1010
Root Asset Number	EM1
Criticality	
Accounting Class	
Area	
Maintainable	No
Linear Asset	No
Owning Department	
Subinventory	FleetSpare
Locator	

The selected asset now appears in the Asset Number field on the Create Work Order page.

6. Enter the work order's Scheduled Start Date if it is based on a forward schedule.

The scheduling process uses this date as a starting point to calculate the Scheduled Completion Date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 6-6).

Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Manufacturing scheduler if you have Oracle Production Scheduling enabled (See: Overview of Setting Up, *Oracle Production Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

7. Enter a Scheduled Completion Date for backward scheduling.

This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available

by that date, the scheduling process moves the start date backwards to ensure completion by the required completion date (See: eAM Scheduling, page 3-195).

Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Production Scheduling enabled (See: Overview of Setting Up, *Oracle Production Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

8. Optionally enter a Target Start Date for the work order. The default value that appears comes from the Scheduled Start Date field, but can be changed.
9. Optionally enter a Target Completion Date for the work order.
The default value that appears comes from the Scheduled Completion Date field, but can be changed.
10. Enter a WIP Accounting Class code to represent the charge (expense) accounts associated with the asset number.
This defaults from the current asset number (See: Defining Asset Numbers, page 3-85); you can update it.
11. Optionally select a Request Number to associate a work request or service request with this work order.
Optionally select a Request Number to associate a work request or service request with this work order.
After selected, the Description updates to the description of the work request.
The additional description of work request is copied to the work order Additional Description field.

Target Start and Completion Dates

The Request By Start Date and Request By Completion Date will be copied to the work order as the Target Start Date and Target Completion Date, if the Enable Target Dates for Work Orders option is selected on the EAM Parameters page. For more information, see Defining eAM Parameters, page 3-13.

This is applicable when the Create Work Order function is performed for a work request.

12. Optionally enter a Description for this work order.
13. Optionally select a Planner for this work order.
14. After selecting an asset activity, the associated maintenance BOM (material) and maintenance route (resources) are associated with the activity, and attached to the

work order. After an asset activity is saved to a work order, you cannot change or delete it. See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Maintenance Routes, page 3-139.

Select an asset activity. Only asset activities associated with this asset number are available.

Note: If this work order was previously created, you can add an asset activity, as long as the work order is at an Unreleased or Draft status, or an asset activity was not previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an Asset Activity to an existing work order.

15. If you select Yes from the Firm list of values, planning and scheduling does not adjust the schedule, regardless of material or resource availability (See: Overview of eAM Planning and Scheduling, page 6-1). This value defaults as Yes or No, depending on the Auto Firm on Release and Auto Firm on Create check box settings, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 3-13). This defaults after the work order is Released, if you select the Auto Firm on Release check box, and defaults immediately if you selected the Auto Firm on Create check box.

If you select No from the Firm list of values, the completion date is calculated based on the work order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the work order. You can update the Firm setting for work orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 4-24).

If Firm is set to Yes, you can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

16. Optionally select a Status of this work order.

The list of values includes all system and user-defined statuses. If you select a user-defined status, however, the validation and the work order behavior remain unchanged, because they are based on the system status that is associated with the user-defined status.

You can update the default value for the Work Order Status to a different status assigned to your organization.

If the work order is changed to a status that requires approval (See: Work flow for Work Orders, page 4-10), the Pending flag is selected until an action, such as approval or rejection, occurs. If the status change is approved, the new status remains, and the Pending check box is cleared. If rejected, the status of the work order is changed to *Canceled by Approver* and the Pending check box is also cleared.

17. The Shutdown Type default value comes from the current asset activity. This

setting helps the planner group work orders that might require shutdowns, so that they are planned together.

18. Select the Yes or No option in the Completion Required field to identify this operation as a mandatory completion operation. The default value is No.

See Completing Work Orders, page 21-106 for more information.

Operations

Summary Details

Select Row: Assign Person Go Purchase Materials Rows 1 to 6

Show All Details | Hide All Details

Details	Operation	Description	Department	Resource Sequence	Resource	Required	Assigned Person or Units Equipment	Start Time
	10	Get New Batt	W-Maint	10	FltMech	0.1	1	31-Jan-2017 18:21

Operation

Standard Op F80

Start Time 31-Jan-2017 18:21:00

End Time 31-Jan-2017 19:21:00

Duration 1

Resource

Shutdown Type Required

Completion Required No

Long Description

UOM HR

Scheduled Yes

Basis Type Item

19. Optionally select a Priority, for example, High, Medium, or Low.
20. Optionally enter information within the Additional Details region. For example, you can add up to 2,000 characters in the Additional Description field.

The Warranty field default values come from the asset definition, but you can update the Warranty Status and Warranty Active fields here.

21. The GIS Asset Details region appears when you are creating a work order for a linear or area asset. Optionally select and enter asset information such as:

- Measure Type
- Scheduled From Measure
- Scheduled To Measure
- Length

Click the Show Details link to enter additional asset segment information. See Using the GIS Asset Workbench, page 22-24 for more information.

22. Optionally open the Failure Information region to enter Failure Analysis information (See: Failure Analysis Overview, page 28-1).
 1. The Failure Entry Required setting indicates whether failure code entry is required during work order completion. This setting defaults from the value set when you assign the asset group to the Failure Set. However, you can update

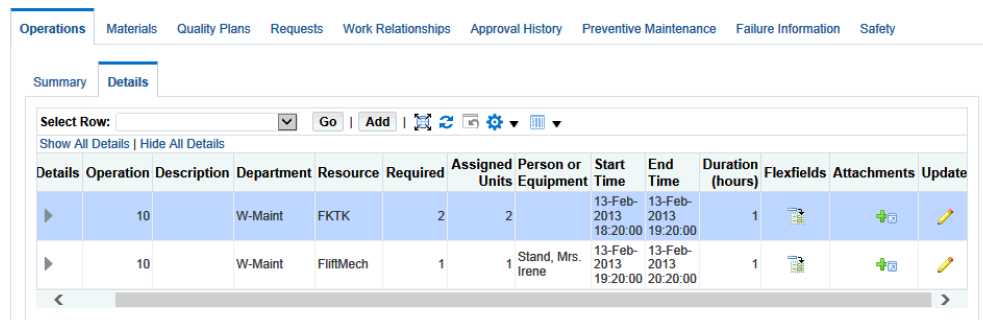
this setting as needed (See: Defining Failure Codes and Sets, page 28-2).

2. Valid codes that are available are dependent on the associated Failure Set and defined Failure Codes. A Failure Set defaults, if one is associated with the current asset group (See: Defining Failure Codes and Sets, page 28-2).

Note: You cannot associate one failure occurrence with multiple work orders. For example, if you report failure data for the same asset on two different work orders, two failures are created, regardless of the failure date. When MTBF is calculated, the failure count would be 2. Similarly, you can associate one combination of failure tracking codes (failure/cause/resolution) to a work order.

23. Optionally open the Operations region to prepare necessary operations. Operations (also known as tasks) are the instructions to perform maintenance activities.

Important: Since operation 1 is reserved for system use, we recommend that you begin the operation sequence numbering at 2 or above, and use operations in multiples of 10.



The screenshot shows the 'Operations' tab in the Oracle Enterprise Asset Management interface. It includes a navigation bar with tabs like Materials, Quality Plans, Requests, Work Relationships, Approval History, Preventive Maintenance, Failure Information, and Safety. Below this, there are sub-tabs for 'Summary' and 'Details'. The 'Details' sub-tab is active, displaying a table of operations. The table has columns for Details, Operation, Description, Department, Resource, Required, Assigned Person or Units, Equipment, Start Time, End Time, Duration (hours), Flexfields, Attachments, and Update. Two rows of data are visible, both for operation 10, department W-Maint, and resource FKTK. The first row shows a duration of 2 and assigned person Stand, Mrs. Irene. The second row shows a duration of 1 and assigned person Irene. Both rows have start and end times of 13-Feb-2013 18:20:00 to 19:20:00.

Details	Operation	Description	Department	Resource	Required	Assigned Person or Units	Equipment	Start Time	End Time	Duration (hours)	Flexfields	Attachments	Update
▶	10		W-Maint	FKTK	2	2		13-Feb-2013 18:20:00	13-Feb-2013 19:20:00	1			
▶	10		W-Maint	FliffMech	1	1	Stand, Mrs. Irene	13-Feb-2013 19:20:00	13-Feb-2013 20:20:00	1			

Each operation is assigned to a department (See: Defining Departments and Resources, page 3-24), associated with assigned resources (trades people, outside service providers, and equipment). When you create a work order for an asset number, you can attach the associated activity (See: Associating Asset Numbers with Activities, page 3-136) to that work order, bringing its related maintenance route and BOM. The maintenance route is comprised of operations necessary to complete the activity. You can view and update these operations from the work order. After creating the work order, you can view operations that default from the maintenance route (See: Defining Maintenance Routes, page 3-139) associated with the current activity.

When you query for an existing work order, you can update and add to its operations. You can also assign and schedule specific persons or equipment to each operation. There are two sub-tabs within the Operations tab: Detail and Summary.

The Summary sub-tab displays information at the Resource line level and assigned persons appear in the Hide/Show region. The Detail sub-tab displays the operation-resource-instance. You can remove the EAM_OP_SUMMARY function from the menu to hide the Summary sub-tab, or remove the EAM_OP_DETAILS_TAB function to hide Details sub-tab (See: Preparing Work Order Operations, page 4-31 and Updating Work Orders, page 21-83).

You can change the department or resources at the operation level if no transactions have been recorded for the work order.

Click or hover over the Add or View button to add or view attachments. You can attach file, URL, and text attachments. If you want to view the attachments, hover or click the View button.

MISC attachments for operations are attached to all purchase requisitions for direct items/non-stock items for that operation.

24. Optionally open the Materials subtab to view or add items.

After creating the work order, you can view the item list for the asset (See: Setting Up Maintenance Bills of Material, page 3-134 and Defining Material Requirements, page 4-38). You can add both stocked and non-stocked material from the Asset BOM to the material requirements for this work order.

You can change the default values for the following supplier related fields:





- Supplier
- Supplier Site
- Contact Name
- Contact Phone

Move orders for EAM work orders will be created with a status of Incomplete if the planner is defined in the Organization Items page (Inventory>Organization Items>General Planning). If the planner is not defined, then the move order is created with a status of Pre-approved. Approval action is required to change the status of the move order to Approved. After approval, the material allocation will











occur.

For more information regarding planner definition, see *Defining Planners, Setting Up, Oracle MRP User's Guide*.

Materials

Select Material: Copy To Asset BOM ☐ Go | Copy From Asset BOM ☐    

Select All | Select None | Show All Details | Hide All Details

Select	Details	Operation	Item Type	Line Type	Item	Item Description	Quantity/Amount	UOM	Date Required	Flexfields
<input type="checkbox"/>		10 Stocked Inventory			Air Filter	Air Filter	1	Ea	26-Apr-2016 04:57:00	 
<div> <div> <p>Operation Description: Default Operation for Work Order</p> <p>Subinventory: <input type="text"/></p> <p>On Hand: 21</p> <p>Issued Quantity: 0</p> <p>Requisition Amount:</p> <p>Requisition Quantity:</p> <p>Received Amount:</p> <p>Received Quantity:</p> <p>Currency: USD</p> <p>Item Cost: 12.99</p> <p>Supply: Push <input checked="" type="checkbox"/></p> <p>MRP Net: Yes <input checked="" type="checkbox"/></p> </div> <div> <p>Locator: <input type="text"/></p> <p>Department: W-Maint</p> <p>Available: 20</p> <p>Allocated Quantity: 0</p> <p>Purchase Order Quantity:</p> <p>Purchase Order Amount:</p> <p>Auto Request Material: No <input checked="" type="checkbox"/></p> <p>Comment: <input type="text"/></p> </div> </div> <p>Material Request Details </p>										
<input type="checkbox"/>		10 Non-Stock Direct	Quantity		EAM Item 1111	EAM Non Stockable Item 1.1	1	Ea	26-Apr-2016 04:57:00	 
<input type="checkbox"/>		10 Description Direct	Quantity			For op1	1	Ea	26-Apr-2016 04:57:00	 

In addition, you can click the Copy icon for the material requirement and copy the existing material line to a new line. This feature reduces the data entry effort when adding similar material requirement lines. The following attributes are copied to the new line:

- Details such as Operation, Item Type, Line Type, Item Code, Quantity, and Date Required.
- Flexfield values.
- Material details such as the Auto Request Material option, Sub-inventory, Locator and Comments.

25. Adding Work Permits to Work Orders

Click the Work Permits region to create work permits or add existing work permits to this work order:

- Select the **Create** check box to create a new work permit, and enter the following information (all fields are required except the Description field):
 - Work Permit name (or number)
 - Description (optional)
 - Permit status
 - Status (Draft is the default value, but you can change it)

- Valid From Date
- Valid To Date
- Flexfields
- Click the **Work Permits** field to search and add an existing work permit from the list of values.

26. Adding Work Clearances to Work Orders

Click the Work Clearance region to add existing work clearances to this work order.

Enter the work clearance that you want to add. The status of the work clearance must be at Draft or Released.

Note: Any work clearances associated with this work order are for informational purposes only. No actions are allowed on them.

Note: You can also add (associate) work clearances to work orders using the Work Clearance pages (Maintenance Super User > Safety Management > Work Clearance). See Safety Management, page 21-118.

Work Permits and Work Clearance Regions

The screenshot displays two data entry regions within a software application. The top region, titled 'Work Permits', includes a tip: 'TIP Permits associated with this work order indirectly via work clearances are only for view purpose.No actions are allowed on them.' It features a table with columns: Create, Work Permit, Description, Permit Type, Status, Valid From Date, Valid To Date, Flexfields, Attachments, and Delete. The first row contains the value '10002' in the Work Permit column, 'Permit' in Description, 'Hot Work' in Permit Type, 'Released' in Status, and dates '21-Aug-2013 13:54:00' and '22-Aug-2013 01:00:00' in the date columns. Below the table is an 'Add 3 Rows' button. The bottom region, titled 'Work Clearance', includes a tip: 'TIP Work Clearances associated with this work order indirectly via permits are only for view purpose.No actions are allowed on them.' It features a table with columns: Work Clearance, Description, Status, Isolation Type, Scheduled Establishment Date, Scheduled Re-Establishment Date, Completion Date, Flexfields, Attachments, and Delete. The first row has empty input fields for the first three columns. Below this table is another 'Add 3 Rows' button. At the bottom of the interface is a navigation bar with buttons: Cancel, Shift Dates, Estimate, Copy Work Order, Save, and Apply. A footer bar contains links: Home, Assets, Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, Reports, Diagnostics, Home, Logout, Preferences, Help, and Personalize Page.

- Optionally click the Save button to save data entered, without applying it to the database.
- Click the Apply button to create the work order.

Generating Preventive Maintenance Work Orders:

You can generate preventive maintenance work orders from the Work Orders page.

1. Navigate to the Schedule Request: Define page (Maintenance Super User > Work Orders > Generate PM Work Orders).

The Generate Preventive Maintenance Work Orders - Self Service value appears in the Program Name.

2. To further narrow down the data selection, you can optionally enter any of the following parameters:

- Start Date (required)
- Cut Off Date (required)
- Area- location where your assets reside
- Owning Department
- Asset Type - Capital and Rebuildable Inventory
- Asset Group - if you previously selected an Asset Type
- Asset Number - if you previously selected an Asset Type
- Set Name - PM set used to implement work orders that are forecasted against default Preventive Maintenance schedules in this set

If a Set Name is specified, you will only select PM schedules for a PM Set for work order generation.

- Project
 - Task - if you previously selected a project
 - Parent Work Order
 - Planner - select if you want to generate PM work orders for specific planners
3. Click the OK button, and the system displays the Generate Preventive Maintenance Work Orders page.
 4. Click the Submit button.

Generating Preventive Maintenance Work Order Reports:

You can generate the Preventive Maintenance Work Order Report that lists the details

of work orders generated from the Preventive Maintenance Work Order Generation concurrent program. Use the Generate Preventive Maintenance Work Orders - Self Service program from the Reports tab in the Maintenance Super User responsibility, or the Reports menu under the Enterprise Asset management responsibility to generate the report.

For more information, see Generating the Preventive Maintenance Work Order Report, page 5-8.

Creating Express Work Orders:

If you need to capture work that has already been completed, use the Express Work Orders feature. You can create an express work order from the following:

- Maintenance Super User > Maintenance Home > Work Orders > Express Work
- Maintenance Super User > Maintenance Home > Assets > Search for an asset > Asset Details > View > Select the Create Express Work Order > Go
- Maintenance Super User > Maintenance Home > Assets > Search for an asset > Click asset link > Details > View > Select Create Express Work Order > Go
- Maintenance Super User > Maintenance Home > Assets > Search for an asset > View > Select Configuration History > Go > View > Create Express Work Order
- Maintenance Super User > Maintenance Home > Assets > Search for an asset > View > Select Asset Operational Log > Go > View > Create Express Work Order
- Maintenance Super User > Maintenance Home > Assets > Search for an asset > View > Select Costs > Go > View > Create Express Work Order

Note: You cannot create an express work order that contains direct items.

Express work orders are automatically created in the Released system status. You can, however, create an express work order with a system status of Complete.

You can update the default value for the Work Order Status to a different user-defined status assigned to your organization.

Note: The system status must be based on a Released or Complete status.

Important: For GIS assets, express work orders cannot be created with a status of Complete. They must first be saved in the Released status and then updated to the Complete status.

1. Select an organization from the drop-down list, and then click the Go button.
2. Select the Work Orders tab.
3. Click the Express Work link.

The system defaults the following information on the page, but you can change the values:

- Work Order Number - if your organization is automatically generating work order numbers
- Start Date - the current system date and time
- Status - Released (default) or Complete

In addition, you can update the status to a different user-defined status assigned to your organization.

- WIP Accounting Class
- Completion Date - default value is the same as the Start Date

4. Optionally enter an asset number.

When you select an asset number, the default value for the Department field appears.

If you select a linear or area asset number, the GIS Asset Details group box appears on the page.

5. Enter an asset group; this is a required field.
6. Optionally enter an asset activity for the work order.

When you click the Save button, the asset activity and any material and resource requirements are populated on the page.

7. Optionally enter a department number. If a department has been set up for the asset, the default department value appears.
8. View asset details such as Asset Number, Asset Criticality, Asset Status and Parent Status.
9. Optionally add details in the Additional Details group box. For example, you can add up to 2,000 characters in the Additional Description field.
10. (Optionally) Enter a value in the Target Start Date field. The default value comes from the Scheduled Start Date field, but can be changed.

11. (Optionally) Enter a value in the Target Completion Date for the work order. The default value comes from the Scheduled Completion Date field, but can be changed.
12. Optionally add GIS asset details such as in the GIS Asset group box.

Note: If you want to add or delete segments, you must first save the express work order with a status of Released.

- Segment Name
- Measure Type
- Scheduled From Measure
- Scheduled To Measure
- Length

Note: The values for Scheduled From Measure, Scheduled To Measure and Length are mandatory for the segments that have measure values defined in the GIS Asset Workbench.

Important: Measure values and Length fields are disabled for segments that are defined with no measures in GIS Asset Workbench.

13. If you are completing an express work order, you can enter the actual GIS asset details in the GIS Asset details group box such as:
 - Segment Name

- Measure Type
- Scheduled From Measure and Scheduled To Measure
- Scheduled Length
- Actual From Measure and Actual To Measure
- Actual Length

Note: The values for Scheduled From Measure, Scheduled To Measure and Length are mandatory for the segments that have measure values defined in the GIS Asset Workbench.

Note: Measure values and Length fields are disabled for segments that are defined with no measures in GIS Asset Workbench.

Important: You cannot update the Scheduled From Measure and Scheduled To Measure values after the work order has been saved with a Complete status.

14. Optionally add details in the Resource Reporting group box such as resources (including contingent workers), persons or equipment, quantities used, departments to charge, and whether you want to complete any operations.

If you want to complete the work order, select the Complete check box for the operation.

You will enter the completion details, including GIS asset information using the Debrief Work Order page. This page is available after you save the work order.

15. Select Yes or No in the Completion Required field. This indicates if the completion of the operation is mandatory before the work order can be completed. The default value is No.

16. Optionally add details in the Material Reporting group box.

Note: Any direct items in the BOM for the activity will not display.

17. Optionally add details in the Failure Information group box.

18. Optionally add any quality plans. You will use the Quality Workbench to enter quality plan information. See Updating Work Orders, page 21-83 for more information.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and enforce signature flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

19. Click **Save**.

Using the OAF Scheduler Workbench:

You can use the Scheduler Workbench found in the Maintenance Super User responsibility to view, manage, and schedule work orders.

1. Navigate to the Scheduler Workbench (Maintenance Super User > Home > Work Orders > Scheduler Workbench).
2. Search for work orders based any of the following criteria:
 - Work Order
 - Asset Number
 - Start Date From
 - Resource
 - Department
 - Start Date To
 - Status
 - Activity
3. Click **Go**.

The Scheduler Workbench page appears.

Scheduler Workbench page

Scheduler Work Bench

Work Order Search

Note that the search is case insensitive

Work Order: Resource: Status:

Asset Number: Department: Activity:

Start Date From: 07-Apr-2023 00:09:10 Start Date To: 30-May-2023 00:09:10

Go Clear

Work Orders

Expand All | Collapse All

Focus	Work Order	Description	Asset Number	Start Date	End Date	Work Order Type	Firm
+	Work Orders						
+	WO420907	Replace Fork Lift Mast	FL2050	19-Apr-2023 07:32:00	20-Apr-2023 11:52:00	Emergency	<input checked="" type="checkbox"/>
+	WO459915	Fork Lift Maintenance	TST1001	20-Apr-2023 09:00:00	21-Apr-2023 10:30:00	Routine	<input checked="" type="checkbox"/>
+	WO459914	Change the battery in electric fork lifts	FL1040	21-Apr-2023 12:00:00	28-Apr-2023 15:00:00	Planned	<input checked="" type="checkbox"/>
+	WO459915	Change Battery in Multimeter	EQ20001	28-Apr-2023 14:36:18	01-May-2023 10:36:18	Routine	<input type="checkbox"/>
+	WO459917	Emission Inspection	CP20000	30-Apr-2023 02:26:00	30-Apr-2023 20:26:00	Planned	<input checked="" type="checkbox"/>

Work Order: WO420907
Description: Replace Fork Lift Mast
InstanceNumber: FL2050
WorkOrderStatus: Released
ActivityCode: Normal Work
ActivityType: Lubrication
AssetGroup: Fork Lifts
WorkOrderType: Emergency
OverridingDepartment: W-Adapt
AssetCriticalityCode: Normal
Priority: Emergency

May -4/30

4. Note the following information in the Work Orders region on the page:

- Work Order number
- Asset Number
- Start Date
- End Date
- Update work order icon: Click this button to access the Update Work Order page to make updates.
- Gantt Chart: The chart will adjust the rescheduling start and end dates for the work order, operations, and resources when you expand the nodes in the chart. The work order can be assigned to a different date, and you can assign employees for the resources. View details of the work order, operations and resources when you place the cursor on the chart (hover).

You can also view additional details by navigating to:

- Work Order: Work order attributes such as Work Order number, Description, Schedule Start and End dates, Asset Number also on appear in the table. Click the work order link to access the Work Order Details page to review the work order details or update the work order. For more information, see Viewing Work Orders, page 21-64.

Note the hierarchical list of operation tasks and operation dependency relationships.

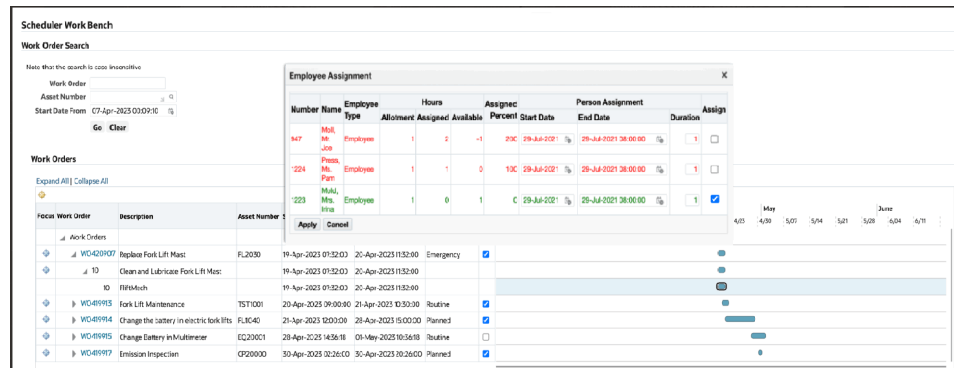
Work Order Hierarchy: Different entities of the work orders are shown in a hierarchy view (Work Order > Operation > Operation Resource > Instance (Single/Multiple)).

- Zoom: Click the plus (+) or minus (-) sign to display the information based

on Month, Week, Days, Hours increments.

- Gantt Chart Actions:
 - Action on Work Order:
 - Reschedule the work order start and end dates.
 - Firm: Select or unselect Firm work order.
 - Properties: Click to view more details of the work order (ToolTip).
 - Action on Operation:
 - Reschedule the work order start and end dates.
 - Properties: Click to view more details of the operation (ToolTip).
- Action on Resource:
 - Rescheduling: Reschedule the operation resource start and end dates.
 - Assign Employee: View and modify the current assignments.
 - Properties: Click to view more details of the resource (ToolTip).

Scheduler Workbench - Additional Information



- Move and Re-Size feature:
 - Move: Click to move the complete work order to a different date or time.
 - Resize: Click to modify the schedule start or end dates from the Gantt chart by expanding the nodes.

Viewing Work Orders:

To view work orders, you can use either the Simple or Advanced Search modes. To view work orders for assets that were transferred to another organization, perform an Advanced Search within the originating organization. You can enter an asset group to view all work orders for the transferred assets, in the current asset group, that were created in the originating organization. A Simple Search filters out the transferred assets, and does not include them in the search results. You can charge resources and material, and complete open work orders for transferred assets. You can execute a simple search on a transferred asset, within its destination organization, to view only work orders that were created in that destination organization.

In addition, you can view the Completed By user name associated with the completion of the work order or operation.

Using the Simple Search, you can also select criteria such as:

- Work Order
- Asset Number
- Include Asset Children
- To
- Include Route Work Order
- Department
- Status

Click the Show More Options link to select additional search criteria:

- Asset Group
- Person
- Purchase Requisition
- Resource
- Pending
- Purchase Order
- Assignment Complete
- Asset Status
- Linear Asset

Click the Advanced Search button to search for work orders based on criteria such as:

- Activity Area
- Activity Source
- Asset Activity
- Asset Criticality

Important: You must personalize the Work Orders result table of Work Order Tab Requests search page to include the Asset Criticality value in the drop-down list. Revise the EAM_REQ_ADVSEARCH_PAGE.xml; Package: EamAssetCriticality. See the *Oracle Application Framework Personalization Guide* for more information.

- Asset Group
- Collection Plan for Quality Triggered Work Order: This field contains the collection plan used during the quality results entry which created a work order.
- Estimate Number
- Hierarchy Type
- Location Code
- Operations Completed: Values of Full, Partial, None
- Person or Equipment
- Planner
- Position Code
- Position Code Description
- Purchase Order
- Purchase Requisition
- Scheduling Parent Work Order: This field includes scheduling parent work orders.
- Segment Code
- Source Work Order-Quality: This field represents source work orders used to

trigger quality work orders during the entry of collection plan quality results.

- Status Type: User-defined work order statuses available for your organization are available for selection.
- Target Completion Date

You can also save search criteria to personalize your search.

1. Click the Personalize Search button, and the Personalized Saved Searches page appears.
2. Click the Create Saved Search button.
3. Enter a name (required) and Description (optional).
4. Select and add the Search Criteria such as Purchase Order and Purchase Requisition.
5. Click Apply.

After executing the search, you can drill into a specific work order. The Work Order page contains content containers, providing information relating to the work order header including shutdown information, asset details, and work order details.

1. Navigate to the Work Orders tab. The All sub-tab is selected.

Note: By default, you are using the Simple Search mode. To switch to the Advanced Search mode, click the Advanced Search button. Use the Advanced Search to view work orders for assets that were transferred to another organization.

2. Optionally select an asset number to search for its related work orders.

You can execute a Simple Search on a transferred asset, within its destination organization, to view only work orders that were created in that destination organization.

3. Optionally select a specific work order.
4. Optionally select Start Date From and To values to display work orders that fall within the specified date range.
5. Choose Go to display all work orders associated with the current search criteria.
The Operations Completed column displays the number of operations that have been completed for the work order.

6. Click the Map All button to display the assets on the Map Workbench.
See Using the Map Workbench, page 22-30 for more information.
7. View asset details such as Asset Number, Asset Criticality, Asset Status and Parent Status.
8. Optionally select a work order number to view details such as:
 - Target Start Date and Target Completion Dates
 - Attachments: Click or hover over the View button to view the attachments
 - Shutdown information

The screenshot displays the 'Work Order: WO395910' page. At the top, there are navigation tabs: 'All', 'Requests', 'Express Work', 'Crew Schedule', 'Mass Time Entry', and 'Generate PM Work Orders'. Below these, a sub-tab 'Work Orders: All >' is selected. The main header includes the work order number 'WO395910' and several action buttons: 'Complete Work Order', 'Update Work Order', 'Check Material Shortage', 'Estimate', and 'View Costs'.

The main content area is divided into two columns. The left column contains the following fields:

Work Order	WO395910
Department	W-Maint
Asset Activity	
Status	Released
System Status	Released
Project	
Task	
Firm	Yes
Activity Cause	
Work On Map	
Work Order Attachments	None Add...
Hide Additional Details	
Target Start Date	09-Mar-2016 04:10:22
Warranty Status	
Tagout Required	No
Warranty Active	No
Notification Required	No

The right column contains the following fields:

Description	safs
Scheduled Start Date	07-Mar-2016 04:11:00
Scheduled Completion Date	07-Mar-2016 04:11:00
Duration(hours)	0
Enable Material Issue Request	Yes
Material Shortage	No as of 07-Mar-2016 04:11:25
Work Order Type	
Activity Type	
Activity Source	
Planner	
Priority	Medium
Target Completion Date	12-Mar-2016 04:10:22
Warranty Expiration Date	
Shutdown Type	
Planned	No

On the right side, there is an 'Asset Details' panel with the following information:

Asset Number	FL1010
Asset Description	Fork Lift 1010
Asset Group	Fork Lifts
Area	Warehouse
Department	W-Maint
Asset Criticality	Medium
Asset Status	Latest
Parent Asset	All Lifts

9. Optionally choose Check Material Shortage.

The Material Shortage field updates to display whether there is a shortage of the material (at that moment in time) that is needed to complete the work order operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within associated BOM is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within the associated BOM are received into Inventory. You should set this process to automatically execute periodically by scheduling the Check Material Shortage concurrent process from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

10. The Operations sub-tab defaults as selected.

This sub-tab enables you to view operations on the current work order, and the operation dependencies in the View Dependency region. Operations are scheduled to run in parallel, sequence, or through dependent steps.

1. Click the Query by Example header row expanded icon to enter search criteria.

The results can be sorted based on each column in the grid. For example, in this screenshot, you can narrow your results using any of the following fields such as:

- Operation sequence
- Description (operation)
- Department
- Resource
- Required
- Assigned Units
- Start Time
- End Time
- Duration (hours)
- Assigned Hours

In addition, the page displays the Completed By user name associated with the completion of the operation.

2. Click the **Enter** button to refresh the results.

Operations Materials Quality Plans Requests Work Relationships Approval History Preventive Maintenance Failure Information Safety

Summary Details

Select Row: Go Add

Show All Details Hide All Details

Select Details	Operation	Description	Department	Resource	Required	Assign
<input type="radio"/>				FltMech		
<input checked="" type="radio"/>	10	Get New Battery From Charger	W-Maint	FltMech	0.1	
<input type="radio"/>	10	Get New Battery From Charger	W-Maint	FKTK	1	
<input type="radio"/>	20	Remove Old Battery	W-Maint	FltMech	0.1	
<input type="radio"/>	30	Install New Battery	W-Maint	FltMech	0.1	
<input type="radio"/>	40	Deliver Battery to Charging Station	W-Maint	FltMech	0.1	

The Completion Required field is display-only. This field indicates if the operation must be completed before the work order can be completed.

1. It is important in asset management to capture both estimated and actual time spent on each operation of a work order. When resources are identified on a work order, there is a time estimate of how long it takes to perform the work. In many cases, the extent of the work load is unknown until the work starts. Resource charging enables you to post actual usage time for persons, equipment, and miscellaneous materials for specific operations on a work order.

To charge resources, select an Operation, and then select Charge Time from the *Select Row*: list of values.

2. Choose Go.
 - Select a Resource Sequence. The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) default, based on the selected resource sequence and the resources associated with the work order. For information on Resource Sequence, Resource, and Unit of Measure, See: Defining Resource Requirements, page 4-47

You can change the resource at the operation level if no transactions have been recorded for the work order.

- Optionally select the Work Performed Date to indicate the actual date the work was performed.
- Optionally select the Person that performed the work.
- Optionally select the Equipment used to perform the work.
- Optionally select the Charge Department to identify which department is

charged for the person or equipment usage.

You can display the list of values if the Person name or Equipment serial number fields are populated. The list of values displays all departments to which the person or equipment is assigned. If you enter a Charge Department manually, the system validates that the department matches the assigned department. If it does not, you will receive an error.

- Optionally select a Reason code to indicate the reason the resource is used.
- Optionally enter a Reference.
- Choose Apply to save your work and return to the **Work Orders** page.

3. Operations are scheduled to run in parallel, sequence, or through dependent steps. For example, Operation 20 is dependent on Operation 10; Operation 20 cannot be performed until Operation 10 is complete. Operations 30 and 40 run in parallel to each other. Operation 40 is independent; it can be performed at any time.

To add an operation dependency, select an Operation, and then select Add Dependency from the *Select Row:* list of values. After the dependency is added, you can view the dependency within

4. Choose Go.
 - Select the Dependent Operation.
 - Select the Dependency Type.
 - Optionally delete existing dependencies by selecting the Delete icon.
 - Choose Apply to create the dependency or Cancel to return to the Work Order page.

5. You can Complete and Uncomplete operations.

After an operation is complete, you can perform an Operation Uncompletion. If an operation is dependent upon another operation, you cannot uncomplete the operation dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 after operation 20 is complete.

To Complete or Uncomplete an operation, select an operation, and then select Complete/Uncomplete from the *Select Row:* list of values.

6. Choose Go.

Quality Plans

Plan Name	Description	Mandatory	Results Entered	Enter Quality Results	View Quality Results	Attachments
CP FOR LUB COL		Not Mandatory	No			
AM_WOCOMP_01	Wo Completion plan for ALL	Not Mandatory	No			

Meters

						Source						
						New Readings			Last Reading			
Details	Meter Name	History	Meter Name	Mandatory	Reading Type	Value	Direction	UOM	Value	Date	Flexfields	History
>	FL1010 Hour Meter		FL1010 Hour Meter	N	Absolute	<input type="text"/>	Ascending	Hour	6002	23-Mar-2014 03:27:00		
>	VG		VG	Y	Absolute	<input type="text"/>	Ascending	Kilometer	10	07-Apr-2014 11:46:14		

Related Reports

- The Actual Start Date and Time defaults; you can optionally update it.
- Optionally enter a Reconciliation Code to describe why you are completing this operation, for example, Operation Completed or Operation Partially Completed.
- Actual Duration identifies the total elapsed time of the work order. It is automatically calculated as the difference between the Scheduled Start and End Dates for the operation.
- Optionally select a Reconciliation Code to describe why you are completing or uncompleting this operation.
- Optionally enter a Reference.
- The page displays the Completed By user name associated with the uncompletion of the work order.
- Optionally click Add to attach any necessary files, URLs, or text to the current operation; each operation can have an unlimited number of attachments.
- The Quality Plans region displays collection plans that are associated with the current asset number for the work order.

When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 3-201. If results entry is required for the collection plan, you are prompted to enter Quality results upon completing the Operation.

Optionally select the Enter Quality Results icon. Required data fields depend on the collection element specifications associated with the collection plan. See: Quality Integration Setup, page 3-201.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and

enforce signature flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.

In addition, the page displays the Completed By user name associated with the completion of the work order or operation. This field appears on the Work Order Details and Operations details pages for the work order.

- Optionally choose Add to attach any necessary files, URLs, or text to the current Quality results. Each results entry can have an unlimited number of attachments.

Choose Apply.

- Choose Apply to save the results entry or Cancel to return to the Complete Operation page.
- Optionally select the View Quality Results icon to view or update existing Quality results already entered. Select Return to Complete Operation.
- Choose Apply to complete the operation or Cancel to return to the Work Order page.
- Optionally update the operations for the current work order. These operations default from the maintenance route (See: Defining Maintenance Routes, page 3-139) associated with the current activity, but you can update and add to them (See: Preparing Work Order Operations, page 4-31).

11. Optionally select the Materials sub-tab to view or add items from the associated item list. When you enter a work order for an asset number, the associated activity attaches the required material (See: Setting Up Maintenance Bills of Material, page 3-134) and resources to complete its operations. The Inventory and Direct Item requirements appear. For Direct Items, the requirement entered in the work order, as well as the items directly procured in Purchasing that have not been received yet, are included in the display. You can update, add, view, and delete material requirements for a specific work order.

Click the Query by Example header row expanded icon to enter search criteria.

The results can be sorted based on each column in the grid. For example, in this screenshot, you can narrow your results using any of the following fields such as:

- Operation sequence
- Description (operation)
- Department

- Resource
- Required
- Assigned Units
- Start Time
- End Time
- Duration (hours)
- Assigned Hours

1. You can optionally request new inventory items.

- Enter an operation.
- Select an Item to search for and add a new inventory item.

You can search for new inventory items by using one of these options:

- Item
- Description
- Cross Reference
- Cross Reference Description
- Manufacturer
- Manufacturer Part Number

1. Query for the item to be added to the work order.

2. Click the Select radiobutton for the inventory item to be added.

- Enter a required Quantity.
- Select a Date Required.

The system date and time default values appear.

- Optionally select a Supply type.

You can optionally select a subinventory location and source locator for the material.

- Optionally select whether an Auto Request Material value.
If you select Yes, requisitions and purchase orders are created automatically for the current inventory item when the work order is released.
- Optionally enter a Comment.
- Select whether to include this Inventory Item in the MRP Net.

Request New Inventory Items

Materials

Select Material: Copy To Asset BOM | Copy From Asset BOM *** Rows 4 to 12

Show All Details | Hide All Details

<input type="checkbox"/>	Details	Operation	Item Type	Line Type	Item	Item Description	Quantity/Amount	UOM	Date Required
<input type="checkbox"/>	▶	10	Stocked Inventory		Rear Wheels - Electric	Rear Wheels Electric Fork	2	Ea	13-Feb-2013 10:20
<input type="checkbox"/>	▶	10	Stocked Inventory		Trans Electric Fork Lift	Transmission / Drive Train	1	Ea	13-Feb-2013 10:20
<input type="checkbox"/>	▶	10	Non-Stock Direct	<input checked="" type="checkbox"/>	Spark Plugs - Masterc	MasterCraft Spark Plugs	6	Ea	13-Feb-2013 10:20

- Click the Apply button to add the inventory item to the material requirements of the work order.
2. Optionally choose Request All to deliver all required material from stores to the work order. A material issue request is generated (move order in Inventory) to request the material associated with a work order. This process is automated upon the work order release, by selecting a check box in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 3-13).
Choose Request to allocate the material requirements to the work order.
Click the Material Request Details button to view any associated material request information such as request number, quantity and status.
 3. Optionally choose Copy From Asset BOM to update the BOM associated with the asset group with any items list changes (See: Setting Up Asset Bills of Material, page 3-103)
 4. Select the necessary Material, and then choose Apply.
 5. Optionally choose One Step Issue. A one-step issue is a substitute for the Material Issue Request and Material Issue Verification activities; a separate request is not created.
 - Select the work order that you wish to issue material. It must be enabled for material issue requests. The current work order defaults. See: Routine Work Orders, page 4-4.
 - Optionally select the specific Operation to view results on existing One Step

Material Issues that were issued to that operation. Operations existing within the selected work order are available.

- Optionally select a specific Material if your query is to view existing One Step Material Issues.
 - Choose Go. All planned material appears in the Select Material(s) region. Planned material is material that exists in the material requirements. See: Defining Inventory Material Requirements, page 4-38.
 - Within the Select Material(s) region, optionally select unplanned Material (material not part of the material requirements) to issue to the current work order.
 - Select an Operation to issue the material. The UOM defaults to the current material.
 - Select the Quantity of the material that you are issuing to the work order.
 - Optionally select a Subinventory to pull the material from in Inventory.
 - If you previously selected a Subinventory requiring a Locator, select a Locator.
 - If the current material is lot controlled, select a Lot.
 - If the current material is serial controlled, select From and To Serial numbers.
 - Optionally select a Revision.
 - If the material is Rebuildable Inventory, optionally choose the Replaced Rebuild Details icon to specify the replacement Rebuildable Item information for the current Rebuildable Item. After selected, you can indicate the following within the Replaced Rebuild Details region:
 - Rebuild Item - defaults as the current Rebuild Item; you can update it.
 - Rebuild Serial Number - optionally enter if you know what serial number is coming out (for serialized rebuilds).
 - Rebuild Activity - the activity you want to associate with the created rebuild work order
 - Rebuild Work Order - the name of the work order created for the replaced Rebuildable Item
- If you specify a replaced rebuild able item, a work order is generated for the replaced rebuild able item because it is most likely problematic and you

can have it repaired. If a serial number is provided for the replaced rebuildable item, it is removed from the asset hierarchy and the configuration history is updated. If nothing is specified within the Replaced Rebuild Details region, the replaced rebuild defaults as the same rebuild item that you are issuing.

A replace rebuild work order is created only when rebuild details are entered for a single serial number issue. If you are issuing multiple serial numbers, then the selected rebuild region is unavailable.

- Optionally, select the Details Show-Hide toggle icon.

Optionally select a Reason for the current issue. Select the Date required for the material to the work order. Today's date and time default values appear. Optionally enter a Reference.

- Select the Select check box next to the lines for which you are issuing to the current work order.
- Choose Issue.

6. You can optionally choose Request Item, within the Direct Items region, to add direct items to the material requirements for the work order.

Non-stock direct items can be included in the internal catalog, but the decision is made to not maintain an inventory balance. These items are not transactable, not stockable, but you can procure them. Direct items are either non-stock or description-based. Non-stock direct items can represent items that are not stocked in inventory, or services that need to be purchased from a supplier. Non-stock direct items are not stocked in inventory, but are defined in the Item Master as an inventory item, purchaseable, and purchase but not stockable (See: Inventory Attribute Group, *Oracle Inventory User's Guide*).

Direct items are contrived as "one-off", bought directly from a vendor for a specific work order and Operation. They are delivered directly to the Shop Floor from maintenance work order execution. See: Defining Direct Item Material Requirements, page 4-38. You can add Planned Direct Items to a work order BOM or an activity BOM. Planned direct items must first be created in the Item Master as Non-Stockable and Purchaseable inventory items (See: Non-Stock Direct Item Setup, page 3-153). A purchase requisition is optionally automatically created for these items, when the work order is released. See Inventory Attribute Group, *Oracle Inventory User's Guide*.

Request New Direct Items

Update Work Order: WO102907

* Indicates required field
Time = hours

Work Order: WO102907 Asset Number: DTF35000 Asset Group: Vehicles Scheduled Start Date: 08-Apr-2004 09:06:00 Scheduled Completion Date: 08-Apr-2004 09:07:00 Duration: 0.017 Wip Accounting Class: MaintWAC Request Number: <input type="text"/>		Description: <input type="text" value="Leaking Oil"/> Department: <input type="text" value="F-Maint"/> Asset Activity: <input type="text" value="Firm"/> Status: <input type="text" value="Complete"/> Shutdown Type: <input type="text" value="High"/> Priority: <input type="text" value="High"/> <input type="checkbox"/> Pending	Work Order Stats Required Hours: 0.02 Assigned Hours: 0.0 Unassigned Hours: 0.02 Estimated Cost: 16.84 Actual Cost: 47.59 Material Shortage:
<input type="button" value="Cancel"/> <input type="button" value="Shift Dates"/> <input type="button" value="Re-Estimate"/> <input type="button" value="Copy Work Order"/> <input type="button" value="Save"/> <input type="button" value="Apply"/>			
Additional Details			
Failure Information			
Operation Requirements			
Material Requirements			
Select Material: <input type="button" value="Copy To Asset BOM"/> <input type="button" value="Go"/> <input type="button" value="Copy From Asset BOM"/>			
<input type="button" value="Select All"/> <input type="button" value="Select None"/> <input type="button" value="Show All Details"/> <input type="button" value="Hide All Details"/>			
<input type="checkbox"/> <input type="button" value="Show"/> <input type="checkbox"/> <input type="button" value="Show"/> <input type="checkbox"/> <input type="button" value="Hide"/>	Operation Item Type 1 Stocked Inventory 1 Stocked Inventory Non-Stock Direct	Line Type Item Item Quantity	Item Description 10-40W Oil Oil Filter <input type="text"/>
			Item Description 10-40W Car / Truck Motor Oil Oil Filter for Vehicles <input type="text"/>
			Quantity/Amount 1 1 1
			UOM QT Ea <input type="text"/>
			Date Required 08-Apr-2004 08-Apr-2004 <input type="text"/>
			Delete <input type="button" value="Delete"/> <input type="button" value="Delete"/> <input type="button" value="Delete"/>
Operation Description: <input type="text"/> Requisition Quantity: <input type="text"/> Received Quantity: <input type="text"/> Supplier: <input type="text"/> Supplier Site: <input type="text"/> Purchasing Category: <input type="text" value="MISC.MISC"/> Currency: <input type="text" value="USD"/>			
Department: <input type="text"/> Purchase Order Quantity: <input type="text"/> Auto Request Material: <input type="text" value="Yes"/> Contact Name: <input type="text"/> Contact Phone: <input type="text"/> Supplier Item: <input type="text"/> Price: <input type="text"/>			

- Select an Operation.

- Select an Item Type.

Description Direct: This direct item type is not stored in Oracle Inventory.

Non-Stock Direct: This direct item type is stored in Oracle Inventory. The Stockable check box is cleared for the master item.

- If you selected a Non-Stock Direct item type, select an Item. This field is disabled if a Description Direct item type was previously selected.
- Enter a Description, if you previously selected a Description Direct item Type.
- Enter a Date Required. The system date defaults.
- Optionally enter a Purchasing Category. See: Setting Up Purchase Order Category Associations for Direct Items, page 3-230.
- Choose Apply.

- Optionally select Check ATP from the *Select Material(s):* list of values to check available to promise information for all selected Material.

- Choose Go.

8. Optionally select Copy To Asset BOM from the *Select Material(s)*: list of values, to copy any selected material to the asset BOM for the current asset number.
 - Choose Go. Both stocked and non-stocked inventory items are copied.
9. Optionally select the Update icon to update the current material requirement information.
10. Optionally select the Request More icon to request more of the current material requirement to the work order.
11. Optionally choose Delete to delete the current material requirement.
12. Click the Material Request Details button to view any associated material request information such as request number, quantity and status.

Material Request Details				×
Request Number	Line Number	Quantity	Line Status	
2316522	2	1	Closed	

12. Optionally choose the Quality Plans sub-tab to view the work order details and operation specific Quality collection plans. The collection plans associated with the asset number appear. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers may have been specified to make specific assets eligible for the collection plan. See: *Quality Integration Setup*, page 3-201.
1. Optionally select the Enter Quality Results icon. Required Data fields depend on the collection element specifications for the collection plan. See: *Quality Integration Setup*, page 3-201.

You can associate electronic reporting and electronic signatures (ERES) enabled transaction events such as Quality Result Creation or Update and enforce signature flows when you add and update quality results for Asset Query quality collection transactions in the Quality Workbench. For the list of Oracle Quality events seeded in Oracle E-Records, see E-records and E-signatures for Oracle Quality in the *Oracle Quality User's Guide*.




- Optionally choose Add to attach any necessary files, URLs, or text to the current Quality results. Each results entry can have an unlimited number of attachments.

Choose Apply.

- Choose Apply to save the results entry.
2. Optionally select the View Quality Results icon to view or update existing Quality results already entered. Select Return to Complete Operation.
 3. Choose Update Work Order to update the current work order.
13. Optionally select the Requests sub-tab to view any service or work requests associated with the current work order.

Click the Request Number link to access the View Work Request page to view work request details.

Requests

Work Order Linear Details	Operations	Materials	Quality Plans	Requests	Work Relationships	Approval History	Preventive Maintenance	Failure Information	Saf
Assign to Work Order   									
Request Number	Description	Status	Request Type	Asset	Department	Delete Assignments			
No results found.									
Return To Work Orders									
Complete Work Order Update Work Order Check Material Shortage Estimate View Cos									

- Choose Assign to Work Order to associate the selected requests to the current work order.
14. Optionally select the Work Relationships sub-tab to manage work order schedules and view work order details. Work order relationships enable you to manage a network of related work orders, enabling you to manage complex projects, such as planned or facility shutdowns. The different relationships provide separate scheduling rules that are used to manage large projects. A Gantt chart enables you to manage work by displaying work order schedules and a summary of work order details. The drag and drop functionality for the Gantt chart enables you to manage schedules with ease. See: Work Order Relationships, page 4-52.

Work Relationships

Work Order Linear Details | Operations | Materials | Quality Plans | Requests | **Work Relationships** | Approval History | Preventive Maintenance | Failure Information | Sa

Select Work Order: Update Dependencies Update Work Hierarchy Update Alternate Cost Hierarchy View Cost

Expand All | Collapse All

December

Select Focus Work Order T

WO243863

View All Relationships

Work Order	Description	Relation	Relation Status	Asset Type	Asset Group	Asset Number
RWO98003	Recharge Fork Lift Battery	Follow-up Child		Rebuildable Inventory	Fork Lift Battery	Battery1004

Return To Work Orders: All

Uncomplete Work Order Update Work Order Check Material Shortage Estimate View Co

1. Optionally choose Update Work Hierarchy to view or update the Scheduling Relationship.
 - Select Create Child Work Order from the Select Work Order: list of values to create a Parent Child Relationship. See: Work Order Relationships, page 4-52.
 - Select Add Existing Work Orders from the Select Work Order: list of values to add Scheduling children to the current work order.
 - Choose Apply.
 - Optionally choose Shift Dates to shift the scheduling dates.
 - Optionally choose Remove to remove the selected work order from the hierarchy.
 2. Optionally choose Update Alternate Cost Hierarchy to view or update the cost relationship. See: Work Order Relationships, page 4-52. You can optionally create child work orders, add existing work orders, and view cost information for the current cost relationship.
 3. Optionally choose View Costs to view the cost information for the work order.
15. Click the Work Order link in the View All Relationships region to view work order dependencies.
 16. Optionally select the Approval History tab to view the work order approval history.

A work order might require approvals or notifications at different stages of its life cycle. For example, organizations typically want an approval process in place before a work order is released. Work flow automates this process. You can initiate

Work flow to generate notifications, approvals, transactions, and update a work order status. You can enable the Work flow for Work Orders option within the eAM Parameters (See: Defining eAM Parameters, page 3-13). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Work flow to indicate what events trigger Work flow. Seeded events that you can enable to trigger Work flow are: work order creation, work order release approval, work order completion, work order status change, operation completion. See: Setting Up Oracle Work flow, *Oracle Workflow User's Guide*, Setting Up the Business Event System, *Oracle Workflow User's Guide*, and Defining Work Order Statuses, page 4-24).

17. Optionally select the Preventive Maintenance tab to view PM information.

Enterprise Asset Management enables you to generate work orders automatically based on meter readings, runtime intervals, and calendar days. Preventive maintenance Activities reduce the probability of failure or degradation of the assets' physical conditions. These Activities are executed periodically, by usage, or based on the condition of an asset number (asset or rebuild able serial number). Meters are entered to measure any asset number that needs to be measured and periodically serviced, based on the measurement (See: Preventive Maintenance Overview, page 5-1).

18. Optionally select the Failure Information tab to view Failure Analysis information for this work order (See: Failure Analysis Overview, page 28-1).

Viewing Crew Schedules:

You can perform a comprehensive view of schedules for persons by department or resource. Planners can determine their crews' workload details. Planners may also modify and change the resource workloads.

1. Navigate to the Crew Schedule page (Work Orders > Crew Schedule).
2. Using the fields in the Search region, you can select the list of persons in which to view or update work loads. You can specify a date range for which person workload details appear.
3. Choose Go to display a list of persons, based on the results of the entered search criteria.

Entering Time for Multiple Work Orders:

Resource transactions define the time an assembly spends at an operation and the cost you incur for an operation. There are two types of resources: person and machine. You can transact both person and machine resources. A resource is an person, piece of equipment, or contractor service, used to perform an operation. You can charge resources to a specific work order

You can enter time for one or multiple orders at once, using the Mass Time Entry page.
See Also: Resource Transactions, *Oracle Work in Process User's Guide*.

1. Navigate to the Mass Time Entry page (Maintenance Super User: Work Orders tab > Mass Time Entry sub-tab).

2. Select a valid work order.
3. Enter the Operation sequence of the work order routing to charge (See: Preparing Work Order Operations, page 4-31).
4. Enter the Resource sequence to charge (See: Defining Resource Requirements, page 4-47).
5. Enter the Quantity to charge.
6. Select a UOM to measure the quantity charged. This default value comes from the department setup for the current resource (See: Defining Departments and Resources, page 3-24).
7. Select a Person or Equipment resource to charge. You can add contingent workers as persons.
8. Select a Charge Department.
9. Optionally enter Resource Sequence, Reason, Reference, and Work Performed Date information in the Hide region.
10. Choose Apply to save your work.

Updating Work Orders:

1. Navigate to the Work Orders page.

2. Enter a work order number.

Optionally, indicate whether you want to include the child assets associated with the work order.

3. Click the Asset Hierarchy icon next to the Asset Number field to change the asset. See *Creating Work Orders*, page 21-46 for more information.

Select the new asset and the value appears in the Asset Number field.

4. Optionally select Yes in the Include Route Work Orders field to retrieve work orders that have asset route work orders.

5. Click the Advanced Search button to add the following as search criteria:

- Asset Criticality: This field enables you to search based on the asset priority ranking

Important: You must personalize the Work Order results table of Work Order Tab Requests search page to include the Asset Criticality value in the drop-down list. Revise the EAM_REQ_ADVSEARCH_PAGE.xml; Package: EamAssetCriticality. See the *Oracle Application Framework Personalization Guide* for more information.

- Operations Completed: This field enables you to search work orders based on operations completed. Options are None, Partially Completed or Fully Completed.
- Source Work Order-Quality: This field represents source work orders used to trigger quality work orders during the entry of collection plan quality results.
- Collection Plan for Quality Triggered Work Order: This field contains the collection plans used for the creation of quality triggered work orders.
Select a collection plan to narrow your results.
- Scheduling Parent Work Order: This field includes the scheduling parent work orders.

6. Click the Go button.

The Operations Completed column displays the number of operations that have been completed for the work order.

7. Click the Update Work Order button for the work order in the Work Orders Search results table.

Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: *Implementing Function Security, Oracle Applications System Administrator's Guide - Security.*

8. Optionally update the work order information, such as:

- **Asset Number:** You can change the asset number for manual (not PM) work orders with a status of Unreleased, Draft, and Released.

The activity of the work order may be removed if the new asset does not have the same activity associated to it. Removing the activity in the work order due to an asset number update does not delete the previously added material and resource requirements.

- For Unreleased or Draft status: When you select a different asset number, all related information such as Department and WIP Accounting Class will be updated in the work order.

In addition, any cost estimates and failure information associated with the previous asset will be removed if it does not match the new asset. Further, the updated costs are reflected in the estimation pages for both the old and the new asset.

- For Released status: Updating the asset number will have costing impacts such as the redistribution of asset costs for the completed transactions, and any failure information will be cleared during the asset update. However, the WIP Accounting Class of the work order does not change.

In addition, the following conditions must exist in order to update the asset number:

- No work order cost has been capitalized or billed.
- No unclosed or pending transactions exist for the work order.
- The period for the work order is Open.
- Work order close variances for the period have not been created (unclosed work orders).

- No quality results have been entered for the work order.
- **Target Start Date and Target Completion Dates:** Target dates must be manually updated. You can change the values for these fields if the work order status is not Cancelled or Closed.

Important: Target dates are not updated if the work order scheduled dates are updated.

- **Department:** You can change the department at the operation level if no transactions have been recorded for the work order.

- Optionally select a Planner for the work order.

- **Status:** You can change the status of the work order.

If you change the status of the work order to Cancelled, it will automatically cancel any associated work request. You must enable the EAM: Work Request Cancel Options profile option to use this feature.

When you cancel a work order, the work request status will change based on the profile option setup. For more information, see Profile Option Details, *Oracle Enterprise Asset Management Implementation Guide*.

If the work order has a status of Complete and you change the status to Complete-No Changes, the system validates if there are any existing open purchase requisitions or purchase orders for the work order materials. You will receive an error message if there are any open purchase requisitions or purchase orders. You cannot complete or update work orders to Complete-No Charges if there are open purchase requisitions or purchase orders attached to the work order.

9. Optionally update the Work Order Type, Shutdown Type and Priority fields.

10. Optionally select an **Employee** for the work order.

Note: In addition, you can select an employee (resource) at the *operation* level.

11. Click the Route Details icon to access the Work Order Route Details page.

Work Order Route Details

Work Order

PM394050

Asset Route

Fork Lift Daily Maintenance

Description

All Fork Lift Daily Maintenance

☐ Allow Route Updates at Work Order
 ☐ Enable cost % updates at Work Order
 ☐ Route cost allocated equally
 ☒ Enable Route Assets Quality Results
 ☐ Route Details Modified at Work Order

Route Details And Cost Distributions

Allocate Cost Equally

Previous

1-5

Next 5

Seq Number	Asset Group	Asset Group Description	Asset Number	Asset Description	Cost Distribution %
1	Fork Lifts	Fork Lift Asset Group	FL1010	Fork Lift 1010	9
2	Fork Lifts	Fork Lift Asset Group	FL1020	Fork Lift 1020	10
3	Fork Lifts	Fork Lift Asset Group	FL1030	Fork Lift 1030	11
4	Fork Lifts	Fork Lift Asset Group	FL1040	Fork Lift 1040	12
5	Fork Lifts	Fork Lift Asset Group	FL2010	Fork Lift 2010	13
<div>Allocate Cost Equally</div> <div>Total</div>					55

See Managing Asset Routes at the Work Order Level, page 21-21 for more information regarding the fields on this page.

12. Optionally update fields in the Additional Details region. For example, you can add up to 2,000 characters in the Additional Description field.
13. Optionally enter values for the GIS Asset Details region.
See Creating Work Orders, page 21-46.
14. Optionally update fields in the Operations region.
 - Completion Required: Select the Yes or No to identify this operation as a mandatory completion operation. The default value is No. You can change this option prior to operation completion. If the operation has been completed, the field is display-only.
 - Update Operation: Click the button if you want to update the operations for the work order such as scheduled dates.
15. Optionally select or hover over the paperclip Attachments icon to attach relevant documents, such as drawings, standard procedures, and reference guides. You can attach file, URL, and text attachments. If you want to view the attachments, hover or click the View button.

Note: The Estimate Number field is display-only and cannot be updated.

To update details for asset route work orders

1. Open the GIS Asset Details region.

For GIS assets that have associated route work orders, the GIS Asset Details region contains any default active segments from the member assets.

2. Select a linear asset in the Asset Number column. This column displays for linear assets that have associated asset route work orders.
3. For non-segmented assets, the Segment Name and Segment Description fields are blank.
4. Select the appropriate check boxes for the rows that you want to delete, and click the Delete Segments button.
5. Click the Add 3 Rows button to add segments to the work order.
6. Save your work.

To assign persons or equipment to an operation for scheduling

1. Open the Operations region.
2. Select the operation in which to assign the person or equipment resource.
3. Select the Assign Person value from the Select Action drop-down list.
4. Click the Go button.

Work Orders: All > Work Order: WO395912 >

Assign Person: Operation 10

Cancel Save Apply Export Printable Page

Work Order	WO395912	Description	Lubricate Fork Lift Mast
Status	Draft	Firm	No
Asset Number	FL1010	Description	Fork Lift 1010
Asset Group	Fork Lifts	Description	Fork Lift Asset Group
Operation	10	Description	Clean and Lubricate Fork Lift Mast
Department	W-Maint	Duration	1
From	14-May-2020 08:00:00	To	14-May-2020 09:00:00

Resource Details

Resource	FliftMech
Assigned Units	1
Required	1
Assigned	1
Unassigned	0
From	14-May-2020 08:00:00
To	14-May-2020 09:00:00

Search

To view schedules for a different horizon, change the From and To Dates.

Department: W-Maint
 Resource: FliftMech
 From Date (example 29-May-2020 15:21:14): 14-May-2020 08:00:00
 To Date: 14-May-2020 09:00:00
 Go Clear

☒ TIP Allotment, Assigned, Available hours do not include time in the past.

Select	Details	Name	Department	Resource	Hours			Assigned Percent	Person Assignment			Assign
					Allotment	Assigned	Available		Start Date	End Date	Duration	
<input type="radio"/>	▶	Moll, Mr. Joe	W-Maint	FliftMech	0	0	0	0	14-May-2020 08:00:00	14-May-2020 09:00:00	1	<input type="checkbox"/>
<input checked="" type="radio"/>	▶	Small, Mr. Andy	W-Maint	FliftMech	0	0	0	0	14-May-2020 08:00:00	14-May-2020 09:00:00	1	<input checked="" type="checkbox"/>
<input type="radio"/>	▶	Stand, Mrs. Irene	W-Maint	FliftMech	0	0	0	0	14-May-2020 08:00:00	14-May-2020 09:00:00	1	<input type="checkbox"/>

The header region displays information about the current work order and the specific operation. You can assign persons to a work order operation and work order resource. Person assignments result in the creation of new person or equipment instances that are assigned to the chosen Resource code and the creation of a new resource requirement. The Resource Details content, within the header, displays all information about the resource.

Using the fields in the Search region, you can search for persons, based on their eligibility or availability, and assign one or more to the work order. All persons who belong to the department for the current operation, and those who are assigned to the Resource code appear. The start and end times for the person default to the resource start and end time.

- Optionally select a different department. Available departments are all departments within the current organization.

Additional Information: You can only view persons and their schedules from other departments; they are not available for assignment. If you want to assign persons from other departments, you can perform this within the Update Work Order page by adding another operation, assigning that department to it, and then accessing this Assign Person page.

- Optionally select a Resource. All resources assigned to the department for the current operation are available.

You can change the resource at the operation level if no transactions have been

recorded for the work order.

7. Optionally specify a date range for which person workload details are displayed.
8. Optionally select a person. All persons including contingent workers who are assigned to the work order operation are available.
9. Optionally select a Competence Type.
10. Optionally select a Competence.
11. Choose Go.

A list of persons appears based on your search criteria. You can view the availability information to decide which person should be assigned to the current operation.

- *Allotment*: Total hours a person is available for work, based on shift and specified Date Horizon (From and To Date in the Search region of the Assign Person page).
- *Assigned*: Total hours a person is scheduled for any work orders during the same Date Horizon. Assigned hours do not include work with a Complete-No Charges, Complete, Cancelled, or Closed status.
- *Available*: Column represents the Allotted Hours- Assigned Hours.
- *Assigned Percent*: Assigned Hours/Available Hours
- *Start Date and End Date*: The default values of the work order start and end dates.
- *Duration*: The total hours required to complete the work order.

You can update the schedules for persons on existing work orders, or dissociate them using the links in this section. The region displays work orders across departments and organizations that a person is assigned to. If the work order is from a different organization, you cannot drill down or modify it.

Note: You can modify the schedule dates for persons only if the work order status is Firm.

Additional Information: You can update the start and end dates for the person within the previous Update Work Order page by selecting the Update Work Order link at the top of the page.

You can also stagger start and end times for the person on the Update Work Order page, by adding a new person row and providing the staggered start and end times for the person.

12. The Assignment Details region displays a list of all the work orders (across departments and organizations) to which the person is assigned.

Assignment Details: Small, Mr. Andy

Expand All | Collapse All

Focus	Work Order	Resource	Usage	Start Date	End Date	Assign	Update	Description
	Small, Mr. Andy							
	WO395909	FlittMech	1	14-May-2020 08:00:00	14-May-2020 09:00:00	<input checked="" type="checkbox"/>		Task: Begins on 14-May-2020, ends on 14-May-2020
	WO395912	FlittMech	1	14-May-2020 08:00:00	14-May-2020 09:00:00	<input checked="" type="checkbox"/>		Task: Begins on 14-May-2020, ends on 14-May-2020

Diagnostic Console

Cancel Save Apply Export Printable Page

Click the work order link to view the work order.

You can update the person schedules on existing work orders, or unassign the person by clicking the Update button. If a work order is from a different organization, you cannot drill down or modify it.

Note: You can modify the schedule dates for the person only if the work order status has a status of Firm.

13. Select the Assign check box next to the person to assign to this operation.
14. Click Apply.
16. Optionally click the Materials section to update material requirements.
Click the Material Request Details button to view any associated material request information such as request number, quantity and status.
17. Optionally choose Shift Dates to shift the work order dates forward or backward by a specified number of days.
You can also enter a new scheduled start date or end date. All other work order dates, including operations, resource, and resource instance dates, are shifted and synchronized accordingly.
18. Optionally choose Estimate to estimate the work order costs. The newly updated estimated costs appear in the Content region.
19. Optionally choose Copy Work Order to copy all work order details, including asset number, activity, operation, resource, resource instance, and materials to a new

work order. You can change any fields before creating the new work order.

20. Optionally choose Save to save the updated information, without exiting the current screen.
21. Choose Apply to save all updates and return to the Work Orders page.

Assigning Persons to Work Orders:

You can assign persons to non-preventive maintenance (PM) work orders using any of the following options:

- Work Orders page (Maintenance Super User > Home > Work Orders)
- Employee Assignment page (Maintenance Super User > Home > Work Orders > Employee Assignment)

Use the following steps to assign persons using the Work Orders page.

1. Navigate to the Work Orders search page.
 - Use the Simple Search to retrieve work orders based on any of the following fields.
 - Work Order Number
 - Asset Number
 - Start Date From and To
 - Include Route Work Order
 - Department
 - Work Order Status
2. Optionally, click the Show More Search Options link to select additional search criteria such as:
 - Asset Group
 - Person
 - Purchase Requisition
 - Resource
 - Pending

- Purchase Order
- Assignment Complete
- Asset Status
- Linear Asset

3. Optionally click the Advanced Search button to add criteria such as:

- Assigned Person
- Collection Plan for Quality triggered Work Order
- PM Set
- PM Schedule
- Activity
- Planner
- Source Work Order-Quality

4. Click Go.

5. Optionally click the work order link or select the Update button for the work order to assign persons to a single work order.

Note: Work orders with no operations will be not available for selection. In addition, work orders with operations but without Person resource requirements will not be available for selection.

The screenshot displays the 'Work Orders' section of the Oracle Enterprise Asset Management interface. At the top, there are navigation tabs: Maintenance Home, Assets, Work Requests, Work Orders (selected), Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, and Reports. Below these are sub-tabs: All, Requests, Express Work, Crew Schedule, Employee Assignment, Mass Time Entry, and Generate PM Work Orders. A 'Text Search' button is visible on the right.

The 'Simple Search' section includes a note: 'Note that the search is case insensitive'. It features input fields for 'Work Order' (WO#), 'Asset Number' (FL1010), 'Start Date From' (19-Nov-2018 15:00:00), 'To' (04-Feb-2015 05:43:46), 'Department' (W-Maint), and 'Status' (Released). There are 'Go' and 'Clear' buttons. An 'Advanced Search' link is also present.

Below the search fields is a table of work orders. The table has columns: Select, Asset Number, Asset Group, Description, Scheduled Start Date, Duration(hours), Owning Department, Status, Update Work Order, Debrief Work Order, Print Work Order, and Operations Completed. The table lists six work orders, with the first one selected.

Select	Asset Number	Asset Group	Description	Scheduled Start Date	Duration(hours)	Owning Department	Status	Update Work Order	Debrief Work Order	Print Work Order	Operations Completed
<input checked="" type="radio"/>	WO396908	FL1010	Fork Lifts	Lubricate Fork Lift Mast	19-Nov-2018 15:00:00	1 W-Maint	Released				0 of 1
<input type="radio"/>	WO387910	FL1010	Fork Lifts		04-Feb-2015 05:43:46	0 W-Maint	Released				0 of 1
<input type="radio"/>	WO373910	FL1010	Fork Lifts		21-Aug-2013 09:08:00	0 W-Maint	Released				0 of 1
<input type="radio"/>	WO373908	FL1010	Fork Lifts		21-Aug-2013 09:02:00	0 W-Maint	Released				0 of 1
<input type="radio"/>	WO325907	FL1010	Fork Lifts		14-Feb-2013 10:54:00	1 W-Maint	Released				0 of 1
<input type="radio"/>	WO324907	FL1010	Fork Lifts		13-Feb-2013 18:20:00	2 W-Maint	Released				0 of 1

6. Optionally, select multiple work orders.

- Click the Assign Person button, and click Go.

To assign a person to a single work order:

- Navigate to the **Work Orders** page, and select Employee Assignment.
- Use the Simple Search or Advanced Search to retrieve work orders, and click Go.
- Click the work order link, or click the button in the **Assign Person** column for the corresponding work order line in the results region of the page to assign one person to a single work order.

Note: Work orders with no operations will be not available for selection. In addition, work orders with operations but without Person resource requirements will not be available for selection.

- Click the radiobutton for the Operation step to which you want to assign a person.
- Select the Assign Person button in the Assign Person column.

The Employee Assignment pop-up window appears.

Employee Assignment										
Number	Name	Employee Type	Hours			Assigned Percent	Person Assignment			Assign
			Allotment	Assigned	Available		Start Date	End Date	Duration	
947	Moll, Mr. Joe	Employee	0	0	0	0	16-Apr-2021 14:00:00	16-Apr-2021 15:00:00	1	<input type="checkbox"/>
1218	Stand, Mrs. Irene	Employee	0	0	0	0	16-Apr-2021 14:00:00	16-Apr-2021 15:00:00	1	<input type="checkbox"/>
1217	Small, Mr. Andy	Employee	0	0	0	0	16-Apr-2021 14:00:00	16-Apr-2021 15:00:00	1	<input type="checkbox"/>

Apply Cancel

- View the persons who may be available for assignment to the work order operation.
- Select the **Assign** check box for the person to assign to the operation.
- Click **Apply**.

Using the Employee Assignment Page:

You can assign persons to both PM and non-PM work orders using the Employee Assignment page.

Use the Employee Assignment page to assign:

- One person to a single work order

- One person to multiple work orders
- Multiple persons to one work order
- Multiple persons to multiple work orders

Follow these steps to assign multiple persons to multiple work orders:

1. Navigate to the Work Orders page.
2. Click the Employee Assignment link and the Simple Search page appears.
3. Enter values for any of the following fields to narrow your search:
 - Department
 - Resource
 - Assignment Employee
 - Assignment Complete (required): Yes/No
 - PM Set
 - PM Schedule
 - Activity
 - Planner
 - Work Order Schedule Start Date From
 - Work Order Schedule Start Date To
 - Work Order Status
 - Work Order
 - Competence Type
 - Competence
4. Click Advanced Search to include these values:
 - Area
 - Planned
 - Scheduling Parent Work Order

- WIP Accounting Class
 - Work Order Description
 - Work Order Owning Department
 - Work Order Shutdown Type
 - Work Order Type
5. Click Go, and the results appear in the Employee Assignment Search region on the page.
- Note that the system displays results in columns such as:
- Work Order
 - Operation
 - Resource Sequence
 - Resource
 - Required number of resource
 - Unassigned - represents the unassigned hours for the operation (step)
 - Units - represents the number of assigned units for the operation (step)
 - Start and End Times
 - Duration - in hours
6. Select the check box for the work orders.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Employee Assignment Mass Time Entry Generate PM Work Orders

Simple Search Save Search Advanced Search

Note that the search is case insensitive

Department: W-Maint Resource: Assignment Employee: Assignment Complete: No

PM Set: PM Schedule: Activity: Planner:

Work Order Schedule Start Date From: 01-Jan-2019 00:00:00 Work Order Schedule Start Date To: 27-Jul-2021 20:11:02 Work Order Status: Work Order:

Go Clear

Employee Assignment Search

Select Assign Person | ***

Work Order	Operation	Description	Department	Resource	Sequence	Resource Required	Unassigned	Units	Assign Person	Start Time	End Time	Duration	Flexfields	Attachments
<input checked="" type="checkbox"/>	YVD_EXP_WO_1_10	Clean and Lubricate Fork Lift Mast W-Maint	10	FiltMech	1 1	1	<input type="checkbox"/>	1	<input type="checkbox"/>	2019-02-18 07:00:00.0	2019-02-18 08:00:00.0	1		+
<input checked="" type="checkbox"/>	YVD_EXP_WO_2_10	Clean and Lubricate Fork Lift Mast W-Maint	10	FiltMech	1 1	1	<input type="checkbox"/>	1	<input type="checkbox"/>	2019-02-18 07:00:00.0	2019-02-18 08:00:00.0	1		+
<input checked="" type="checkbox"/>	WO405909	Clean and Lubricate Fork Lift Mast W-Maint	10	FiltMech	1 1	1	<input type="checkbox"/>	1	<input type="checkbox"/>	2021-04-16 07:00:00.0	2021-04-16 08:00:00.0	1		+

- Click the **Assign Person** button, and the **Mass Assignment of Employees** pop-up window appears.

Mass Assignment of Employees ×

...

Number	Name	Employee Type	Assign
947	Moll, Mr. Joe	Employee	<input type="checkbox"/>
1218	Stand, Mrs. Irene	Employee	<input type="checkbox"/>
1217	Small, Mr. Andy	Employee	<input type="checkbox"/>

Save Cancel

- Click the Assign check box for the persons to assign to the selected work orders.
- Click Save.

Assigning Multiple Persons to Multiple Work Orders Using Mass Work Order Management:

Follow these steps to assign multiple persons to multiple work orders using the Mass Work Order Management page:

- Navigate to the Work Orders search page.
- Search for work orders based on your specific selection criteria.
- Click the Mass Work Order Management button, and the Work Order Mass Management page appears.

Work Order	Description	Asset Number	Asset Group	Status	Scheduled Start Date	Scheduled Completion Date	Attachments
WO381907		FL1010	Fork Lifts	Draft	30-May-2020 07:15:00	30-May-2020 07:15:00	
WODOC001		FL1010	Fork Lifts	Released	26-May-2020 07:23:00	26-May-2020 07:23:00	
DOC001		FL1010	Fork Lifts	Released	05-May-2019 08:09:00	01-Jun-2019 08:09:00	
WO380911		FL1010	Fork Lifts	Released	05-Jan-2020 13:04:00	05-Jan-2020 13:04:00	

4. Select the work orders to which you want to assign multiple persons.
5. Click the Employee Assignment button, and the Employee Assignment Search results appear.
Select specific search values such as Competence Type and Competence to narrow your results.
6. Select the work orders and click the Assign Person button.
7. Select the Assign check box for each person.
8. Click the Save button.
The system assigns the persons to the selected work orders.

Creating Handover Operations:

You can hand over work to another department, if you are unable to finish it. In addition, you can also hand work over to a specific employee in another department.

1. Navigate to the Work Orders page.
2. Enter the work order number to which you want to create a handover operation.
3. Click the Go button.
4. Click the Work Order link, and the Work Order page appears.
5. Click the arrow in the Operations collapsible region of the page.
Select the radiobutton for the operation step that you want to hand over.
6. Select Handover from the Select: Row drop-down list, and click the Go button.
The Handover page appears. Note that the original operation information displays.

Work Orders: All > Work Order: WO402938 >

Handover

[Cancel](#) [Apply](#)

Work Order	WO402938	Description	Change the battery in electric fork lifts
Asset Number	FL1010	Asset Description	Fork Lift 1010
Asset Group	Fork Lifts	Asset Type	Capital
Asset Activity	Change Fork Lift Battery		

Enter new operation data and click apply to handover.







Original Operation

Operation	30	Completed	
Assigned Department	W-Maint	Completion Required	No
Description	Install New Battery		

New Operation

Operation Details

* Indicates required field

New Operation	31
Description	Install New Battery
* Assigned Department	F% 
* Start Date and Time	17-Mar-2017 18:48:21  <small>(example 17-Mar-2017 18:48:21)</small>
* Duration (hours)	0.1
Reconciliation Code	
Shutdown Type	Not Required 
Completion Required	No 
Attachments	

7. Enter a value in the New Operation field or accept the default value.
8. Enter a description for the new operation.
9. Select the Assigned Department that will perform the handover work.
10. Enter a value in the Duration (hours) field.
11. Optionally select a Reconciliation Code.
12. Select a Shutdown Type.
13. Select Yes or No in the Completion Required field.
14. Optionally click the Attachments button to add attachments to the operation.
15. Revise the Resource Details as necessary.

Note that the default resource values appear and come from the original operation.

Resource Details

Please specify the resources to be carried over and their start time and duration.

<input type="checkbox"/>	Resource Sequence	Resource	Quantity Open	UOM	Start Date and Time	Duration (hours)	Person
<input type="checkbox"/>	10	FltMch	.1	HR	17-Mar-2017 18:48:21	0.1	
<input type="checkbox"/>	10	FltMch	.1	HR	17-Mar-2017 18:48:21	0.1	
<input type="checkbox"/>	10	FltMch	.1	HR	17-Mar-2017 18:48:21	0.1	

16. Click the Apply button.

Using Microsoft Projects to Change Work Order Dates:

You can use Microsoft Projects to change the dates on asset work orders. You may want to use this feature to perform 'what if' scenarios without actually changing the data in Oracle eAM. After you have made revisions to the dates associated with the work order, you can import the revised data back into Oracle eAM.

Note: You can use Microsoft Projects 2003 with this feature.

By using this feature, you can:

- Export the work order data in an XML format into Microsoft Projects.
- Change the dates associated with the work order.

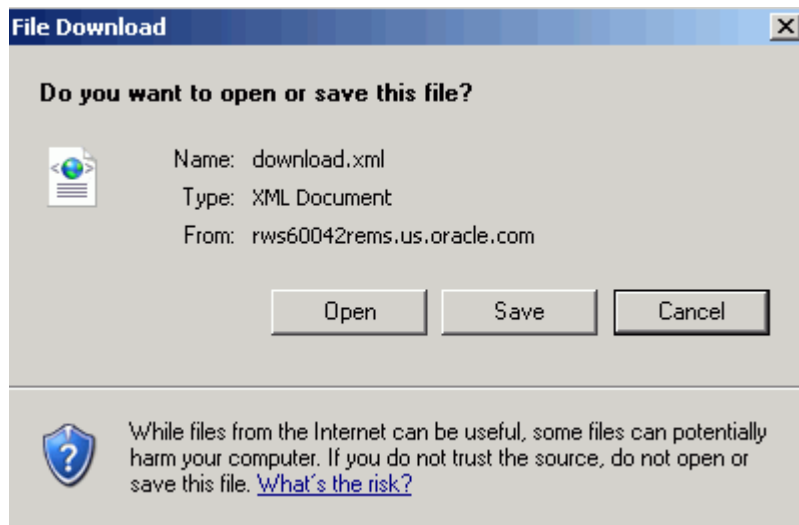
Note: You can only change the dates associated with tasks associated with a work order. You cannot change or add resources.

- View Gantt charts reflecting the date changes while creating and updating the tasks.
- Access multiple views of the revised schedule such as resource graphs, resource usage charts and so on.
- Print the revised reports and views.
- Import the revised work order data back into Oracle Enterprise Asset Management.

To use Microsoft Projects to change the dates associated with a work order:

1. Navigate to the Work Orders page and query for the asset work order to which you want to make changes.

2. Click the Go button.
3. Select the radiobutton for the work order, and then click the Export Schedule button.
4. On the Export Work Orders page, select Microsoft Project in the Target System field.
5. Select the check box for the work order, and click the Apply button.
6. Click the Open button to edit the file immediately, or click the Save button to save the document and edit it at a later time.



7. Open Microsoft Projects and then select the document.
8. Make your date changes in Microsoft Projects.
9. Review the changes and when you are finished, save the project.
10. Access the Work Orders search page and click the Import Schedule button.
11. On the Import Work Orders page, select the file that you revised and now want to import.
12. In the Select Source System field, select Microsoft Project, and click the Go button.
13. Click the Apply button to import the revised data.

Using Primavera to Change Work Order Dates:

You can also use Primavera to change the dates on asset work orders. You may want to

use this feature to perform 'what if' scenarios without actually changing the data in Oracle eAM. After you have made revisions to the dates associated with the work order, you can import the revised data back into Oracle eAM.

Primavera retains any work hierarchy and parent-child relationships that may exist in Oracle eAM.

Important: You can export only person resources to Primavera.

Field Mappings from Oracle eAM to Primavera

Oracle eAM	Primavera
Work order scheduled start and end dates	Start and Finish milestones
Operations	Activities
Departments and Resources on an operation	Roles (concatenated)
Resources (persons)	Resources
Parent-child relationships	WBS relationships

By using this feature, you can:

- Export work order data in an XML format into Primavera.
- Change the dates associated with the work order.

Note: You can only change the dates associated with tasks associated with a work order. You cannot change or add resources.

- Import the revised work order data back into Oracle eAM.

To use Primavera to change work order dates:

1. Navigate to the Work Orders page and query for the asset work order to which you want to make changes.
2. Click the Go button.
3. Select the radiobutton for the work order, and then click the Export Schedule button.

4. On the Export Work Orders page, select Primavera in the Target System field.
5. Select the check box for the work order, and click the Apply button.
6. Click the Open button to edit the file immediately, or click the Save button to save the document and edit it at a later time.
7. Open Primavera and then select the document.
8. Make changes to the work order dates.
9. Save your work in Primavera.
10. Access the Work Orders search page and click the Import Schedule button.
11. On the Import Work Orders page, select the file that you revised and now want to import back into eAM.
12. In the Select Source System field, select Primavera, and click the Go button.
13. Click the Apply to import the revised work order schedule.

Managing Statuses for Mass Work Orders:

You can update and manage the status of multiple work orders at the same time.

To manage work order statuses for mass work orders

1. Navigate to the Work Orders page (Maintenance Super User > Work Orders).
2. Select values for one or more of the following fields:
 - Work Order
 - Asset Number
 - Asset Group
 - Status
 - Start Date From and To
3. Click the Go.
4. Select the radio for the specific work order.
5. Click the Mass Manage Work Order, and the Work Order Mass Management page appears.

Maintenance Home Assets Work Requests **Work Orders** Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Mass Time Entry Generate PM Work Orders

Work Orders: All >

Work Order Mass Management

Update Work Order Status To Released ☐

Submit

Select Entire Search Result	Deselect Entire Search Result						
<input type="checkbox"/> Work Order ^	Description	Asset Number ^	Asset Group	Status	Scheduled Start Date ^	Scheduled Completion Date	Attachments
<input type="checkbox"/> LHDFGWO_1		FL1010	Fork Lifts	Complete	01-Mar-2017 21:24:00	01-Mar-2017 21:24:00	
<input type="checkbox"/> WO385941		FL1010	Fork Lifts	Complete	02-Mar-2017 23:28:00	02-Mar-2017 23:28:00	
<input type="checkbox"/> WO385927	Lubricate Fork Lift Mast	FL1010	Fork Lifts	Complete	01-Mar-2017 07:00:00	01-Mar-2017 08:00:00	
<input type="checkbox"/> PWTVWG-001		FL1010	Fork Lifts	Complete	06-Mar-2017 00:23:21	06-Mar-2017 00:23:21	
<input type="checkbox"/> WO391981		FL1010	Fork Lifts	Complete	08-Mar-2017 07:00:00	08-Mar-2017 08:00:00	

- Select the work orders to which you want to change status.
- Select the status in the Update Work Order Status To drop-down. The following indicates the valid status changes:

Current Status	Status Can be Changed To
Draft	Unreleased, On Hold, Released, Cancelled
Unreleased	On Hold, Released, Cancelled
On Hold	Released, Cancelled
Cancelled	On Hold, Unreleased, Released
Released	Unreleased, On Hold, Cancelled, Complete, Complete No Charges
Complete	Released, Complete No-Charges
Complete No-Charges	Complete

- Click the Submit .
The system runs the Work Orders Mass Management - Status Update concurrent program.
- A confirmation message appears on the page.
If any errors (failures) occurred, a log message appears with the reason for the error.

Printing Work Orders:

After you receive the list of work orders from the Work Order Search page, you have two options to print the work order:

- A Print Work Order icon at the work order level enables you to print a selected work order
- The Print Work Order button at the Result table level enables you to print multiple work orders.

Both options navigate to the Work Order Report page.

1. Navigate to the Work Orders page (Maintenance Super User > Work Orders).
2. If you choose the Print Work Order icon at the work order level from the Search page, only one work order appears. If you choose the Print Work Orders button from the Search page, a list of work orders appears. You can then selectively specify the work orders or select all work orders to print.
3. The Select Parameters region provides print content options. Items that are checked are printed.

The report can include information such as:

- Quality Plans with results: Entered for Operation Completion and Work Order completion transactions.
 - For Asset Route Work Orders: Member asset details associated with the asset route work order, quality plans and results entered for the member assets.
 - For GIS Asset Work Orders: GIS details including segment details scheduled and actual measure values.
4. You can select a work order print template. Maintenance Work Order Report and Maintenance Work Order Report With Summary are the seeded templates. See Maintenance Work Order Report With Summary, page 31-12 for more information. You can also define XML templates.
 5. Select a language from the Locale drop-down list.
 6. Select a Format for the work order print. The supported formats are: EXCEL, HTML, PDF, and RTF.
 7. Click the Run button to print your work orders.

Printing Work Packets Using AutoVue:

eAM enables users to print work packets which contain one or more work orders along with the file attachments. You can use AutoVue to specify the category of work order attachments to be printed.

Important: The FND Attachment AutoVue Server profile option must be enabled to use this feature. See eAM Profile Options, *Oracle Enterprise Asset Management Implementation Guide*.

You can also print work packets using the Enterprise Asset Management responsibility. See Maintenance Work Order Package Print with AutoVue, page 31-13.

To print a work packet

1. Navigate to the Work Orders page (Maintenance Super User > Work Orders).
2. Enter the asset for which you want to print.
3. Access the Print Work Orders page (Print Work Orders button or Print Work Order icon at WO level).
4. Select the work orders to be printed.
5. Under Parameters section, select at least one of the following File Attachments type categories:

Note: Only files with Attachment types selected are printed with the Work Order Details Report using the AutoVue server.

- **Miscellaneous Attachments**
 - **Asset Attachments**
 - **Maintenance Job Attachments**
 - **Routing Attachments**
 - **Work Request Attachments**
6. Click the Print In AutoVue button to open a print pop-up.

Important: This button and the File Attachment type check boxes are visible only if the Fnd Attachment AutoVue Server profile is set.

The Print pop-up shows all the printers installed and configured on the AutoVue server machine.

Enter values in the **Printer**, **Paper Size**, and **Orientation** fields.

7. Click the Print and Close button.

Completing Work Orders:

Oracle Enterprise Asset Management work orders are created against assets. They are defined manually, or generated automatically based on a scheduled activity. If you attach a manually created work order to an activity (normally the role of a Planner), the work order inherits the activity attributes, such as the asset BOM, asset route (operations), attachments, quality plans, cost information, and scheduling rules.

The operations within a work order do not need to be complete to complete a work order unless the operation has been defined for mandatory completion before the work order can be completed. (See *Creating Work Orders*, page 21-46 for more information.)

However, the date you complete a work order must be greater than (later) or equal to the end date of the operation that has the latest end date. In addition, the date you start a work order must be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a work order after it is completed to transition it to a Released status (See: *eAM Work Order Statuses*, page 4-24).

Planners or Crew Supervisors can complete or uncomplete work orders, using the Maintenance Workbench (See: *Using the Maintenance Workbench*, page 4-70) or from the Work Orders tab in Maintenance Super User. After completing a work order, the completion transaction record is created with your electronic signature (User Name). A record is created with this signature, during completion, for any mandatory collection plan results or mandatory meter readings, as well.

In addition, the page displays the Completed By user name associated with the completion of the work order or operation. This field appears in the work order details and operation details for the work order.

Note: You can complete associated work permits at the same time that you complete work orders. However, the associated work permit must have a status of Released or a user-defined equivalent.

1. Navigate to the Work Orders page.
2. Enter a work order number.
3. Choose Go.
4. Click the work order link or click the Update Work Order pencil icon.
You can add up to 2,000 characters in the Additional Description field.
5. Click the Complete Work Order button.

Work Orders: All >

Complete Work Order: WO421937

Cancel Apply

Work Order	WO421937	Description	Lubricate Fork Lift Mast
Asset Type	Capital	Asset Number	FL1010
Asset Group	Fork Lifts	Department	W-Maint
Status	Released		

Additional Description

Enter completion data and meter readings, click 'Apply' to complete the work order.

Completion Details

* Indicates required data

Transaction Type Complete Job

* Completion Status Complete

* Actual Start Date and Time 11-Mar-2020 14:00:00
(example 23-Apr-2020 22:44:02)

* Actual Duration (hours) 1

Actual End Date and Time 11-Mar-2020 15:00:00

Target Start Date and Time

Target Completion Date and Time

* Shutdown Start Date and Time 11-Mar-2020 14:00:00

* Shutdown Duration (hours) 1

Shutdown End Date and Time 11-Mar-2020 15:00:00

Reconciliation Code

Completion Comments

Completion Subinventory

6. Optionally select an Employee for the workorder.

7. You can change the status of the work order.

If the work order has a status of Complete and you change the status to Complete-No Changes, the system validates if there are any existing open purchase requisitions or purchase orders for the work order materials. You will receive an error message if there are any open purchase requisitions or purchase orders. You cannot complete or update work orders to Complete-No Charges if there are open purchase requisitions or purchase orders attached to the work order.

8. Enter a duration value: Actual Duration or Actual Start Date and Time. The Actual Start Date and Time defaults as the system date, but you can optionally update it. The value that you do not enter is automatically calculated.

Actual Duration identifies the total elapsed time of the work order. It is automatically calculated as the difference between the Scheduled Start Date and Scheduled End Date.

9. The Target Start Date and Target Completion Date fields are read-only.

10. Optionally enter a Reconciliation Code. This is a simple description of why you are completing this work order, for example, Work Order Completed or Work Order Partially Completed.

11. Optionally enter text in the Completion Comments field. You can enter up to 2,000 characters.

12. The Asset Number column appears in the GIS Asset Details region.
The GIS Area Details region appears for work orders created for GIS assets.
13. Optionally click the Add 3 Rows button to add GIS asset detail lines.
14. Enter quality data in the Work Order Quality Plans and Quality regions of the page.
Oracle Quality collection plans including any child quality plans associated with the current work order that require completion appear.

When the collection plan was created, it was specified if the collection plan required completion. Also, during the Enterprise Asset Management collection plan creation process, triggers might have been specified to make only certain assets eligible for the collection plan. See: Quality Setup, page 3-201.

Required fields are dependent on the collection element specifications for the collection plan. See: Quality Setup, page 3-201.
15. Open the Meters region to enter readings for meters associated with this asset number. Readings for meters defined as mandatory must be entered. You can optionally enter non-mandatory readings.

At work order completion, meter readings are mandatory for work orders generated by the Preventive Maintenance scheduling engine. After a work order is completed, meter readings are required for all runtime interval meters associated with the asset number in the Preventive Maintenance scheduling definition. See: Preventive Maintenance Scheduling, page 3-173.

If there is a meter associated with this asset number, you are prompted to enter a Current Reading or a Reading Change. If you enter a Current Reading, the Reading Change default value appears. If you enter a Reading Change, the Current Reading default value appears. See: Entering Meter Readings, page 5-3.

Enter Reset Reading value to indicate that you would like to Reset the Current Reading.
16. Open the Failure Information region to enter Failure Analysis information. (See: Failure Analysis Overview, page 28-1). The Failure Information region appears if the *Failure Code Required* value is set to Yes, within the Failure Set definition (See Defining Failure Codes and Sets, page 28-2).

Failure information entry is mandatory during work order completion if the Failure Entry Required check box was selected when this work order was created. However, if the Failure Entry Required check box is was clear, you can still enter failure information at work order completion (See: Creating Work Orders, page 21-46).
17. Open the Operations region to review or revise operations before completing the work order.

The Completion Required column appears in the Operations region of the page. This information indicates if any operations require mandatory completion prior to the work order being completed. This field is display only.

Note: If you attempt to complete a work order before performing the required operation completion, you will receive the following error message: Please complete the required operations before work order completion.

The screenshot shows the 'Details' tab of a software interface. At the top, there are tabs for 'Summary' and 'Details'. Below the tabs, there is a 'Select Row:' dropdown menu with 'Assign Person' selected, a 'Go' button, and a 'Purchase Materials' button. Below this, there are links for 'Show All Details' and 'Hide All Details'. The main table has the following columns: 'Select Details', 'Operation', 'Description', 'Department', 'Resource Sequence', 'Resource', 'Required', 'Assigned Units', 'Person or Equipment', and 'Start Time'. The table contains three rows of data. Below the table, there is a detailed view of an operation with the following fields: 'Standard Op', 'Start Time' (04-Mar-2020 15:00:00), 'End Time' (04-Mar-2020 16:00:00), 'Duration' (1), 'Shutdown Type' (dropdown), 'Completion Required' (No), 'Long Description' (text area), 'UOM' (dropdown), 'HR' (dropdown), 'Basis Type' (dropdown), 'Item' (dropdown), 'Charge Type' (dropdown), 'Schedule Sequence' (dropdown), and 'Standard Rate' (dropdown).

Select Details	Operation	Description	Department	Resource Sequence	Resource	Required	Assigned Units	Person or Equipment	Start Time
<input type="radio"/>	10	Clean and Lt	W-Maint	10	FlittMech	1	1		04-Mar-2020 15:00
<input type="radio"/>	20		W-Maint	10	FlittMech	1	1	Moll, Mr. Jg	04-Mar-2020 15:00
<input type="radio"/>	30		W-Maint	10	FKTK	1	1	FKTK0002	04-Mar-2020 15:00

18. Enter operation completion comments in the Long Description field.
19. Open the Work Permits region to enter information for any associated work permits.

Update Work Order with work permit information

Maintenance Home Assets Work Requests **Work Orders** Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

All Requests Express Work Crew Schedule Employee Assignment Mass Time Entry Generate PM Work Orders Scheduler Workbench

Work Orders: All >

Confirmation
Work Order DOC12345 was successfully updated.

Update Work Order: DOC12345 Cancel Shift Dates Estimate Copy Work Order Save Apply

* Indicates required field
Time = hours

Work Order: DOC12345

Asset Number: FL1010

Asset Group: Fork Lifts

* Wip Accounting Class: MaintWAC

Scheduled Start Date (example 03-Jul-2023 02:53:38): 23-Jul-2023 02:47:00

Scheduled Completion Date: 23-Jul-2023 02:47:00

Duration: 0

Request Number: Other Request: Planner:

Description:

Department: W-Maint

Department Description: Warehouse Maintenance

Asset Activity:

Firm: No

Status: Draft

Work Order Type:

Shutdown Type:

Priority:

☐ Pending

Employee:

Work Order Stats

Required Hours: 0

Assigned Hours: 0

Unassigned Hours: 0

Operations Completed: 0 of 0

Estimated Cost: 0.00

Actual Cost: 0.00

Material Shortage: No As of 03-Jul-2023 02:50:11

Asset Details

Asset Description: Fork Lift 1010

Area: Warehouse

Department: W-Maint

Asset Criticality: Normal

Asset Status: Latest

Parent Asset: [All Lifts](#)

► Additional Details

► Failure Information

► Operations

► Materials

▲ Work Permits

☒ TIP Permits associated with this work order indirectly via work clearances are only for view purpose.No actions are allowed on them.

Create	Work Permit	Description	Permit Type	Status	Valid From Date	Valid To Date	Flexfields	Attachments	Delete
	10003	Permit	High Work	Released	20-Aug-2013 19:03:40	21-Aug-2013 19:03:40			
<input type="checkbox"/>									
<input type="checkbox"/>									

► Work Clearance

Cancel Shift Dates Estimate Copy Work Order Save Apply

20. Choose Apply to complete the work order.

Adding Completion Details to Work Orders:

You can add completion details to existing work orders by clicking the Debrief Work Order icon from the Work Orders page.

1. Navigate to the Work Orders page, and select an existing work order.
2. Click the Debrief Work Order icon for the work order to which you want to add completions information such as completion comments.
3. The Asset Details region displays the Asset Description, Area, Department, Asset Criticality, Asset Status, and Parent Asset.

You can view details for the parent asset by clicking the Parent Asset link.

4. The Target Start Date and Target Completion Date values are display only.
5. The GIS Area Details region appears when you are completing a work order for a

GIS asset.

Click the Show Details link to enter additional linear asset segment information. See Using the GIS Workbench, page 22-24 for more information.

6. Optionally modify the following GIS asset details such as:
 - Actual From Measure
 - Actual To Measure
 - Actual Length
7. Expand the Resource Reporting section to add resource information associated with persons (including contingent workers) and equipment.
8. Expand the Material Reporting section to add material information.

You can manually add material to the operations, add the material to an asset BOM, copy the material associated with the asset BOM, and view on-hand quantity.

Note: If you are adding material information for an express work order, bear in mind that the material was issued out of inventory when you created the work order, and you are simply reporting these actions. Therefore, no allocations are necessary.

Select Material: Copy To Asset BOM												
Go Copy From Asset BOM												
Select All Select None												
Select	Details	Material	Operation	Issued Quantity	UOM	Quantity	On Hand	Details	Subinventory	Locator	Lot	From Serial To Serial
<input type="checkbox"/>	Show	Air Filter	10	1	Ea	0			FkftStore			
<input type="checkbox"/>	Show											
<input type="checkbox"/>	Show											
Add 3 Rows												

9. When you are finished, click the Save button to save your changes.
10. Click the Apply button if all the information associated with the work order is complete.
11. If you are using electronic reporting and electronic signatures (ERES), a notification will be generated after clicking the Save or Apply buttons.

The ERES flow is identical to the flow associated with the **Complete Work Order** page.

Uncompleting Work Orders:

1. Navigate to the **Work Orders** page.
2. Enter a work order number (with a Complete status).
3. Click Go.
4. Choose the Complete Work Order value from the Select Work Order action drop-down list.
5. Click Go, and the **Uncomplete Work Order** page appears.

You can uncomplete at the work order level or the operations level. If you want to uncomplete at the operations level, select the Operations collapsible level and select the operation sequence to uncomplete. After the uncomplete process has finished, the operation details will display the Completed By name.

6. The Released status default value appears, but you can select a different status in the drop-down list.
7. Click Apply to uncomplete this work order.

When you uncomplete a work order, any entered failure information is not reversed. However, when you re-complete the work order, you can update your failure information.

You can also view the user who uncompleted the work order.

Closing Work Orders:

You can close work orders through the Maintenance Super User responsibility. You can close work orders based on user-defined work order statuses.

To close work orders using the Maintenance Super User responsibility:

1. Navigate to the Report Submission page (Maintenance Super User > Home > Reports).
2. Select the EAM Close WorkOrders value in the Program Name field.
3. Click the Parameters subtab.
4. Enter selection criteria such as the work order Status. The status list includes user defined and system work order statuses.

Request Submission | View Requests

Define: Active step Review: Next step

Schedule Request: Define Manage Schedule Cancel Continue

* Indicates required field

☒ New Request
☐ Copy Request

Program Name Q

Request Name

NLS Settings **Parameters** Notification Print Options Delivery Options Schedule Options

Class Type Q

From Class Q

To Class Q

From Job Q

To Job Q

From Job Release Date

To Job Release Date

From Job Start Date

To Job Start Date

From Job Completion Date Q

To Job Completion Date Q

Status Q

* Exclude Reserved Jobs Q

* Exclude Un-Completed Jobs Q

* Exclude Jobs with Pending Trans Q

* Report Type Q

* Actual Close Date Q

5. Click Continue.
6. Review the request, and then click Submit.

Related Topics

Defining Inventory Material Requirements, page 4-38

Defining Direct Item Material Requirements, page 4-43

Entering Meter Readings, page 5-3

Stores

Material issue to work orders and returns to Inventory are typical store room functions.

The Stores tab provides Material Issue Request and Verification functionality, and is used to manage the material availability for a work order. The material requirements for a work order are defined on its maintenance BOM, and are available to the work order via the Material Issue Request and Verification process.

There are two activities involved in delivering material from stores to a work order:

1. A Material Issue Request is generated (Move Order in Oracle Inventory) to request the material to be allocated a work order.

This process is automated upon work order release, by selecting a check box in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 3-13).

2. A Material Issue Verification (Move Order in Oracle Inventory), and is generated

when you access the Stores tab and select material for a work order, based on available, unprocessed move orders.

A one-step material issue is a substitute for these two activities; a request is not created.

You can return material to Inventory from a maintenance work order. If excess or defective material is issued to a work order, it must be returned.

Related Topics

Stores, page 27-1

Budget Forecasts

You can extract work order cost information from Enterprise Asset Management to a spreadsheet. You can use the results as a base for creating organization budgets and forecasts. You can extract historical costs for past accounting periods, or estimated costs of future periods, based on Preventive Maintenance rules. A forecast contains criteria, along with filter options, based on work orders, assets, and costing information.

To create a forecast:

1. Navigate to the Forecasts page (Maintenance Super User > Budget Forecasts).
2. Click the *Create Forecast* button.

Maintenance Home Assets Work Requests Work Orders Stores **Budget Forecasts** Failure Analysis Construction Units Safety Management Reports

Forecasts Templates

Budget Forecasts: Forecasts >

Create Forecast Cancel Apply

* Indicates required data

* Forecast Name Car Maintenance

* Description Car Maintenance Fore

Apply Template Template1

* Include Historical Planned Work

☐ Include Other Organizations

* Accounting Period From Jul-17

* Accounting Period To Jul-19

Additional Optional Criteria

Criteria Type	From	To
Account		
Area		
WIP Accounting Class		
Activity		
Department		
Project		
Asset Number		
Asset Group		
Work Order		
Work Order Type		

3. Enter a Forecast Name.
4. Enter a Description.
5. Optionally select a template from the Apply Template list of values. This template indicates the type of information to include in your forecast. If you select a template, the associated work information is populated in the Include field, such as Historical Planned Work, Historical Non-Planned Work, All Historical Work, or Forecasted Work.
6. Optionally select the Include Other Organizations check box.
7. Enter the Accounting Period From and To values to indicate the accounting period in which to include information.

For historical forecasts, you can select periods in the past or the current period. For future (Preventive Maintenance) forecasts, you can select periods in the future or the current period.
8. Optionally narrow the forecast to specific criteria, such as Account, Area, WIP Accounting Class, Activity, Department, Project, Asset Number, Asset Group, Work Order, and Work Order Type.
9. Click the Apply button to save the forecast.

To generate a forecast:

After you save a forecast, you can generate Forecast entries by selecting the icon at the Forecast level. After the forecast entries are generated for a selected forecast, you can view them by Accounts or Work Orders.

1. Click the Generate button.
 - *View By Accounts:* Forecast costs are aggregated by General Ledger accounts into Accounting Period buckets. Costs derived from historical work orders are aggregated, based on the actual period when they occurred. Costs derived from planned work orders are aggregated in the period of the forecasted completion date.
 - *View By Work Orders:* Forecast costs for each work order appear. If it is a historical work order, the actual work order number appears. If it is a planned work order, the Work Order Number field is blank.

To manage existing forecasts:

1. Navigate to the Forecasts page (Maintenance Super User > Budget Forecasts tab).
2. You can perform Simple or Advanced Searches for existing forecasts. Using the Simple Search mode, you can search on the forecast Name, Description, or Status. You can optionally choose Advanced Search to add more search criteria.
3. Choose Go to display existing forecasts, based on entered search criteria. If you did not enter any search criteria, all existing forecasts appear.
4. If a forecast has a Not Submitted status, you can optionally update its Name, Description, Accounting Periods, and Criteria, by choosing the Update icon.
5. Optionally select a link for the forecast to view its details.
 1. The Accounts tab displays the affected accounts.
 2. You can optionally export the displayed account information to an Excel spreadsheet, by choosing *Export Accounts*.
 3. Optionally select the Work Orders tab to display work order information. Future, forecasted work orders appear, if the Include field value is Forecasted Work. Historical work orders appear if the Include field value is Historical Planned Work, Historical Non-Planned Work, or All Historical Work.
 4. Optionally choose *Export Work Orders* to:
 - Export only the selected work order information to an Excel spreadsheet, if

the forecast includes historical work.

- Create new forecasted work orders for the selected work, if the forecast includes forecasted work.
5. Optionally choose *Export Full Forecast* to:
 - Export all work order cost information to an Excel spreadsheet, if the forecast includes historical work.
 - Create new forecasted work orders for all displayed work, if the forecast includes forecasted work.
 6. Optionally choose the Generate icon to generate the forecast, based on saved criteria. After the Generate icon is selected, the forecast status changes to a Pending status while it executes. After the forecast finishes executing, the forecast status changes to Completed. You can generate the forecast an unlimited number of times.
 7. Optionally choose the Export icon to export the completed forecast to an Excel spreadsheet, HTML, PDF, or RTF file.
 1. Select a Template.
 2. Select a Locale.
 3. Select the Format. This choice indicates whether you are exporting information to an Excel spreadsheet, HTML, PDF, or RTF file.
 4. Choose Run to display the cost information.
 5. Choose Export to export the cost information to the file type populated in the Format field.

Failure Analysis

Failure Analysis enables you to track an asset failure from the time it is reported until its resolution. Statistics from your collected failure data provide you with information on why an event occurs and causes your asset failure. You can then take the necessary steps to eliminate that event. Additionally, you can use the failure statistics, among others, to help you formulate your Reliability-Centered Maintenance (RCM) program. Failure hierarchies that support multiple-level failure reporting provide effective root cause and reliability analysis. For specific Asset Groups or Rebuildable Items, each failure (problem) has a defined number of root causes, with each root cause having a defined number of resolutions (remedies).

When failure is reported, each work order represents one single failure occurrence

(event) for the asset specified on the work order. The cost to repair an asset that fails to a normal, operational state is assumed to be the charges accumulated in the work order that is associated with the failure. If the repair is outsourced to an external party and requisitioned on a purchase order, a work order must be created to collect the repair costs for Failure Analysis to pick it up.

Related Topics

Failure Analysis, page 28-1

Safety Management

This feature enables you to create work permits mandated by regulatory agencies to be followed by operations, maintenance and safety personnel during maintenance of assets which require work permits before the assets can be repaired.

You can create isolations and work clearances in addition to work permits. An isolation represents a standard procedure to isolate an asset from its surroundings when it is to be repaired. It contains the steps and details required to isolate the asset before maintenance technicians carry out repair work (the Establishment), and also contains the steps to place the asset back in working condition after they have performed the repair work (the Re-establishment). You can associate additional assets to an isolation.

A work clearance represents the actual tasks of establishment and re-establishment to be performed during a specific period while maintaining the asset. You can use isolations to derive the establishment and re-establishment steps included in a work clearance or enter them manually.

You can associate a work order with permits and work clearances to record the complete safety information while performing repair work on assets which have safety requirements.

Related Topics

See Safety Management, page 30-2

Using Asset Performance Metrics

You can analyze and use asset performance metrics based on historical maintenance data.

Some of the key benefits of this feature are:

- Repair versus replace analysis
- Benchmarking of maintenance metrics
- Evaluation of maintenance effectiveness

- Asset Performance Trend analysis

Use the Asset Performance tab to:

- View and analyze asset performance metrics based on historical maintenance data.
- Calculate and update asset performance metrics and details periodically using a concurrent program.
- Use key performance indicators (KPIs) related to maintenance effectiveness in EAM.

The asset performance metrics are focused in the following areas and include KPIs for:

- Asset Availability Metrics, page 21-119
- Asset Cost Metrics, page 21-121

The following sections contain information for regions on the Asset Performance Metrics page. You can navigate to this page from:

- Maintenance Super User > Maintenance Home > Assets > Asset Performance
- Maintenance Super User > Maintenance Home > Assets > Capital, Rebuildable Inventory subtab > Asset Search results table < Asset Performance Metrics from the Action drop-down list

Asset Availability Metrics

Asset Availability Metrics include the following KPIs:

- Asset Age
- Asset Utilization Hours
- Operating Hours
- Overall Equipment Effectiveness

Asset Performance Metrics page

Asset Performance Metrics

Cancel
Save
Apply

Calculated As On:

Simple Search

* Asset Number
FL2040
Refresh Metrics Calculation
Go
Clear

Asset Availability Metrics

Asset Inception Date
26-Sep-2002 18:20:54
Asset Age
18
Average Working Hours/Day
Average Working Days/Month
Planned Utilization Hours
Downtime Hours

Failure Hours
Operating Hours
Asset Availability %

Calculated
☐

The following table contains information regarding the fields used for asset availability metrics such as asset inception date, asset age, average working hours per day, and planned utilization hours:

Field	Mandatory (Yes/No)	Updateable (Yes/No)
Asset Inception Date	No	Yes
Asset Age	No	No
Average Working Hours/Day	No	Yes
Average Working Days/Month	No	Yes
Planned Utilization Hours	No	No
Downtime Hours	No	Yes
Failure Hours	No	Yes
Operating Hours	No	Yes
Asset Availability % (percent)	No	No
Productivity Index	No	Yes

Field	Mandatory (Yes/No)	Updateable (Yes/No)
Quality Index	No	Yes
Overall Equipment Effectiveness	No	No

Asset Cost Metrics

Asset cost metrics include the following KPIs based on an annual basis:

- Total Maintenance Cost
- Preventive Maintenance Cost
- Replacement Asset Value
- Replacement Asset Value % (percent)

The following table contains information regarding the fields used for asset cost metrics such as total maintenance cost, preventive maintenance cost, and replacement asset value percent.

Field	Mandatory (Yes/No)	Updateable (Yes/No)
Total Maintenance Cost	Yes	No
Preventive Maintenance Cost	Yes	No
% (Percent) of Preventive Maintenance Cost	Yes	No
Asset Acquisition Cost	No	Yes
Replacement Asset Value - Average	No	No
Replacement Asset Value % - Average	No	No
Capitalized Cost	No	Yes

Running the Calculate Asset Performance Metrics Concurrent Program

Run the Calculate Asset Performance Metrics concurrent program to calculate and update the Asset Performance Metrics periodically.

Field	Default Value	Mandatory (Yes/No)
Asset Type	Capital	Yes
Asset Group	No	No
Asset Number	No	No
Asset Category	No	No
Asset Owning Department	No	No

By Period Information Views

The following sections describe the information contained in the by period pop-up windows.

Total Maintenance Cost

Represents the total of all work order actual cost for the asset including cost incurred in different organizations and breakdown provided for each calendar year. The following table provides an example of this cost.

Year	Total Maintenance Cost
2009	434.60
2010	798.78
Total	1233.38

Preventive Maintenance Cost

Represents the total of preventive maintenance costs relative to the total maintenance cost, based on calendar year. The following table provides an example of this cost.

Year	Preventive Maintenance Cost
2009	200.30
2010	450.33
Total	650.63

Preventive Maintenance Cost Percentage

Represents the percentage of preventive maintenance costs relative to the total maintenance cost, based on calendar year. The following table provides an example of this cost.

Year	Preventive Maintenance Cost Percentage
2009	46.09
2010	56.38
Average	51.24

Capitalized Cost

Represents the total of all capitalized work orders for the asset number, based on each calendar year. This table provides an example of the cost.

Year	Capitalized Cost
2009	210.50
2010	160.00
Total	370.50

Replacement Asset By Period Windows

The following sections describe the information contained in the replacement asset pop-up windows that display after you click the respective pop-up button.

Replacement Asset Value by Calendar Years

The replacement asset value is user defined and is based on an average of the calendar years. This table provides an example of the average replacement asset value based on calendar years.

Year	Replacement Asset Value
2009	1200.00
2010	1400.00
Average	1300.00

Pop-Up Window Information

This display only field is dependent on the values used in the Total Maintenance Cost and Replacement Asset Value fields. The formula is:

Total Maintenance Cost/Replacement Asset Value=Replacement Asset Value Percent (%)

The following examples outlines how this calculation works if you want to determine the average percentage over two calendar years:

Year	Total Maintenance Cost	Replacement Asset Value	Replacement Asset Value %
2009	434.60	1200.00	36.22
2010	798.78	1400.00	57.06

In this example, the average Replacement Asset Value percentage is **46.64** (36.22+57.06)/2.

GIS Assets

This chapter covers the following topics:

- Overview of GIS Asset Management
- Defining GIS Asset Numbers
- Updating GIS Assets
- Updating Reference Methods
- Using Asset Icons
- Using Line Styles
- Using Asset Properties
- Using Element Types
- Using GIS Relationships
- Using Map Manager
- Using Map Actions
- Using the GIS Asset Workbench
- Using the Map Workbench
- Using the Indoor Map Workbench

Overview of GIS Asset Management

You can use Oracle Enterprise Asset Management to maintain and track GIS assets. GIS assets include the following types of assets:

- **Linear**

A linear asset is represented by its length and measure values to indicate its start point and end point, and has a geometric profile and shape. For example, oil and gas pipe lines, roads, highways and utility lines (water, sewage and power

transmission).

- **Area**

An area asset has a geometric shape that is non-linear, but is identified by the closed area or shape having multiple linear sections forming its geometry. Examples are bodies of water such as lakes and ponds, forest areas, playgrounds, and so on.

The EAM asset numbers that are defined as GIS assets can be mapped to the route and geometry of GIS systems such as ESRI and Oracle Spatial. You can then visualize assets on a map, and execute work with reference to the measure values of the asset. Various asset attributes such as Properties, Elements and Relationships are created in EAM, and are used to track GIS assets.

In addition, you can maintain GIS assets in EAM by capturing the measure values in work orders when the work orders are executed.

Asset routes and non-serial rebuild able items cannot be defined as GIS assets.

Defining GIS Asset Numbers

Use the Define Asset Number form to define GIS assets. GIS assets include linear and area assets. In addition, you can define rebuild able GIS assets.

1. Navigate to the Define Asset Number form (Enterprise Asset Management > Assets > Asset Numbers > Asset Numbers).
2. Select an Asset Status. This field represents the status associated with the GIS asset item instance.
3. Select the GIS Asset check box to define the asset as a linear or area asset.

Define Asset Number (EM1)

Asset Number: DocGIS001

Asset Group: Fork Lifts

Asset Serial Number: FL73

Asset Category:

Organization: EM1

Asset Type: Capital

Asset Type: Capital []

Main Location Safety Others

Owning Department:

Criticality:

WIP Accounting Class:

Asset Status: CREATED

Parent

Asset Type: Capital

Asset Number:

Asset Group:

Area:

☒ Maintainable

☒ Active

☒ GIS Asset

☒ Operation Log Enabled

Warranty Expiration:

Checked Out: ☐

Attributes Resource Usage GIS Workbench Meters Associate Activity

4. When you select the GIS Asset check box, the GIS Workbench button becomes available.

Use the GIS Asset Workbench to enter details for GIS assets. See Using the GIS Asset Workbench, page 22-24 for more information.

5. For more information regarding the fields on this page and other sub-tabs, see Defining Asset Numbers, page 3-85.

Updating GIS Assets

You can update GIS assets using one of the following pages:

- Define Asset Number form (Enterprise Asset Management > Assets > Asset Number)
- Asset Numbers (Maintenance Super User > Maintenance Home > Assets > Asset Numbers)
- GIS Asset Workbench:
 - Assets > Update (Maintenance Super User > Maintenance Home > Assets > Capital or Rebuildable tabs)
 - Assets > View Assets (Maintenance Super User > Maintenance Home > Assets > Capital or Rebuildable tabs)

- Asset Number form > Update (Enterprise Asset Management > Assets > Asset Numbers > Asset Numbers)

Updating Reference Methods

Use the Update Reference Methods page to update existing reference methods.

1. Navigate to the Update Reference Method page (Maintenance Super User > Home > Assets > GIS Assets > Reference Methods > Search).
2. Search for a reference method and click the Update button.
3. Update information such as:
 - Reference Method Name (description)
 - Active Start Date
 - Active End Date
 - Y Reference
 - Z Reference
 - X Offset UOM
 - Y Offset UOM
 - Description
 - Context Value

Note: You cannot update the Reference Method Code value.

The screenshot shows the 'Update Reference Method' form in the GIS Assets application. The form is titled 'Update Reference Method' and includes fields for Reference Method Code, Reference Method Name, Reference UOM, Active Start Date, Active End Date, Y Reference, Z Reference, X Offset UOM, Y Offset UOM, Z Offset UOM, Description, and Context Value. The form also has 'Cancel', 'Save', and 'Apply' buttons. The left sidebar shows a navigation menu with 'Reference Methods' selected. The top navigation bar includes 'Maintenance Home', 'Assets', 'Work Requests', 'Work Orders', 'Stores', 'Budget Forecasts', 'Failure Analysis', 'Construction Units', 'Safety Management', and 'Reports'.

4. Click Save or Apply.

Using Asset Icons

Icons can be created for details such as element and properties, and these icons will be used in the Map Viewer.

Creating Icons:

1. Navigate to the Create Icon page (Maintenance Super User > Home > Assets > GIS Assets > Icons).

Maintenance Home **Assets** Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Rebuildable Inventory Mass Meter Readings Mass Geocode Entry Asset Setups Map Workbench **GIS Assets** Capital

Assets: GIS Assets: Icons >

Create Icon Cancel Save Apply

* Indicates required field

* Icon Code Active End Date

* Icon Name Image File Path No file selected.

* Active Start Date 07-May-2019 Description

Reference Methods
Properties
Element Types
Relationship Types
Asset Statuses
Icons
Line Styles
Map Visualization Setup
Map Managers
Map Actions
Spatial Routes

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2. Enter values in the following fields:

- Icon Code (required)
- Icon Name (required)
- Active Start Date (required)
- Active End Date (optional)
- Image File Path - Click Browse to locate image to upload
- Description (optional)

3. Click Save or Apply.

Updating Asset Icons:

1. Navigate to the Update Icon page (Maintenance Super User > Home > Assets > GIS Assets > Icons).
2. Search for an icon and click the Update button.
3. Update the fields on this page.

Note: You cannot update the Icon Code value.

4. Click Save or Apply.

Using Line Styles

Line styles are used details such as elements and properties, and will be used in the Map Viewer.

Creating Line Styles:

1. Navigate to the Create Line Style page (Maintenance Super User > Home > Assets > GIS Assets > Line Styles).

The screenshot shows the 'Create Line Style' page within the GIS Assets application. The page has a top navigation bar with tabs: Maintenance Home, Assets (selected), Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, and Report. Below this is a sub-navigation bar with tabs: Rebuildable Inventory, Mass Meter Readings, Mass Geocode Entry, Asset Setups, Map Workbench, GIS Assets (selected), and Capital. On the left is a sidebar menu with options: Reference Methods, Properties, Element Types, Relationship Types, Asset Statuses, Icons, Line Styles (selected), Map Visualization Setup, Map Managers, Map Actions, and Spatial Routes. The main content area is titled 'Assets: GIS Assets: Line Styles > Create Line Style' and includes 'Cancel', 'Save', and 'Apply' buttons. A note states '* Indicates required field'. The form contains the following fields: Code (required), Name (required), Active Start Date (required, with a date picker showing 07-May-2019), Active End Date (optional, with a date picker), Line Style (required), Color (required), Width (required), and Description (optional, with a text area). The footer contains copyright information: 'Copyright (c) 1998, 2017, Oracle and/or its affiliates. All rights reserved.' and links for 'About this Page' and 'Privacy Statement'.

2. Enter a line style Code (required).
3. Enter a Name for the line style (required).
4. Enter the Active Start Date (required).
5. Optionally enter the Active End Date.
6. Enter the Line Style (required). The values for this field are defined in the Lookups page.
7. Enter the line Color and Width (required).
8. Optionally enter a Description.
9. Save your work.

Updating Line Styles:

1. Navigate to the Line Styles page (Maintenance Super User > Home > Assets > GIS Assets > Line Styles).
2. Optionally enter search criteria to narrow the results, and click the Go button.
3. Click the Update button and the Update Line Style page appears.
4. Update the fields as necessary.
You cannot update the Code field.
5. Save your work.

Using Asset Properties

Properties are the attributes of GIS assets that are tracked along its length with reference of measure values or for a point on the GIS asset. For example:

- Diameter and Material (MOC) of the pipeline.
- Speed Limit and Surface Condition of the road.
- Line Voltage of the transmission line.
- Fluid Pressure of the pipeline.

Creating Asset Properties:

Define properties for assets by using the Create Property page.

1. Navigate to the Create Property page (Maintenance Super User > Home > Assets > GIS Assets > Properties > Create Property).

Assets: GIS Assets: Properties >

Create Property

* Indicates required field

* Property Code

* Property Name

* Active Start Date 07-May-2019

Active End Date

Value Set Name

UOM

* UOM Enabled No

* LinearType POINT

Description

Context Value

Cancel Save Apply

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2. Enter values for the following fields:

- Property Code (required)
- Property Name (required)
- Active Start Date (required)
- Active End Date (optional)
- Value Set Name (optional)
- UOM (optional)
- UOM Enabled (required) - Yes or No
- Icon (optional)
- Line Style (optional)
- LinearType (required): Values are Point or Line.
- Description (optional)
- Context Value (optional)

Updating Asset Properties:

You can update asset properties by using the Update Property page or the GIS Asset

Workbench. Use these pages to associate properties to GIS assets. See Using the GIS Asset Workbench, page 22-24 for more information.

1. Navigate to the Update Property page (Maintenance Super User > Home > Assets > GIS Assets > Properties > Properties > Search).
2. Search for a property code, and click Go.
3. Click the Update button for the property code, and the Update Property page appears.
4. Update fields on this page.

Note: You cannot update the Property Code value.

5. Click Save or Apply.

Associating Properties to GIS Assets:

Use the GIS Asset Workbench to associate properties to GIS assets.

See Using the GIS Asset Workbench, page 22-24 for more information.

Using Element Types

Elements are significant pieces of installations located on the GIS asset network and are integral parts of the network. You can define and track the elements of the GIS assets for ease of maintenance, reference, and identification.

Elements can be both Linear and Point types.

Elements can also be defined with a type of Labeled or Non-Labeled. Labeled elements will have an element instance (Name); however, non-labeled elements will not have an element instance. If the elements themselves require maintenance activities to be performed on them, they should be defined as assets in EAM and related to the GIS assets using the Relationships functionality.

For example, Point Type, Labeled Elements could be inspection points of pipelines, mile markers on roads, and transmission towers. Examples of Linear Type, Non-Labeled Elements are guard rails, medians, and fencing.

Use the Create Element Type page to define element types. Use the GIS Asset Workbench to associate element types to GIS assets.

Creating Element Types:

1. Navigate to the Create Element Type page (Maintenance Super User > Home > Assets > GIS Assets > Element Types > Element Types > Create Element Type).

Assets: GIS Assets: Element Types >

Create Element Type

* Indicates required field

* Code

* Name

* Active Start Date 07-May-2019

* Active End Date

* Linear Type POINT

Reference Point No

Labelled No

Description

Context Value

Cancel Save Apply

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2. Enter values for the following fields:

- Code (required)
- Name (required)
- Active Start Date (required)
- Active End Date (optional)
- Linear Type (required): Values are Point or Line.
- Reference Point (optional): Values are Yes or No. A reference point is used as an identification entity located on the GIS asset network. For example, inspection points on a pipeline, mile markers on roads, and transmission towers.
- Labelled (optional): Values are Yes or No. This field indicates if the element will be labelled or non-labelled.
- Icon (required)
- Line Style (optional)
- Description (optional)
- Context Value (optional)

3. Click Save or Apply.

Updating Element Types:

1. Navigate to the Update Element Type page (Maintenance Super User > Assets > GIS Assets > Element Types > Element Types).
2. Enter search criteria to retrieve the element code that you want to update.
3. Click the Update button.
4. Update the following fields:
 - Name (required)
 - Active Start Date (required)
 - Active End Date (optional)
 - Linear Type (required): Values are Point or Line.
 - Reference Point - Yes or No (optional)
 - Labelled - Yes or No (optional)
 - Icon (required)
 - Line Style (optional)
 - Description (optional)
 - Context Value (optional)

Note: You cannot update the element Code value.

5. Click Save or Apply.

Associating Elements to GIS Assets:

Use the GIS Asset Workbench to associate elements to linear assets.

See Using the GIS Asset Workbench, page 22-24 for more information.

Using GIS Relationships

A relationship describes the connection between two GIS assets, such as a linear and a point asset, or a linear asset and a location. Assets and elements in the GIS asset network can share a relationship in terms of deployment, geometry, location or any other such need. User-defined relationship types provide the ability to capture the

various relationships that exist between different components of the network.

Relationships can also be a Linear or Point type. For example: Parallel (Linear type) and Intersection (Point type).

Use the Create Relationship Type page to define relationship types. Then, associate GIS assets with relationship types using the GIS Asset Workbench.

Creating Relationship Types:

1. Navigate to the Create Relationship Type page (Maintenance Super User > Assets > GIS Assets > Relationship Types > Create Relationship Type).
2. Add values for the following fields:
 - Code (required)
 - Name (required)
 - Active Start Date (required)
 - Active End Date (optional)
 - Reference Point (required): Values are Yes or No.
 - Direction (optional)
 - Linear Type (required): Values are Point or Line.
 - Description (optional)
 - Context Value (optional)
3. Click Save or Apply.

Updating Relationship Types:

1. Navigate to the Relationship Type page (Maintenance Super User > Assets > GIS Assets > Relationship Types).
2. Search for a relationship type and click the Update button.
3. Update values for the following fields:
 - Name (required)
 - Active Start Date (required)
 - Active End Date (optional)

- Reference Point (required): Values are Yes or No.
- Direction (optional)
- Linear Type (required): Values are Point or Line.
- Description (optional)
- Context Value (optional)

Note: You cannot update the relationship Code value.

4. Click Save or Apply.

Associating Relationships to GIS Assets:

Use the GIS Asset Workbench to associate relationships to GIS assets.

See Using the GIS Asset Workbench, page 22-24 for more information.

Using Map Manager

The Map Manager enables you to set up the parameters required for map integration. This is a mandatory EAM setup which captures various parameters necessary to display map layers and also to communicate with the GIS system (ESRI/Oracle Spatial).

Important: You can have only one active map manager record defined in the system. Currently, the association level supported is Site.

Note: This setup is mandatory for **any** map integration, even if you are not using the GIS Asset Management functionality. This setup enables you to use the Map Visualization for discrete assets.

Creating Map Manager:

1. Navigate to Map Managers (Maintenance Super User > Assets > GIS Assets > Map Managers).
2. Click the Create button.
3. Enter Map Manager values in the Create page.
4. Review Map Manager values section.

5. Save your work.

Modifying Map Manager:

1. Navigate to Map Managers (Maintenance Super User > Assets > GIS Assets > Map Managers).
2. Click the Go button.
3. Click the Update icon to make changes to the Map Manager values.
4. Enter new values in the Update page.
5. Review changes.
6. Save your work.

Map Manager Values:

The Map Manager values are based on map integration you have selected in profile CSI: Map Viewer Name. The Create or Update page automatically displays the ESRI related or Oracle Spatial related parameters based on selected map integration.

If the ESRI integration option is selected, the ESRI setup will display. If the Oracle Spatial or Custom GIS with Oracle Spatial integration is selected, the respective set up will display.

Oracle Spatial Map Manager Setup:

1. Navigate to Create Map Manager page (Maintenance Super User > Assets > GIS Assets > Map Managers > Create).
2. Enter the Map Code (required).
3. Select the Association Level of Site (required).
4. Enter the Active Start Date.
5. Enter the Initial Zoom Level (required). This is default zoom level is used when the Map Workbench is launched.
6. Optionally enter a Map Viewer URL if you have the Map Viewer Server set up to maintain Oracle Spatial.
7. Enter values for the Initial CenterX point and Initial CenterY point. These default X and Y values (latitude and longitude) are used as a center for the map when the Map Workbench is launched.

8. Enter a value for the Locate Point Tolerance. This tolerance will be applied when capturing points between two points.
9. Enter the Spatial Reference ID which is the spatial reference that the asset geometry needs to use.
10. Enter the Map Layers to be used on the maps to extend the map visualization by adding user-defined layers on the base map. Examples: Customer Names, Zone Divisions, Engineering layout.

- Enter Map Name.
- Enter Order. This is the sequence in which the layer should be added.
- Choose the Map Type:
 - Elocation: Select to display Oracle Maps.
 - Google: Select to display Google Maps.
 - Data Source: Select to display maps from Oracle Spatial map viewer data source.

You must select Elocation or Google. You cannot have both layers.

If Elocation or Google Layer is chosen as one of the map layers, it should have an Order value minimum of all layers (for example, 1), so that the first layer is added to the display.

Additionally, if Google is the selected map layer, then the Google Maps license key must be entered in profile, CSI:Google Maps Client ID.

You add more data sources as needed for additional map layers.

- Enter the URL from which the data source is available. This field is available only if the selected map type is Data Source.
 - Enter the Theme name as configured in the Map Viewer data source. This field is available only if the selected map type is Data Source.
11. Enter the Locator URL: This field is used by the Search by address feature. This is the map viewer URL through which the location address can be converted to latitude and longitude.
 12. Save your work.

Capital | Rebuildable Inventory | Mass Meter Readings | Mass Geocode Entry | Asset Setups | **GIS Assets** | Map Workbench

Assets: GIS Assets: Map Managers >

Update Oracle Spatial Map Cancel Save Apply

Oracle Spatial Map Manager

Map Code: DocMap Association Level: Site
 Start Date: 15-Jul-2019 End Date:

Map Setup

Initial Zoom Level: 5 Map Viewer URL:
 Initial Center PointX: 17.44 Initial Center PointY: 78.47
 Locate Point Tolerance: 5 MinX: -8259908
 MaxX: -8186683 MinY: 4963428
 MaxY: 4991232 Spatial Reference Id: 8307

Map Layers

Name	Order	Map Type	URL	Data Source	Theme
Elocation	100	Elocation	https://services.arcgri...		
Base Label	200		https://services.arcgri...		

Locator Information

Locator URL:

ESRI Map Manager Setup:

1. Navigate to Create Map Manager page (Maintenance Super User > Assets > GIS Assets > Map Managers > Create).

If ESRI is the chosen map viewer, then the ESRI fields will appear.

2. Enter the Map Code (required).
3. Select the Association Level of Site (required).
4. Enter the Active Start Date.
5. Enter values for MinX, MinY, MaxX and MaxY points. These points form the rectangular area that needs to be initially zoomed to when the Map Manager is launched.
6. Enter the value for the WikiID (well known ID) which is the Spatial Reference of the map. This component of the coordinate system is used by the Map Manager to display the map and assets on the map.
7. Enter the Map Layers to be used on the maps to extend the map visualization to extend the map visualization by adding user-defined layers on the base map. Examples: Customer Names, Zone Divisions, Engineering layout.

Enter values for the following:

- Name

- Order: The sequence in which the layer needs to be added.
- URL: The ARCGIS map layer URL.
- Transparency: The transparency that the map layer needs to use.
- Display by Default: Select the check box so that the map layer appears automatically.

8. Enter the Locator URL. This geocoding field is used by the Find My Place feature in the Map Workbench.

This is the URL through which the location address can be sent and equivalent coordinates could be derived to zoom to a location.

Locator Information

Locator URL

Linear Asset Feature Web Services

Feature Class	Query	Feature Class Unique ID Field	*Unique ID Data Type	Geometry To Measure	Measure To Geometry
Roads	http://roadsandhighwa	OBJECTID	NUMBER	http://roadsandhighwa	http://roadsandhighwa

Discrete Asset Feature Web Services

Feature Class	Query	Object ID Field Name	*Unique ID Data Type	Access Control	Delete
Discrete	https://sampleserver6	OBJECTID	NUMBER		

Area Asset Feature Web Services

Feature Class	Query	Object ID Field Name	*Unique ID Data Type	Access Control	Delete
Area	http://sampleserver6.e	objectId	NUMBER		

Cancel Save Apply

9. Enter values for the Linear Assets Web Services feature.

These are Web Services generated from ESRI. The Feature Class/Table contains the Polyline shape and is published to the ESRI server to expose as webservices. A 'query' operation for the published webservices should be enabled so that EAM can query the Feature Class data.

Further, if the shape has measure dimensions, the webservice should also include the 'Linear Referencing' operation. This Linear Referencing Publishing would

generate additional webservice geometry to measure and measure to geometry which is required by EAM to perform dynamic segmentation.

Please refer to ESRI Roads and Highways Extension for more details on how to publish Feature Route with Linear Referencing capability.

- **Feature Class:** Enter a name which represents an ESRI Feature Class. The Feature Class can be selected when you define asset segments in the GIS Asset Workbench to map the segment to ESRI geometry.

Note: You can create and associate multiple ESRI Feature Classes.

- **Query:** The REST URL through which geometry can be queried by passing the Object ID or any unique ID in the Feature Class.
- **Feature Class Unique ID Field:** The identifier of the Feature Class table in the ESRI system.

You can publish and define multiple ESRI Feature Classes, and map them to various asset segments to associate the ESRI shape and geometry.

For example, the Electrical and the Water and Sewage departments could have their respective functional assets in the ESRI system, each residing in the respective Feature Class tables.

- The Electrical Department will have transmission lines in the Transmission Feature Class table. This table would be defined and published with a Feature Class name with respective URLs in Map Manager. When defining the transmission line asset, the segments would choose the Transmission Line Feature class to associate to its ESRI shape/geometry.
- Similarly, the Water and Sewage Department will have its own Feature Class tables which would be published and defined in the Map Manager. When defining water and sewage assets, the respective Feature Class would be chosen to map the shape and geometry in ESRI.
- **Unique ID Data Type:** Type of data in the unique column name on the ESRI Feature Class Table. Can be Number or Varchar.
- The following URLs are required for the linear referencing capability only if the published ESRI Feature class has measure dimensions.

If the shape has measure dimensions, then the Feature table is a route and is eligible for dynamic segmentation. The URLs would be used by EAM to dynamically segment the route. The Linear Referencing option is provided by ESRI while publishing to generate additional URLs. Please refer to ESRI Map Integration, page 23-1 for more details on REST services publishing.

Geometry To Measure: The URL through which a geometry point is passed so that the equivalent measure value on the asset geometry is returned.

Important: This URL can be generated only if you have Roads and Highways Extension for ARCGIS desktop and Server installed.

- Measure To Geometry: The REST URL through which a measure is passed so that the equivalent geometry point value on the asset geometry is returned.

Important: This URL can be generated only if you have Roads and Highways Extension for ARCGIS desktop and Server installed.

- Tolerance: Tolerance: Enter a tolerance offset value. You can click the asset geometry in the Map Workbench; however, it is not always possible to click the asset. This value considers the mouse click as an asset click if it is within the tolerance limit.

Important: Use the GIS Asset Workbench to associate Feature Classes to asset segments. See Using the GIS Asset Workbench, page 22-24 for more information.

10. Click the icon in the Responsibility and User columns to restrict access control to feature classes based on the responsibility and user. This control restricts users to access specific feature class data in the Map Workbench.

Note: All users associated with the specific responsibility will have the same access to the feature classes. This is applicable only when no user entry is made in the 'Users' column.

11. Enter values for the Discrete Asset Feature Web Services to publish point shape Feature Classes and map to discrete assets for the following fields.

These are web services generated from the ESRI System. The Feature Class and table that contain the Point shape is published to the ESRI server to get exposed as webservices. A query operation for the published webservices should be enabled so that EAM can query the Feature Class data.

- Feature Class: This value is selected during asset creation to map the asset to the ESRI Point geometry.
 - Use the Define Asset Number form to associate Point Feature Classes to

discrete assets. See Defining Asset Numbers, page 3-85.

- Use the GIS Asset Workbench to associate Point Feature Classes for assets. See Using the GIS Asset Workbench, page 22-24 for more information.

12. Enter values for the Area Asset Feature Web Services. Area assets have a geometric shape that is non-linear, but is identified by the closed area or shape having multiple linear sections forming its geometry. Examples are bodies of water such as lakes and ponds, forest areas, playgrounds, and so on.

Feature Class: This value is selected during asset creation to map the asset to the ESRI geometry.

- Use the Define Asset Number form to associate area Feature Classes to discrete assets. See Defining Asset Numbers, page 3-85.
- Use the GIS Asset Workbench to associate area Feature Classes for area assets. See Using the GIS Asset Workbench, page 22-24 for more information.

These are web services generated from the ESRI System. The Feature Class and table that contain the area shape is published to the ESRI server to get exposed as webservices. A query operation for the published webservices should be enabled so that EAM can query the Feature Class data.

13. Save your work.

Setting up the Create Map Manager for the Indoor Map Workbench:

You can set up the Map Manager to define the fields to be included on the Indoor Map Workbench.

1. Navigate to Map Managers (Maintenance Super User > Assets > GIS Assets > Map Managers).
2. Click the **Create** button.
3. Enter Map Manager values in the **Create ESRI Map Manager** page.

Header Region

Field	Mandatory?	Default Value
Map Code	Yes	NA
Association Level	Yes	Site

Field	Mandatory?	Default Value
Start Date	Yes	Sysdate
End Date	No	NA
ESRI Map Type	Yes	Null Values are Indoor, Outdoor For this feature, select Indoor.

Map Setup Region

Field	Mandatory?
Initial Zoom	Yes
Initial Center Point X	Yes
Initial Center Point Y	Yes

Map Layers Region

Field	Mandatory?	Default Value
Name	Yes	NA
Order	Yes	NA
URL	Yes	NA
Transparency	Yes	NA
Display By Default	Yes	Selected
Delete	NA	NA

Feature Layers Region

Field	Mandatory?	Default Value
Type	Yes	Null
Feature Class	Yes	Null
Query	Yes	Null
Object ID Field Name	Yes	Null
Object ID Data Type	No	Null
Delete	NA	NA

4. Save your work.

See Using the Indoor GIS Workbench, page 22-40 for more information.

Using Map Actions

GIS asset toolbar actions are used with the Map Workbench. The toolbar actions that you create appear in the Map Actions fields in the Map Workbench.

Creating Map Tool Bar Actions:

1. Navigate to the Create Map Toolbar page (Maintenance Super User > Assets > GIS Assets > Map Actions > Create Tool Bar Actions).
2. Enter a Toolbar Code (required).
3. Enter a Toolbar Name (required).
4. Enter an Active Start Date (required).
5. Select a Toolbar Type (required).
6. Optionally enter an Active Start Date.
7. Optionally enter the name of the API to be used with this map toolbar.
8. Save your work.

Updating Asset Map Toolbars:

1. Navigate to the Create Map Toolbar page (Maintenance Super User > Assets > GIS Assets > Map Actions > Create Tool Bar Actions).
2. Edit the values on the page. You cannot update the Toolbar Code.
3. Save your changes.

Using the GIS Asset Workbench

Use the GIS Asset Workbench to enter and view GIS and area asset details for a specific asset. Use this workbench to associate the following:

- Linear Reference Method
- Segments, including ESRI Feature Classes
- Properties
- Elements
- Relationships

You can access the GIS Asset Workbench using any of the following:

- Maintenance Super User > Home > Assets > Capital > Asset Numbers > Search > Go > View action drop-down > GIS Asset Workbench
- Maintenance Super User > Home > Assets > Rebuildable Inventory > Serialized Numbers > Search > View action drop-down > GIS Asset Workbench
- Maintenance Super User > Home > Assets > Capital > Asset Numbers > Search > View action drop-down > Details > Go > GIS Asset Workbench
- Maintenance Super User > Home > Assets > Rebuildable Inventory > Serialized Numbers > Search > View action drop-down > Details > Go > GIS Asset Workbench
- Enterprise Asset Management > Assets > Asset Numbers > Find Asset Numbers > Search > GIS Asset Workbench
- Enterprise Asset Management > Assets > Asset Numbers > Find Rebuildable Serial Number > Search > GIS Asset Workbench

To add asset details using the GIS Asset Workbench:

1. Navigate to the Asset Numbers page (Maintenance Super User > Home > Assets).
2. Search for a GIS asset by using one of these search methods:
 - Select a GIS asset in the Asset Numbers field.
 - Click the Advanced Search button, and select Yes in the GIS Assets field. The results will include GIS assets only.
3. Click the Go button.
4. Select the row for the asset.
5. Choose the GIS Asset Workbench value from the View drop-down.
6. Click the Go button, and the GIS Asset Workbench appears.
7. Select a Linear Reference Method (required).
8. Optionally select the Direction of the asset.
9. Select if this is an Area Asset. Area assets have a geometric shape that is non-linear, but is identified by the closed area or shape having multiple linear sections forming its geometry. Examples are bodies of water such as lakes and ponds, forest areas, playgrounds, and so on.

Values are Yes and No; the default value is No. If you select Yes, the Segmented option will be No. You cannot have an area asset that is segmented.
10. Optionally indicate if the linear asset is Segmented and will contain a single segment or multiple segments. Values are Yes or No.

If you select Yes, the Segments region becomes available to add multiple rows.

A segment is a section of the linear asset identified by its start and end measure. A linear asset can have one or more segments within its length. Creating segments enables you the ability to analyze and work on specific sections of the linear asset. Example: Gathering and Transmission Pipeline Segments, Freeway Road Segments, Main and Feeder Segment Pipelines.

You can enter an end date for the linear asset segment, and update the segment details with new measure values. This enables the same segment name to be retained in the system with updated measure values.
11. Select Yes to enable the Add 3 Rows icon in the Segment Details region to add multiple segments. Add Segment Details such as:

- Segment Name
- Segment Description
- Feature Class: Available with the ESRI integration only. These values are defined on the ESRI Map Manager page, and is a reference to a published Feature table from ESRI System which has a Polyline shape.
- ESRI Route ID: Available with the ESRI integration only. The ESRI reference identifier from the eSRI Feature table which contains the corresponding Polyline geometry.
- Spatial Route: Available for Oracle Spatial integration option only. The Spatial route can be associated during the GIS assets setup.
- Custom Route ID: Available for Custom integration option only. The identifier must be passed to a custom API to derive SDO geometry.
- From Measure: Optional if ESRI Feature class shape does not have measure dimension.
- To Measure: Optional if ESRI Feature class shape does not have measure dimension.
- Length: Optional if ESRI Feature class shape does not have measure dimension.
- Start Date
- End Date

You can have more than one segment with the same segment name with a different segment description as long as the dates are not overlapping. This enables you to have version control of geometry changes based on time. Versioning the segments with the same name would keep the properties, elements and relationships intact as they continue to point to the same segment name.

Important: Based upon the map integration that you use, the segment row may also include additional columns such as ESRI Route ID, Spatial Route ID or Custom Spatial Route ID. This provides the ability to associate the geometry shape to the linear asset.

See GIS Asset Maps Integration, page 23-1 for more information.

Select No to enter segment details for one row. Enter Segment Details such as:

- Feature Class: Available with the ESRI integration only. These values are

defined on the ESRI Map Manager page, and is a reference to a published Feature table from ESRI System which has a Polyline shape.

- ESRI Route ID: Available with the ESRI integration only. The ESRI reference identifier from the ESRI Feature table which contains the corresponding Polyline geometry.
- Custom Route ID: Available for Custom integration option only. The identifier must be passed to a custom API to derive SDO geometry.
- From Measure: Optional if ESRI Feature class shape does not have measure dimension.
- To Measure: Optional if ESRI Feature class shape does not have measure dimension.
- Length: Optional if ESRI Feature class shape does not have measure dimension.
- Start Date
- End Date

Note: The Measure UOM defaults to the UOM associated with the Linear Reference Method.

GIS Asset Workbench

Maintenance Home **Assets** Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Rebuildable Inventory Mass Meter Readings Mass Geocode Entry Asset Setups Map Workbench GIS Assets **Capital**

Assets: Capital >

GIS Asset Workbench

Cancel Save Apply

* Indicates required field

Asset Number CBArea1 Asset Group Fork Lifts
Description Asset Status CREATED

Linear Reference Method

* Reference Method
Direction
Area Asset No
Segmented No

Reference Method	
Name	Description
UOM	X Offset UOM
Y Reference	Y Offset UOM
Z Reference	Z Offset UOM

Segment Details

Details	Feature Class	Feature ID	Measure UOM	From Measure	To Measure	Length	Active Start Date	Active E
▶	Area	1					08-Nov-2018 08:17:06	

12. Optionally click the following to add Properties and associated details:

- Add 3 Rows icon
- Copy Property: Copy the property details for the selected row
- Copy Segment Details: Copy the segment details for the selected row
- Copy Row: Copy the entire selected row

Properties

Copy Property Copy Segment Details Copy Row

Select Details	Segment Name	Property	Linear Type	Value UOM	Value	Measure Type	Measure UOM	From Measure	To Measure	Length
▶	S001	Temperature	LINE		15	Absolute	Miles	1	12	11
▶	S002	Temperature	LINE		33	Absolute	Miles	13	25	12
▶	S003	Temperature	LINE		10	Absolute	Miles	26	33	7

Elements

Copy Element Copy Segment Details Copy Row

Select Details	Segment Name	Element	Linear Type	Shared	Label	Reference Point	Measure Type	Measure UOM	From Measure	To Measure	Length
▶	S001	Electric Line	LINE			No	Absolute	Miles	1	5	4
▶	S002	Electric Line	LINE			No	Absolute	Miles	13	20	7
▶	S001	Electric Pole	POINT			No	Absolute	Miles	3		
▶	S002	Electric Pole	POINT			No	Absolute	Miles	27		

13. Optionally add Elements details. Elements can be Labelled or Non_labelled, Point or Line. You can add elements by clicking one of the following:

- Add 3 Rows icon

- Copy Element: Copy segment name
- Copy Segment Details: Copy the segment details for the selected row
- Copy Row: Copy the entire selected row

If you click the Add 3 Rows icon, enter information such as:

- Segment Code
 - Element
 - Shared
 - Label
 - Measure Type
 - Active Start Date
 - Active End Date
14. Click one of the following buttons to add Relationships to the GIS asset:
- Add Relationship: Enter relationship information.
 - Copy Relationship: Copy a specific relationship row.
 - Copy Segment Details: Copy the segment details for the selected row.
 - Copy Row: Copy the entire selected row.
15. Click the Manage Relationships icon to access the Manage Relationships page.
- Use this region to edit relationship details such as Assets and Related Assets.

Relationships

Add Relationship

Copy Relationship

Copy Segment Details

Copy Row

<

16. Click the Save button to return to the GIS Assets Workbench.

17. Click the Apply button.

To view assets using the GIS Assets Workbench:

1. Navigate to the Asset Numbers page.
2. Enter search criteria for a asset, and then click Go.
3. Click the link for the asset and the Asset Details page appears.
4. Click the GIS Asset Workbench link.

Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management Reports

Capital Rebuildable Inventory Mass Meter Readings Mass Geocode Entry Linear Assets Map Viewer

Assets: Capital >

Asset Details: FL1040

View Work Requests Go

Asset Number	FL1040
Description	Fork Lift 1040
Serial Number	FL1040
Asset Group	Fork Lifts
Asset Group Description	Fork Lift Asset Group
Parent Asset Number	All Lifts
Parent Asset Group	Fork Lifts
Fixed Asset Number	102017
Category	ForkLift.Electric
Accounting Class	MaintWAC
Maintainable	Yes
Linear Asset	Yes
Equipment Serial Number	
Asset Route	No
Supplier Warranty Expiration Date	
Attachments	None
Failure Set	Equipment Failure Set

Asset Health

Open Work Requests	
Open Work	0
Planned Work	
Planned Work Date	
Shutdown	No
Criticality	Normal
Owning Department	W-Maint

Asset Location

Current Org	EM1
Subinventory	
Area	Warehouse
Location	
Latitude	
Longitude	

[Show On Map](#)

[Linear Asset Workbench](#)

TIP D,M and S used against the numerals in Latitude and Longitude stand for Degrees Minutes and Seconds respectively

5. View the associated asset details such as the measure values associated for the current active segment.

Using the Map Workbench

Use the Map Workbench to view GIS, discrete, and area assets. You can also view and create work requests and work orders, including express work orders for the located assets.

Important: Discrete assets must have geocoded information or an associated ESRI Point Feature Class defined to be displayed on the Map Workbench.

Segments must have an association to a Spatial Route or ESRI polyline Feature Class to be displayed on the Map Workbench.

You can perform the following using the Map Workbench:

- Search for assets by asset numbers, asset status and asset relationships.

- Search for assets using the Asset Search, GIS Attributes Search, Work Order Search, Locate Segments, and Work Request Search tabs.
- Locate assets in a circle or polygon area on a map.
- Locate assets using segments.
- Search for GIS asset attributes, Elements and Properties.
- Search for work orders by number or status.
- Search for work requests based on number or status.
- Create Dynamic Segments of assets by entering measure values or using reference points.
- Create Dynamic Segments of assets by clicking an asset displayed on a map.
- Create work orders including express work orders on Located Assets.
- Create work orders including express work orders for located assets with Located Measures.

Note: Dynamic segmentation is the process of clipping the asset geometry for the given measure values without disturbing the underlying asset geometry. Refer to Oracle Spatial and ESRI materials for more information on dynamic segmentation.

Navigating the Map Workbench:

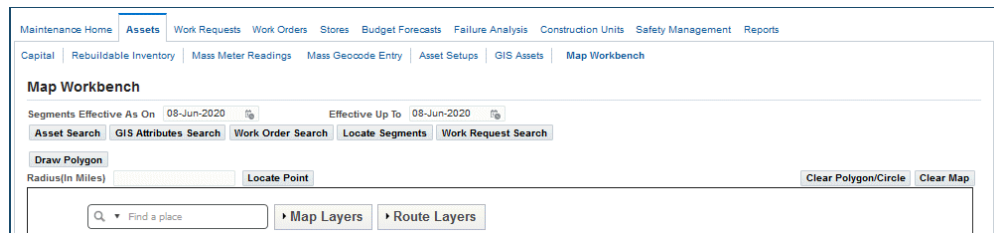
1. Navigate to the Map Workbench page (Maintenance Super User > Home > Assets > Map Workbench).

The Map Workbench can also be accessed using the Map All action from the Asset Search and Work Order Search. In addition, you can navigate to the Map Workbench by clicking the Show on Map link in asset and work order details.

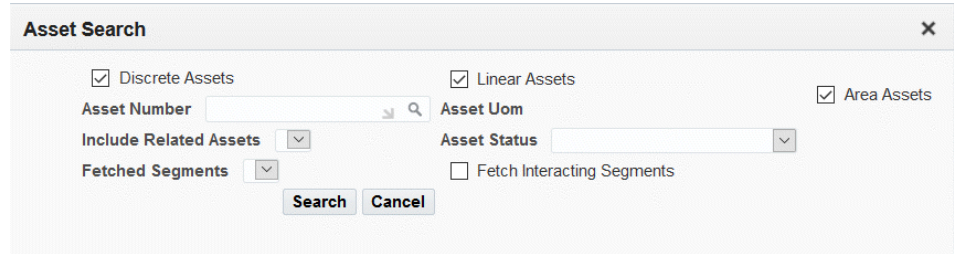
The Map Workbench page appears and displays the following to enable you to search for discrete or GIS assets, GIS asset attributes, work orders on maps and perform dynamic segmentation for measured GIS assets. Work orders and work requests can be initiated on the selected assets and asset segments.

- Segments Effective From and Effective To: Enter the effective dates of the segments and to perform an asset search based on the effective date.
- Search Options:

- Asset Search
 - GIS Attribute Search
 - Work Order Search: You can search for multiple work orders.
 - Locate Segments
 - Work Request Search: You can search for multiple work requests.
- Search Results Tab: Initiate work based on the following:
 - Located Assets
 - Located Attributes
 - Located Work Orders
 - Located Measures
 - Located Work Requests



2. Click the Asset Search button to search for discrete, linear, or area assets on a map. You can perform an asset search using one of these options:
 1. Select the check box for Discrete Assets, Linear Assets, or Area Assets.
 2. Select the Asset Number.
 3. Select Include Related Assets and Fetched Segments to further narrow your search.
 4. Optionally select the Asset Status.
 5. Click the Search button.



Asset Search [X]

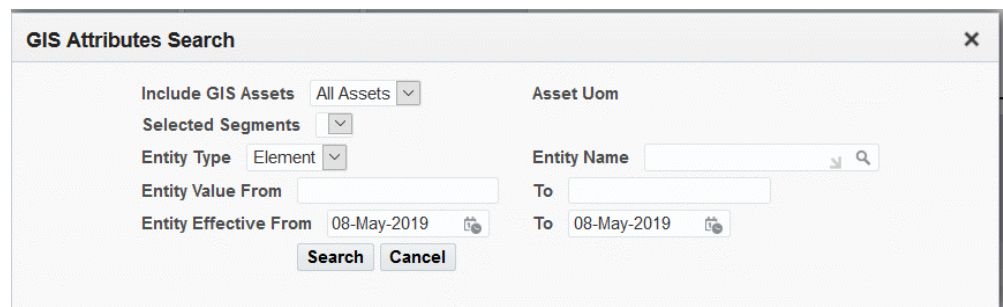
☒ Discrete Assets
 ☒ Linear Assets
 ☒ Area Assets

Asset Number [Q]
 Asset Uom

Include Related Assets
 Asset Status

Fetched Segments
☐ Fetch Interacting Segments

3. Click the GIS Attributes Search button to search for asset attributes:
 - Select a value in the Include GIS Assets dropdown list: All Assets or All Selected Assets.
 - Search by Entity Type of Element or Property (required).
 - Select a value in the Selected Segments field:
 - Enter an Entity Name.
 - Optionally enter an Entity Value From and To value to narrow your search.
 - Enter Effective From and To dates.
 - Click the Search button.



GIS Attributes Search [X]

Include GIS Assets All Assets
 Asset Uom

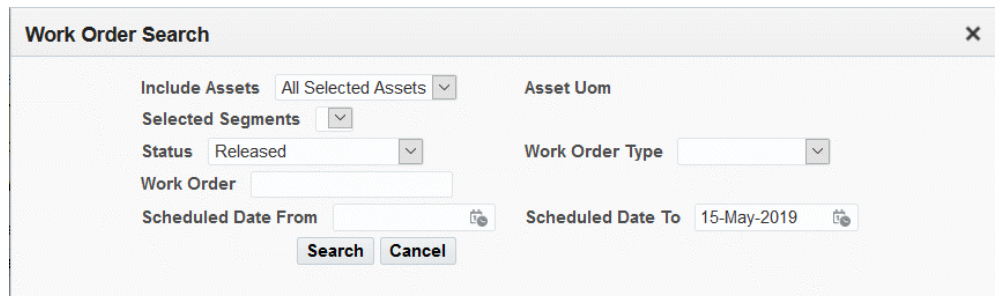
Selected Segments
 Entity Name [Q]

Entity Type Element
 Entity Value From To

Entity Effective From 08-May-2019 [calendar icon]
 To 08-May-2019 [calendar icon]

4. Click the Work Order Search subtab to enter selection criteria such as:
 1. Include Assets: Enter a specific retrieved asset, All Selected Assets, or All Assets.
 2. Selected Segments
 3. Status
 4. Work Order Type

5. Work Order
6. Effective From and To dates
7. Click the Search button.



The screenshot shows a 'Work Order Search' dialog box with a close button (X) in the top right corner. The dialog contains several search criteria fields:

- Include Assets:** A dropdown menu currently showing 'All Selected Assets'.
- Selected Segments:** A dropdown menu.
- Status:** A dropdown menu currently showing 'Released'.
- Work Order:** A text input field.
- Scheduled Date From:** A date picker field.
- Scheduled Date To:** A date picker field currently showing '15-May-2019'.
- Asset Uom:** A label with a corresponding dropdown menu.
- Work Order Type:** A dropdown menu.

At the bottom of the dialog are two buttons: 'Search' and 'Cancel'.

5. Click the Locate Segments button to search for assets with segments.
Enter values for any of the following fields:
 - Select a value from the Selected Assets drop-down list.
 - Select a value from the Selected Segments drop-down list.
 - Optionally enter a value in the From Measure and To Measure fields to narrow your search.
 - Optionally enter a value in the From Reference Point, Offset and Offset UOM fields to narrow your search.
 - Optionally enter a value in the To Reference Point fields, Offset, and Offset UOM fields to narrow your search.
 - Click the Locate button.

6. Click the Work Request Search button to search for work requests associated with the assets. Enter values for any of the following fields to narrow your search:
 - Include Assets: All Assets or All Specific Assets
 - Asset UOM
 - Request Status
 - Request Type
 - Request Number
 - Request Priority
 - Request By Start Date From
 - Request By Start Date To

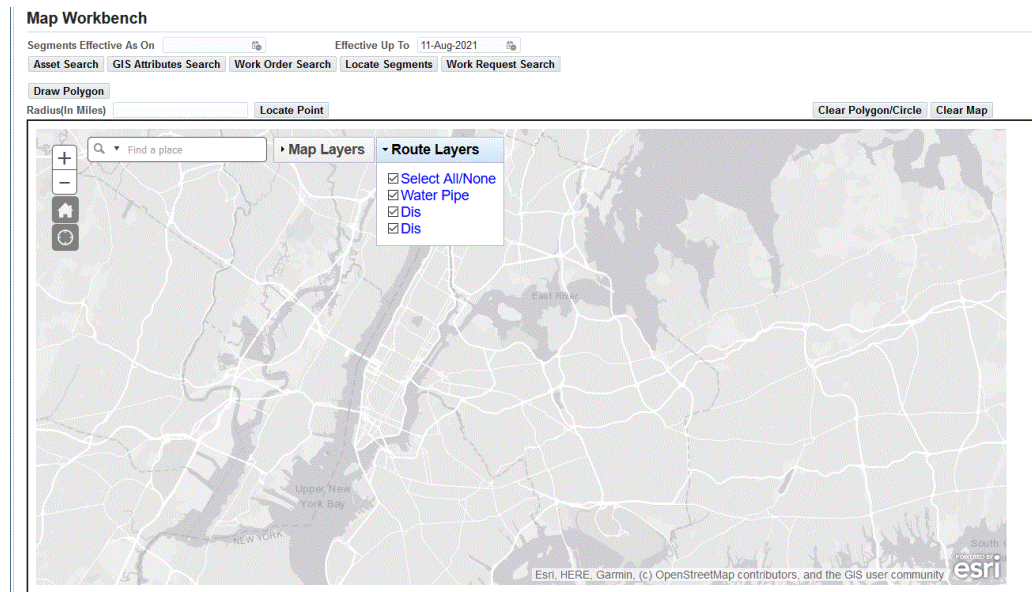
7. Click the Draw Polygon button to draw a polygon to restrict the search on the map to the drawn polygon area only.
8. Enter a Radius and Click point to draw circle area covering the radius distance. Search on the map would be restricted only to the radius distance.
9. Optionally enter a numerical value in the Radius (In Miles) field, and click the

Locate Point button to locate assets located within a specific mile radius.

10. Optionally enter the Zoom to Location (Address, City, State, Zip), and then click the Locate button.
11. Optionally click the Clear Polygon button or the Clear Map button.
12. Optionally right-click the map to select the Map Layers.

Route Layers in Map Workbench:

Optionally right-click the map to select the Route Layers.



The following are rules related to the Route Layers functionality in Map Workbench:

- All the feature classes of Linear, Discrete, and Area Asset types appear in the Map Workbench Route Layers list.
- The Route Layers list of values is not limited based on the access control provided for the responsibility or user.
- The Route Layers list values are available for selection.

The default value for all the selected layers is Yes.

[psx

- When a particular route layer is unselected and the asset search is performed, the asset geometries belonging to that feature class will not be retrieved in the search results.

bbb

This is applicable for asset search by entering search parameters or during searches by polygon/circle area.

- The route layers selection is considered before the asset search is executed.

If the selection is modified with existing search results displayed on the Map Workbench, then it will not modify the retrieved asset geometries.

1. Click the Located Assets subtab to view GIS asset information such as:

- Asset Number
- Segment Name
- Segment Description
- Route Name
- From Measure and To Measure
- Zoom to display the asset location on the map
- Remove to delete the asset number row from the results

Note: The Zoom and Remove buttons are available for discrete, linear, and area assets.

Located Assets

Located Attributes

Located Work Orders

Located Measures

Located Work Requests

Mass Geocode Entry

▲ Located Assets

Create Work Order

Express Work Order

Create Work Request

Create Multiple Work Orders

Create Work Order on Dynamic Asset Route

...

Select Asset Number	Segment Name	Segment Description	Route Name	From Measure	To Measure	Zoom	Remove
<input checked="" type="checkbox"/> NN01						Zoom	Remove

2. Click the Create Work Order button to access the Create Work Order page for the selected assets.

You can select the work order status for a specific organization.

See Creating Work Orders, page 21-46 for more information.

3. Select an asset number.

Select an asset number, and then click the Express Work Order subtab to create an express work order. See Creating Express Work Orders, page 21-45 for more information.

4. Click the Create Work Request button to access the Create Work Request page for

selected assets. See *Creating and Updating Work Requests*, *Oracle Enterprise Asset Management User's Guide* for more information.

5. Click the Create Multiple Work Orders button to create one work order for each selected asset number.

For linear assets, if the segments are selected, then the work order will be created on the selected segments only. If no segments are selected from the search results, but only the asset is selected, then the work order will be created with all the segments.

The Create Multiple Work Orders window appears in which work order default values can be applied to all the work orders to be created. The Number of Assets Selected is a read-only field that displays the number of assets selected for the work order creation process.

1. Optionally select values for these fields:

- Asset Activity
- Department
- Work Order Type
- Priority
- Status
- Scheduled Start Date
- Scheduled Completion Date

Note: If no values are selected in the fields, then all the work orders will be created based on the standard default values for the work order.

2. Click the Create Work Order button to create a work order. User-defined work order statuses available for your organization are available for selection.
3. Click the Submit button.
4. A confirmation message appears on the Map Workbench page that displays the request ID for the EAM Create Multiple Work Orders concurrent program that was successfully called. View the concurrent program log for the list of work orders that were created or failed.
6. Click the Create Work Order on Dynamic Asset Route button. A pop-up window appears enabling the creation of work order route for each of the selected assets.

1. The following information displays:
 - Number of Assets Selected
 - Assign to Asset Route: Select an asset route.
 - Work Order (required): Accept the auto-generated work order number if work order numbers are automatically generated, or a different work order number.
 - Description: Optionally enter text.

2. Click the Proceed to Create Work Order button.

The Update Work Order page appears with the work order created on the dynamic asset route available for edit. The work order is created with a status of Draft. However, the Route Details pop-up window appears where work order details such as the status can be modified.

7. Click the Located Attributes subtab to view:
 - Asset Number
 - Segment Name
 - Entity Type
 - Entity Name
 - Value
 - Zoom to display the asset location on the map
 - Remove to delete the asset number row from the results
8. Click the Located Work Orders subtab on the lower region of the page to view associated work order information such as:
 - Asset Number
 - Segment Name
 - Segment Description
 - Status
 - Work Order Number

- Zoom to display the asset location on the map
 - Remove to delete the asset number row from the results
9. Click the Located Measures subtab to view:
- Asset Number
 - Segment Name
 - From Measure and To Measure

User-defined work order statuses available for your organization are available for selection.

Click the Create Multiple Work Orders button to create a work order for each selected asset number.

For linear assets, all segments from one asset are grouped into the details of one work order.

10. Select the row for the asset number.

Click the **Mass Geocode Entry** subtab to add, view, and update geocode information for the located asset. See *Entering Geocodes for EAM Assets*, page 24-3 for more information.

Using the Indoor Map Workbench

Use the Indoor Map Workbench to visualize assets indoors on a GIS map.

Important: The Indoor Map Workbench menu must be enabled before you can use this feature. See *Enabling the Indoor Map Workbench Menu*, page 3-121.

To use the Indoor Map Workbench:

1. Navigate to the Indoor Map Workbench (Maintenance Super User > Assets > Indoor Map Workbench).
2. Use these options to perform the following searches:
 - **Asset Search**
 - Asset Number
 - Asset Status

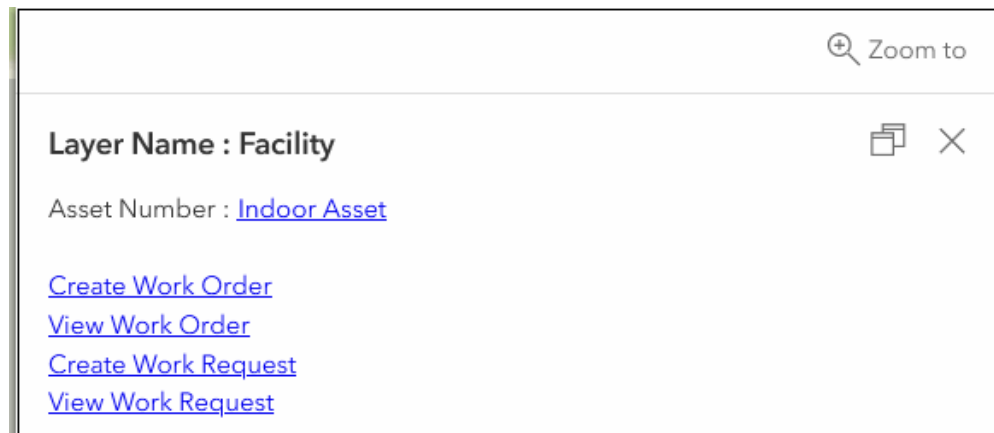
- **Work Order Search**
 - Status
 - Work Order Type
 - Work Order
 - Scheduled Date from
 - Scheduled Date to
- **Work Request Search**
 - Request Status
 - Request Type
 - Request Number
 - Request Priority
 - Assigned Department
 - Request By Start Date From
 - Request By Start Date To

Results Region

Click the following subtabs to perform additional actions the selected row:

- **Located Assets:** Create work orders, express work orders, work requests, and multiple work orders for the asset.
- **Located Work Orders** - Click one of the following:
 - **Create Work Order** - to create a work order. See Creating Work Orders, page 21-46.
 - **Express Work Order** - to create an express work order. See Creating Express Work Orders, page 21-57.
 - **Create Work Requests** - to add work requests to the asset. See Creating and Updating Work Requests., page 17-8
 - **Create Multiple Work Orders** - to add a work order for several selected work orders. You must select more than one row to click this button. See Using the Map Workbench, page 22-30.

- Asset Number link - to view asset details. See Defining Asset Numbers, page 3-85.
 - Work Order Number link - to view work order details. See Viewing Work Orders, page 21-64.
 - Zoom - to display the asset location on the map.
 - Remove - delete the row from the results.
- **Located Work Requests:**
3. Place the cursor over the map area where the asset is located to access the following actions:



- Create Work Order - To a work order. See Creating Work Orders, page 21-46.
- View Work Order - To navigate to an existing work order for the asset. See Viewing Work Orders, page 21-64.
- Create Work Request - To add a work request for the asset. See Creating and Updating Work Requests, page 17-8.
- View Work Request - To navigate to an existing work request. See Obtaining Work Request Information., page 17-5

GIS Assets Map Integration

This chapter covers the following topics:

- Overview of GIS Assets Map Integration
- ESRI-GIS Assets Integration
- Oracle Spatial-GIS Assets Integration
- Custom GIS with Oracle Spatial-GIS Assets Integration
- Using Linear Spatial Routes
- Using the Linear Spatial Route Map

Overview of GIS Assets Map Integration

Setting the Profile CSI: Map Viewer Name drives the map integration option. Select of the following options for GIS assets:

- ESRI: For ESRI integration
- Oracle Spatial: For Oracle Spatial Integration
- Custom GIS with Oracle Spatial: For Custom GIS integration

The integration option determines where you want the GIS geometry of the GIS assets to reside.

ESRI-GIS Assets Integration

Oracle Enterprise Asset Management directly integrates with an ESRI GIS System. With this integration, ESRI is the primary source GIS system. The geometry would be part of the ESRI GIS, and EAM holds the reference of the geometry and pulls the geometry whenever required.

This applies both for discrete assets which can refer to Point geometry, and GIS assets

which can refer to Line geometry of an ESRI Feature Class.

Prerequisites

☐ Required Software Licenses

1. ArcGIS for Server
2. ArcGIS for Desktop
3. Esri Roads and Highways Extension for Desktop and Server: Applies only for GIS assets and if line geometry has measure dimensions. This is needed to publish the line geometry with Linear Referencing capabilities.

☐ Prerequisite Steps Before Asset Association

Perform the following steps before associating assets:

1. Publish the ESRI Feature Class that the discrete or GIS asset needs to reference.
2. Set up the parameters in Map Manager. See Using Map Manager, page 22-14 for more details.

ESRI Geometry:

ESRI maintains the geometry in the Feature Class. Each row has a shape and can be identified by a unique ID.

As part of the ESRI integration implementation, the ESRI Feature Class which has either a point shape or polyline shape should be published to the Server using the ArcGIS for Desktop tool.

If the Feature Class has a polyline shape and a measure dimension, the published webservices must also have GIS referencing capability. This option requires ESRI Roads and Highways Extension for Desktop and Server to publish the webservices with GIS referencing capability. This would generate additional webservices of geometry to measure and measure to geometry.

After the required Feature Classes are published, the generated URLs must be seeded in the Map Manager under the GIS asset and discrete asset webservices section, based on the polyline or point Feature Class published. Refer to Using Map Manager, page 22-14 for more information regarding how the generated URLs should be set up.

Note: Please review ARCGIS Help for publishing Feature Classes as web services using the ARCGIS Desktop tool. In addition, review the ESRI Road and Highways extension product which assists in the selection of the Linear Referencing capabilities.

Mapping ESRI Geometry to EAM GIS Assets:

The ESRI Polyline Feature class is mapped to the EAM Linear Asset Segment so that the geometry is associated to the GIS asset. If the ESRI integration option is selected, the segment table will include additional columns, ESRI Feature Class and ESRI Feature ID. Use these columns to choose the Feature Class that is set up in Map Manager and enter the unique ID pointing to a row in chosen Feature Class to create the association between the ESRI Polyline Geometry and the EAM GIS asset. If geometry has a measure dimension, you can enter the measures and length to specify the portion of measure that the segment is mapped.

During the asset visualization in Map Workbench, the geometry is fetched using Webservice Query URLs seeded in the Map Manager by passing the unique ID entered in Linear Asset Segment fields using the GIS Asset Workbench.

The mapping between ESRI Unique ID and the EAM GIS Asset can be performed in several ways. You can select from various mapping options based on the length of geometry and how you wanted to view, manage, or maintain the asset in Enterprise Asset Management. This gives flexibility to define GIS assets based on operational needs but not driven by GIS feature objects.

Mapping Options

One Asset to One Route	The Linear Asset Segment can be mapped to a single ESRI Feature ObjectID which would mean that the asset maintains the complete geometry route as defined in the ESRI system.
One Asset to Many Routes	Multiple asset segments of an asset are mapped to different ESRI object IDs, which indicates that the asset maintains all the geometry of the mapped objectIDs as one single asset.

Many Assets to One Route

Create multiple assets, map the Segment to same Object ID field with (entered) Measure values which indicates that multiple assets maintain the same geometry. However, each asset has its own share of length, and only that portion of the GIS route can be maintained.

Example: An ESRI pipe route, 1000212, has a geometry stretch of 100km. Map the same routeId Assets A1, A2 with measure values entered in GIS Asset Workbench Segment Details:

- Asset A1 maintains 1000212 for 1-50km
 - Asset A1 maintains 1000212 for 50-100km
-

Mapping ESRI Geometry to EAM Discrete Assets:

The ESRI Point Feature Class is enabled so that it can be associated to the EAM discrete asset. When the ESRI integration option is selected, the Location tab will display additional fields of ESRI Feature Class and ESRI Feature ID in the Define Asset Number and Define Rebuildable Serial Number forms. Use these fields to choose the Feature Class setup in the Map Manager and enter the unique ID pointing to a row in the selected Feature class to create the association between the ESRI Point Geometry and the EAM discrete asset.

During the asset visualization in the Map Workbench, the geometry is fetched by passing the unique ID using Webservice Query URLs seeded in the Map Manager.

Note: You can use the Latitude and Longitude fields in the Locations tab to enter the location details to visualize the asset on the map. If Latitude, Longitude and ESRI Feature Details are defined, then the ESRI feature takes priority.

Oracle Spatial-GIS Assets Integration

Oracle Enterprise Asset Management GIS assets geometry can be maintained in Oracle Spatial if Oracle Spatial is installed as part of the EBS database.

With this integration, the geometry would be maintained in EAM as a Spatial Route, and the EAM GIS asset would hold the reference of the spatial route geometry and pulls the geometry when required for viewing.

Prerequisites

☐ Required Software License

- Oracle Spatial in EBS Database

☐ Prerequisite Steps Before Asset Association

1. Set up parameters in Map Manager. Please review Using Map Manager, page 22-14 for more details.
2. Run the EAM: Reindexing Oracle Spatial Tables concurrent program. This concurrent program is run after the Map Manager setups to create the index of the spatial columns are completed for the Oracle Spatial integration.
3. Use a Linear Spatial Route and create geometry.

Geometry:

The geometry can be created in EAM system from the Linear Spatial Route setup. Spatial Routes enable you to draw the geometry on Google Maps, Oracle Maps, or Oracle Spatial Maps. Please review Using Linear Spatial Routes, *Oracle Enterprise Asset Management User's Guide* to create and manage Spatial Routes for more information.

Mapping Spatial Route Geometry to an EAM Asset:

The Spatial Routes must be mapped to EAM asset so that the geometry is associated to the asset. This can be performed using GIS Asset Workbench Segment Details. If the Oracle Spatial integration option is selected, the segment section in GIS Asset Workbench displays an additional column, Spatial Route ID, where the spatial route can be selected to create an association between the Route Geometry and the EAM GIS asset.

During asset visualization in the Map Workbench, the geometry is fetched from the asset associated spatial route.

The mapping between Spatial Route and an EAM GIS Asset can be performed in several ways. You can select from various mapping options based on length of the spatial route geometry, and how you want to view and maintain the asset in Oracle Enterprise Asset Management.

Mapping Options

One Asset to One Route	The Linear Asset Segment can be mapped to a single Spatial Route without entering measure values, indicating that the asset maintains the complete geometry route as defined in the Spatial Route.
One Asset to Many Routes	Multiple asset segments of an asset are mapped to different Spatial Routes, indicating that the asset maintains all the geometries of the mapped Spatial Routes as one single asset.
Many Assets to One Route	<p>Create multiple assets, map the Segment to same Spatial Route with Measure values also entered. This indicates that multiple assets maintain the same geometry but each one has its own share of length and each asset can maintain only that part of the GIS route.</p> <p>Example: A pipe Spatial Route, Pipe100, has a geometry stretch of 100km. Map the same Spatial Route to Assets A1, A2 with measure values entered in GIS Asset Workbench Segment Details:</p> <ul style="list-style-type: none">• Asset A1 maintains Pipe100 for 1-50km• Asset A1 maintains Pipe100 for 50-100km

Custom GIS with Oracle Spatial-GIS Assets Integration

Oracle Enterprise Asset Management gives option to integrate with your GIS System as the primary source GIS system.

In this integration, the geometry would be part of custom GIS, and the EAM GIS asset would hold the reference of the geometry and pulls the geometry when needed.

Prerequisites

☐ Required Software License

- Oracle Spatial in EBS Database

If you have a custom GIS system that has Spatial capabilities or if the custom GIS uses Oracle Spatial, you must have a separate Oracle Spatial license as part of EBS

database. This is necessary for EAM to process geometry further during visualization.

Prerequisite Steps

1. Set up parameters in Map Manager. Please review map Manager for more details.
2. Implement API EAM_GIS_CUSTOM.Get_Custom_Route()

The EAM_GIS_CUSTOM.Get_Custom_Route () package specification is seeded as part of EAM. You must implement this API which will return Custom GIS geometry data in the Oracle Spatial Format.

The custom_route_id and asset_number would be passed to the API, for you to implement logic to fetch related geometries from your GIS system and fetched data must be converted to Oracle Spatial SDO_GEOMETRY format for EAM to use.

```
function Get_Custom_Route (custom_route_id number,asset_number number)
return sdo_geometry
```

The custom_route_id is the unique id entered in GIS Asset Workbench for the GIS asset.

Geometry:

The Custom GIS system maintains the geometry.

Mapping Custom GIS Geometry to an EAM Asset:

The Custom GIS geometry must be mapped to the EAM asset so that the geometry of associated asset can be fetched. This can be performed using GIS Asset Workbench Segment Details.

If the Custom GIS with Oracle Spatial integration option is selected, the segment section will include a Custom Route ID column where the you can enter a unique ID used to retrieve the geometry from Custom GIS system.

During asset visualization in the Map Workbench, the geometry is fetched by calling the custom API **Get_Custom_Route** by passing the unique id you have associated in GIS Asset Workbench, enabling you to fetch related geometry from your GIS system.

The mapping between the Custom Route ID and an EAM GIS asset can be performed in many ways. You can select from various mapping options based on the length of the Spatial route geometry and how you want to view or maintain the GIS asset in Oracle Enterprise Asset Management.

Mapping Options

One Asset to One Route	The Linear Asset Segment can be mapped to a single Custom routeid without entering measure values, indicating that the asset maintains the complete geometry route as defined in GIS system.
One Asset to Many Routes	A multiple Asset segments of an asset are mapped to different Custom routeIds, which would mean the asset maintains all the geometries of the mapped routeId as one single asset.
Many Assets to One Route	<p>Create multiple Assets, map the Segment to same routeId with Measure values also entered, which would mean multiple assets maintain the same geometry but each one has its own share of length and each asset is eligible to maintain only that part of the GIS route</p> <p>Example: A Custom GIS pipe route, 1000212, has a geometry stretch of 100km. Map the same routeId Assets A1, A2 with measure values entered in GIS Asset Workbench Segment Details:</p> <ul style="list-style-type: none">• Asset A1 maintains 1000212 for 1-50km• Asset A2 maintains 1000212 for 50-100km

Using Linear Spatial Routes

Linear Spatial Routes will be used only if you choose the option of Oracle Spatial for map integration.

Creating Spatial Routes:

1. Navigate to the Create Spatial Route page (Maintenance Super User > Assets > GIS Assets > Spatial Routes > Create Spatial Route).
2. Enter a spatial Route Code (required).
3. Enter an Active Start Date (required).

4. Optionally enter values in any of these fields:

- Route Name
- Line Style
- Active End Date

5. Save your work.

Updating Linear Spatial Routes:

1. Navigate to the Linear Spatial Route page (Maintenance Super User > Assets > GIS Assets > Spatial Routes).
2. Click the Go button to retrieve the existing linear spatial routes.
3. Click the Update icon to make changes to the spatial route.
4. Enter new values for the Route Name, Active Start Date, Line Style, and Active End Date.

You cannot edit the Route Code.

5. Save your work.

After the Spatial Route Definition has been created, you can view the map and draw the geometry profile. Refer to Using the Linear Spatial Route Map, page 23-9.

Using the Linear Spatial Route Map

The Linear Spatial Route Map is a spatial map page that supports basic toolbar actions to draw the route profile on a map. This geometry can be saved for the spatial route defined in EAM.

In addition, you can use the Linear Spatial Route Map to view, draw and modify the geometry associated with the spatial route.

Note: Make sure the Map Manager setup and Reindexing Oracle Spatial concurrent program are run before you use Linear Spatial Route Map.

Creating Route Geometry Using the Linear Spatial Route Map:

1. Navigate to the Linear Spatial Routes page (Maintenance Super User > Assets > GIS Assets > Spatial Routes).

2. Search for an Oracle Spatial route, and click the Go button.
3. Click the Open button in the Map column to launch the Spatial Route Map.

Linear Spatial Routes Save Search

* Indicates required field

Simple Search

Note that the search is case insensitive

Route Code Route Name

From Date To Date

Go Clear Advanced Search

Create Spatial Routes | ***

Route Code	Route Name	From Measure	To Measure	Active Start Date	Active End Date	Update	Map
DocMapRoute				16-Jul-2019		Update	Open

4. The Linear Spatial Route Map appears with the map layer. The map layer could be Google Maps, Oracle Maps, or Oracle Spatial Map sourced from the data source based on the Map Manager setup.
 1. Click the Draw Route button to draw the geometry on the map layer.
 2. Right-click to stop drawing.
 3. Once finished with drawing, enter From measure and To measure.
 4. Click Save Spatial Route to save the geometry.
5. Optionally use the Undo, Redo, Clear buttons and distance tool while modifying the geometry of the spatial route.

Modifying Route Geometry Using the Linear Spatial Route Map:

1. Navigate to the Linear Spatial Routes page (Maintenance Super User > Assets > GIS Assets > Spatial Routes).
2. Search for a spatial route, and click the Go button.
3. Click the Open button in the Map column to launch the Spatial Route Map.

The Linear Spatial Route Map appears with map layer. The map layer could be Google Maps, Oracle Maps or Oracle Spatial Map sourced from the datasource based on the Map Manager setup

1. Click the route line and begin editing the drawing by performing drags and drops.

2. Update the From and To measures if required.
3. Click Save Spatial Route to save the geometry.
4. Optionally use the Undo, Redo, Clear buttons and distance tool while modifying the geometry of the spatial route.

Google Maps Integration

This chapter covers the following topics:

- Google Maps Integration Overview
- Google Maps Integration with EAM
- Viewing Assets on Google Maps
- Entering and Viewing Geocode Information Using the EAM Responsibility

Google Maps Integration Overview

Oracle Enterprise Asset Management can integrate with the web based source map viewer of Google Maps. Oracle Enterprise Asset Management assets can be geocoded and displayed in the map viewer based on user entered search criteria.

Important: This integration approach is applicable for geocoded EAM assets which are represented as point, discrete assets on the map. With this integration, the geometry and route of the asset and associated length are not displayed in the map.

Note: Only those assets that have geocode information associated to them will display on the map.

You cannot geocode asset routes or non-serial rebuildables.

Google Maps Integration with EAM

From the Maintenance Super User responsibility, when the user selects any asset icon on the map viewer, details such as asset number, description, asset group, owning department, asset location and geocodes will be displayed in a popup window. You can also access other pages to perform the following actions:

- Create a work order.
- Create a work request.
- View open work orders.
- View open work requests.
- View the graphical asset hierarchy for the asset.

Entering Geocodes for EAM Assets:

1. Navigate to the Maintenance Super User responsibility, and click the Assets tab.
2. Enter EM1 in the Organization field and then click the Go button.
3. Click the Mass Geocode Entry sub-tab.
4. Enter search criteria to retrieve the assets, and click the Go button.

Mass Asset Geocode Entry

Simple Search

Note that the search is case insensitive

Asset Number Asset Group

Asset Category Address

Update/Enter Asset Geocodes

Asset Number	Asset Description	Asset Group	Asset Category	Address	Latitude				Longitude				Delete
					Degrees	Minutes	Seconds	Direction	Degrees	Minutes	Seconds	Direction	
PP50000	Punch Press 50000	Production Machine	Production.PPress Machine	3455 108th Ave.,King,98101,US	47	37	32.88	N	122	22	13	W	<input type="button" value="Delete"/>
PP500001	Punch Press 500001	Production Machine	Production.PPress Machine	3455 108th Ave.,King,98101,US	47	37	32.29		122	22	12.5	W	<input type="button" value="Delete"/>

5. In the Update/Enter Asset Geocodes region, enter values such as:
 - Latitude values for the asset:
 - Degrees - Enter a numeric value, do not use decimals, and you can enter a negative value.
 - Minutes - Do not use decimals.
 - Seconds - Enter a numeric value and you can use decimals.
 - Direction - Select N (north) or S (south).

- Longitude values for the asset:
 - Degrees - Enter a numeric value, do not use decimals, and you can enter a negative value.
 - Minutes - Do not use decimals.
 - Seconds. Enter a numeric value and you can use decimals.
 - Direction - Select E (east) or W (west).

If the geocode information already exists for the queried asset, the information can be modified or deleted.

- Click one of these buttons:
 - Cancel - to discard any changes you have made.
 - Save - to save the changes and stay on the current page.
 - Apply - to save your changes to the system, and the system returns you to the Mass Asset Entry Geocode page.

Viewing Assets on Google Maps

If a responsibility has the appropriate roles and security, users can view locations of EAM discrete and GIS assets on Google Maps by using the Map Workbench, if you are using Oracle Spatial integration.

The Oracle Spatial integration option enables you to display assets on Google maps. The Map Manager provides the ability to add Google as a Map Layer.

See Using Map Manager, page 22-14 and Using the Map Workbench, page 22-30 for more details.

Entering and Viewing Geocode Information Using the EAM Responsibility

You can also enter and view geocode information using the EAM responsibility.

To enter or view geocode information using the EAM responsibility:

1. Navigate to the Enterprise Asset Management responsibility.
2. Click the Asset Numbers link and the Asset Numbers page appears.
3. Enter the search criteria for the asset to which you want to add or view geocode information.

4. Click the **Find** button.

The Define Asset Numbers page appears.

The screenshot shows the 'Define Asset Number (EM0)' window. The 'Main' tab is selected, and the 'Location' sub-tab is active. The form contains the following fields and buttons:

- Asset Number:** Production Machines
- Asset Group:** Production Equipment
- Asset Serial Number:** Production Machines
- Asset Category:** (empty)
- Organization:** EMD
- Asset Type:** Capital
- Locator:** (empty)
- Location Code:** (empty)
- Address:** 3455 108th Ave,,,King,98101,US
- Production Organization:** (empty)
- Equipment Item:** (empty)
- Equipment Serial Number:** (empty)
- Latitude:** (empty)
- Longitude:** (empty)
- Degrees:** (empty)
- Minutes:** (empty)
- Seconds:** (empty)
- Direction:** (empty)

Buttons at the bottom: Attributes, Resource Usage, Meters, Associate Activity.

5. Enter or view the geocode information of the asset in the Location sub-tab.

ESRI Integration

This chapter covers the following topics:

- ESRI Integration Overview
- ESRI Integration with Oracle Enterprise Asset Management
- Setting Up the ESRI Profile
- Selecting the ESRI Default Service
- Defining the ESRI Functions
- Entering Geocode Information for EAM Assets
- Locating and Viewing Assets on ESRI Maps
- Viewing and Transacting Work Using ESRI

ESRI Integration Overview

You can integrate Oracle Enterprise Asset Management with ESRI to view assets and work spatially on an ESRI map viewer. You can also perform various actions on the assets.

Important: You must purchase a license from ESRI to use this feature.

Important: This integration approach is applicable for geo-coded EAM assets which are represented as point, discrete assets on the map. With this integration, the geometry and route of the asset and associated length are not displayed in the map.

By using the ESRI map viewer, you can:

- Search and locate geocoded assets on a map.

- Locate work orders associated with assets on a map.
- Perform actions on work orders located on a map.

Important: Mozilla Firefox is the recommended browser to use with the ESRI integration feature.

ESRI Integration with Oracle Enterprise Asset Management

Prerequisites

- ☐ You must perform the following setup tasks before you can view and transact work using ESRI:
 1. Purchase a license from ESRI for online or server access.
 2. Set up the ESRI profiles using the System Administrator responsibility.
 3. Enter the geocode information for assets.

You can add the geocode information using one of the following options:

- Mass Geocode Entry page (Maintenance Super User > Assets > Mass Geocode Entry)
- Define Asset Numbers page (Enterprise Asset Management > Asset Numbers > Asset Numbers > Define Asset Number)
- Mass Geocode Import API

Related Topics

For more information regarding the Mass Geocode Entry API, see Import Geocode API, eAM Open Interfaces and APIs, *Oracle Enterprise Asset Management Implementation Guide*.

Setting Up the ESRI Profile

Perform the following steps to setup the ESRI profile. You must perform this step in order to use the ESRI map viewer.

Important: You must purchase a license to use the online or server version of the ESRI map viewer to use this feature.

Important: Mozilla Firefox is the recommended browser to use with the ESRI integration feature.

To set up the ESRI profile value:

1. Navigate to the System Administrator responsibility, and access the Find System Profile Values page (System Administrator > System > Profile > Find System Profile Values).
2. Perform a query to search for %CSI%MAP%.

The screenshot shows a window titled "Find System Profile Values". Inside, there is a "Display" section with several checkboxes: ☒ Site, ☐ Application, ☐ Responsibility, ☐ Server (B), ☐ Organization, ☒ User, and ☒ Profiles with No Values. To the right of the "User" checkbox is a text input field containing the word "OPERATIONS". Below the "Display" section is a "Profile" label followed by a text input field containing "%CSI%MAP%". At the bottom right of the window are two buttons: "Find" and "Clear".

3. Select the CSI:Mapviewer Name profile option name.
The System Profile Values page appears.
4. Select the ESRI value in the User column.
By default the profile is updatable only at the seed level. You can use the Application Developer responsibility to set the profile as updatable at the User and Responsibility levels.
5. Click the **Save** button.

Setting up the ESRI service

You will need to set up:

- CSI: ESRI Default Service profile option. See Oracle Installed Base System Profile Options and Debug Information, *Oracle Installed Base Implementation Guide*.
- The ESRI function name.

Selecting the ESRI Default Service

Follow these steps to specify the ESRI default service.

Selecting the CSI: ESRI Default Service

After you have set up the CSI: ESRI Default Service profile option, you must associate the profile to your site, responsibility or user.

1. Navigate to the System Administrator responsibility, and access the Find System Profile Values page (System Administrator > System Profiles Values > Find System Profile Values).

The screenshot shows a window titled "Find System Profile Values". Inside, there is a "Display" section with several checkboxes: ☒ Site, ☐ Application, ☐ Responsibility, ☐ Server (B), ☐ Organization, ☒ User, and ☒ Profiles with No Values. To the right of these checkboxes are corresponding input fields. The "User" field contains the text "UTLMGR". Below the "Display" section, there is a "Profile" label followed by an input field containing "CSI%ESRI%". At the bottom right of the window are two buttons: "Find" and "Clear".

2. Perform a query for CSI%ESRI%.
The System Profile Values page appears.

Profile Option Name	Site	Application	Responsibility	User
CSI:ESRI Default Service				OPERATIONS

3. Select STREET MAP in the User column. This is the seeded service delivered with the application.

Profile Option Name	Site	Application	Responsibility	User
CSI:ESRI Default Service				STREET MAP

4. Save your work.

Defining the ESRI Functions

Follow these steps to define the ESRI functions.

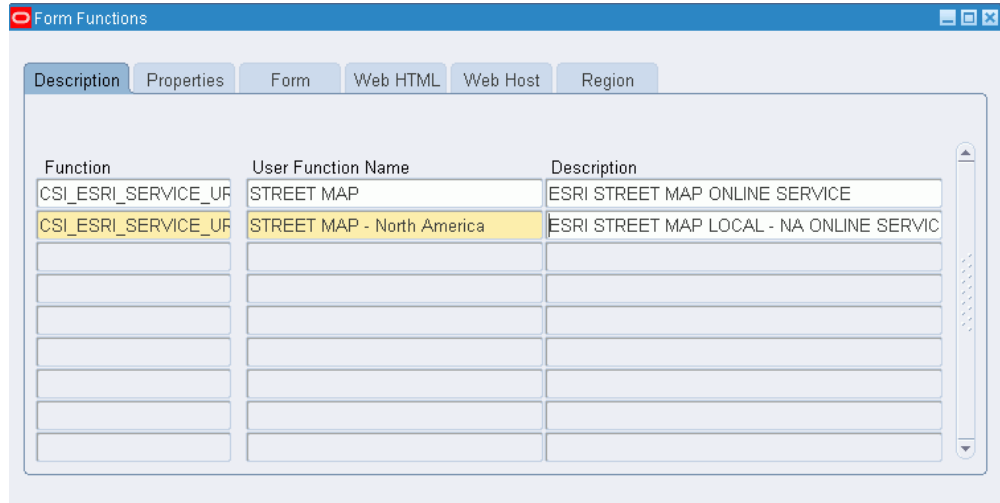
Defining the ESRI Function Information:

Use the FND functions to register the different services offered by ESRI with Oracle EAM and Oracle Asset Tracking.

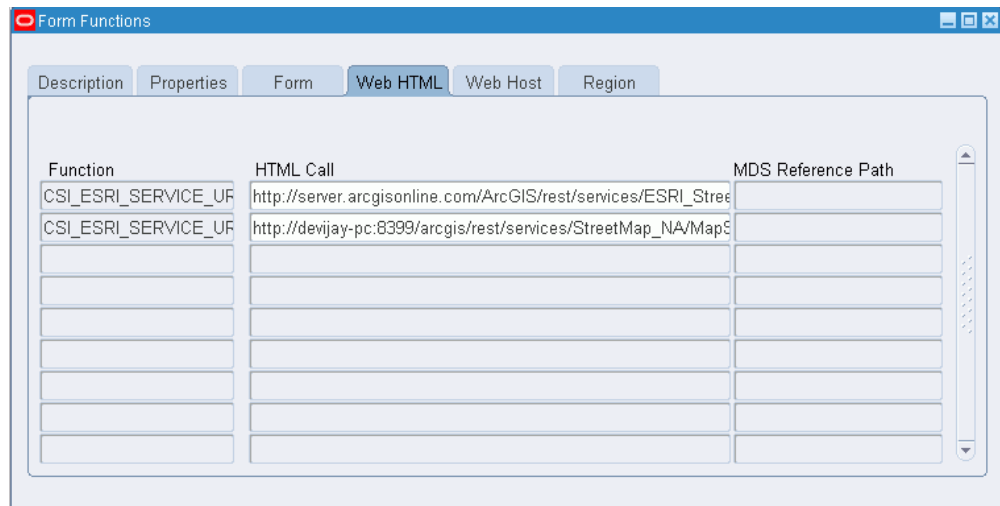
1. Navigate to the System Administrator responsibility, and access the Find Functions page (System Administrator > Application > Function).

The Form Functions page appears.

2. Enter a Function Name and User Function Name, such as CSI_ESRI_URL_1.
3. Add a Description for the function.



- Click the Web HTML tab, and enter the ESRI service URL in the HTML Call field.



- Click the Properties tab, and define the function as 'Rest Service.'

Function	Type	Maintenance Mode Support	Context Dependence
CSI_ESRI_SERVICE_UF	REST service	None	Responsibility
CSI_ESRI_SERVICE_UF	REST service	None	Responsibility

- Click the Region tab, and associate the function to the object, ESRI Service Links.

Function	Object	Region Application	Region Code
CSI_ESRI_SERVICE_UF	ESRI SERVICE LINKS		
CSI_ESRI_SERVICE_UF	ESRI SERVICE LINKS		

- Save your work.

Entering Geocode Information for EAM Assets

You can enter geocodes for EAM assets by using:

- Mass Geocode Entry page (Maintenance Super User > Home > Assets).
See Entering Geocodes for EAM Assets, page 24-1.
- Define Asset Numbers page (Enterprise Asset Management > Asset Numbers > Asset Numbers > Define Asset Number).
See Entering and Viewing Geocode Information Using the EAM Responsibility,

page 24-3.

- Mass Geocode Import API

See Import Geocode API, eAM Open Interfaces and APIs, *Oracle Enterprise Asset Management Implementation Guide*

Locating and Viewing Assets on ESRI Maps

Use the Asset Numbers page to locate and map discrete and GIS assets using ESRI maps.

To locate and map assets using the Map Workbench:

1. Navigate to the Maintenance Super User - Home page.
2. Select an organization, and then click the **Go** button.
3. Click the Assets tab, and then click the Capital link.
The Asset Numbers page appears.
4. Search for discrete and GIS assets that have ESRI-referenced location information.
5. Click the **Map All** button.

ORACLE® Asset Management

Diagnostics Home Logout Preferences Help

Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management

Capital Rebuildable Inventory Mass Meter Readings Mass Geocode Entry

Maintenance Organization UTE

Asset Numbers

Text Search Save Search

Simple Search

Note that the search is case insensitive

Asset Number SS101

Category

Asset Route No

Go Clear

Advanced Search

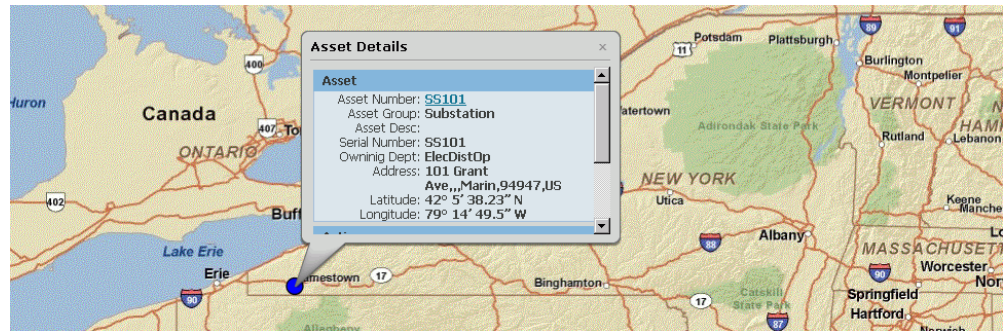
Select Asset Number: View Work Requests View Work Orders View Asset Operational Log Go Map All Export

Select	Asset Number	Description	Asset Group	Category	Area	Owning Department	Criticality	Check In	Out
<input checked="" type="radio"/>	SS101		Substation	Distribution.Station	East	ElecDistOp			

A map is rendered with all the assets that met your search criteria. Assets appear as defined in the map visualization setup.

6. Use the Results table at bottom of the Map Workbench to zoom to or remove any asset from the map.
7. Click an asset icon to view additional information.

You can view additional asset information by clicking the asset number link.



8. Click the vertical scroll bar to access additional pages to perform actions such as:

- Create Work Order
- View Open Work Orders
- Create Work Request
- View Open Work Requests
- Graphical Hierarchy

Viewing and Transacting Work Using ESRI

You can view and transact work when using the ESRI map viewer.

Important: The assets associated with the work orders must have geocoded information in order to map the locations of the work orders using the ESRI map viewer.

You can perform the following tasks on work orders using the ESRI map viewer:

- View asset details.
- View work details.
- Update work orders
- Debrief work orders.
- Assign employees based on operations.

To view and transact work using the ESRI map viewer:

1. Navigate to the Work Orders page (Maintenance Super User > Home> Work Orders).
2. Select the appropriate organization, and then click the **Go** button.
3. Search for work orders that you want to display using an ESRI map viewer.
The Work Orders - All page appears.
4. Click the **Map All** button.
All the work orders associated with geocoded assets are rendered on a map.
5. Click a work order icon to view additional information.
Work orders displayed on the map are displayed in a table form below the map.
You can view additional work order information by clicking the work order link.
6. Click the vertical scroll bar and select the Assign Employee link for an operation.
The Assign Employee page appears.
7. Select an employee to assign to the operation.
8. Click the Assign Enabled check box.
9. Save your work.
A confirmation message appears that indicates that the employee has been successfully assigned to the work order.
10. You can also update and debrief work orders, and view asset and work order details.

GIS Integration: Custom Mapviewer

This chapter covers the following topics:

- GIS Integration: Custom Mapviewer Overview
- Setting Up the Custom Mapviewer
- Setting Up the Custom Mapviewer Profile Value

GIS Integration: Custom Mapviewer Overview

In addition to using Google maps or ESRI to display assets in Oracle Enterprise Asset Management or Oracle Asset Tracking, you can also use a custom web-based HTML map viewer.

Important: This integration approach is applicable for geocoded EAM assets which are represented as point, discrete assets on the map. With this integration, the geometry and route of the asset and associated length are not displayed in the map.

By using this custom map viewer, you can:

- Display geocoded assets on a map.
- Display work orders on a map (work orders must be associated with geocoded assets).
- Transact work orders using the mapviewer, for example, view and create work orders, view and create work requests.

Related Topics

Appendix A: CSI Integration, Implementing the Custom Mapviewer, *Oracle Enterprise Asset Management Implementation Guide*

Setting Up the Custom Mapviewer

Prerequisites

- ☐ You must perform the following setup tasks before using the custom mapviewer to display assets and transact work using the custom mapviewer.
- 1. Set up the profile value for the custom mapviewer using the System Administrator responsibility.
- 2. Define the CSI: Customized Mapviewer Class. See Appendix A: GIS Integration, Implementing the Custom Mapviewer, *Oracle Enterprise Asset Management Implementation Guide*.
- 3. Enter geocode information for the assets that you want to display on the mapviewer. See Entering Geocodes for EAM Assets, page 24-1 or Entering and Viewing Geocodes Using the EAM Responsibility, page 24-3.

Setting Up the Custom Mapviewer Profile Value

Follow these steps to define the profile value to use with the custom map viewer.

1. Navigate to the System Administrator responsibility, and access the Find System Profile Values page (System Administrator > System Profiles Values > Find System Profile Values).
2. Perform a query to search for <CSI%MAP%>.
3. Select the CSI:Mapviewer Name profile option name.
The System Profile Values page appears.
4. Select the Custom value in the User column.
5. Save your work.

Stores

This chapter covers the following topics:

- Stores
- Delivering Material from Stores to a Work Order
- Returning Material to Inventory
- Issuing Multiple Rebuildable Items

Stores

Material issue to work orders and returns to inventory are typical store room functions and can be performed by using the Maintenance Super User - Stores tab.

There are two activities involved in delivering material from stores to a work order.

1. A Material Issue Request is generated to request the material to a work order. This process is automated upon work order release by selecting a check box in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 3-13).
2. The Material Issue Verification is generated when you access the Stores tab and select material for a work order, based on available, unprocessed move orders.

Note: A one-step material issue is a substitute for these two activities; a request is not created.

There are two primary methods used to issue material to a work order:

- One Step Issue method - Used to issue one-off or ad hoc material to a work order. This method does not involve the prior requesting of material and can be executed for both planned and unplanned material.
- Two Step Issue method involves two steps:

1. The maintenance planner or user requests material from store.
2. The stores room person delivers the material to the work order.

You can return material to inventory from a maintenance work order. If excess or defective material is issued to a work order, it needs to be returned.

The section includes the following topics:

- Delivering Material from Stores to a Work Order, page 27-2
- Returning Material to Inventory, page 27-13
- Issuing Multiple Rebuildable Items, page 27-15

Delivering Material from Stores to a Work Order

There are two activities involved in delivering material from stores to a work order:

1. Material Issue Request is generated (move order in Oracle Inventory) to request the material to a work order.

You may automate this process upon work order release by selecting the *Enable Material Issue Requests* check box in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 3-13). You may override this setting at the work order level. The *Auto Request Material* check box is located in the Material Requirements window. (See: Routine Work Orders, page 4-4).

2. The Material Issue Verification (move order in Oracle Inventory) is generated when you access the Stores tab and select material for a work order, based on available, unprocessed move orders.

A one-step material issue is a substitute for these two activities; a request is not created.

If you want to issue multiple rebuild able items in a single transaction, select Yes in the Allocate Serial Numbers field in the Organization Parameters: Revision, Lot, Serial Number, LPN page. See Issuing Multiple Rebuildable Items, page 27-15 for more information.

If the Material Issue Request process is not automated, you can perform a manual request within the Request All Materials page, located on the Work Orders tab.

You can also run the Work Order Component Pick Release, page 27-4 concurrent program to perform the material allocation for a group of work orders.

You can also run the EAM Work Orders Component Pick Release concurrent process from the Reports tab under the Maintenance Super User (self-service) responsibility.

To perform the required setup steps for the two-step material delivery process:

Prerequisites

1. Define a *Default Pick Slip Grouping Rule* within the WIP Parameters window.

This information is used when pick slips are created for the material issue requests, detailing subinventory and locator information.

2. Decide if your organization will allocate serial numbers.

If No, then the quantity of the material issued is allocated and no serial numbers are allocated. The picker then enters the picked serial numbers from the available serial numbers.

If Yes, then the serial numbers are allocated during the material request, and therefore, are not available for any other transaction.

1. Navigate to the Work In Process Parameters window.
2. Select the Other tab.

Work in Process Parameters

The screenshot shows the 'Work in Process Parameters (EM1)' window with the 'Other' tab selected. The window contains the following fields and controls:

- Component ATP Rule:** A text field containing the value 'Standard'.
- Default Overcompletion Tolerance %:** A text field that is currently empty.
- Default Pick Slip Grouping Rule:** A text field containing the value 'Cluster Picking'.
- Default Plan Tasks:** A checkbox that is currently unchecked.
- Bottom right corner:** A small icon consisting of a square with a plus sign inside, enclosed in brackets [].

3. Select a Default Pick Slip Grouping Rule. This information is used when pick slips are created for the material issue requests, detailing subinventory and locator information.

4. Save your work.
5. Navigate to the Organization Parameters window.
6. Select the Revision, Lot, Serial tab.

Organization Parameters

The screenshot shows the 'Organization Parameters (EM1)' window with the 'Revision, Lot, Serial And LPN' tab selected. The window contains several sections for configuring parameters:

- Starting Revision:** A text field containing the value '0'.
- Lot Control:**
 - Uniqueness:** A dropdown menu set to 'None'.
 - Generation:** A dropdown menu set to 'At item level'.
 - Lot Name Generation:**
 - ☐ Zero Pad Suffix
 - Prefix:** A text field.
 - Total Length:** A text field containing '30'.
 - Allocate Lot:** A dropdown menu.
 - Child Lot Control:**
 - Child Generation:** A dropdown menu.
 - ☐ Zero Pad
 - Prefix:** A text field.
 - Total Length:** A text field.
 - ☐ Format Validation
 - ☐ Copy Lot Attributes
 - Auto Create Lot UOM Conversion:** A dropdown menu.
 - Allow Different Material Status:** A dropdown menu.
- Serial Control:**
 - Uniqueness:** A dropdown menu set to 'Within inventory model and items'.
 - Generation:** A dropdown menu set to 'At organization level'.
 - Prefix:** A text field.
 - Starting Serial Number:** A text field.
 - Allocate Serial Numbers:** A dropdown menu set to 'Yes'.
- LPN Generating Option:**
 - Total Length:** A text field.
 - Prefix:** A text field.
 - ☐ UCC-128 Suffix (Modulo-10)
 - Starting LPN Number:** A text field.
 - Suffix:** A text field.

7. Select an Allocate Serial Numbers value. If you select No, the quantity is allocated, but individual serial numbers are not. If you select Yes, you can allocate multiple serial numbers when material requests are created. These serial numbers are not available to any other transaction.

Organizations typically select No, enabling the picker to enter the picked serial numbers. In most cases, the requestor is not partial to specific serial numbers.

8. Save your work.

Running the Work Order Component Pick Release Concurrent Program: Prerequisites

The work orders must meet the following criteria:

- Work order has a status of Released.
- The Enable Material Issue Requests option is selected at the work order level.
There is an open quantity for the material requirements.
- The Auto Request Material option is selected for the material requirement lines.
The concurrent program will select only the material requirement lines from work orders that have the Auto Request Material option set to Yes.

Using this concurrent program enables you to perform material allocation for work orders that were released earlier with insufficient on-hand material, but now have sufficient on-hand quantity for the material allocation.

Follow these steps to run the Work Order Component Pick Release concurrent program.

1. Navigate to Enterprise Asset Management > Work Orders > Work Order Component Pick Release or Maintenance Super User > Reports > EAM Work Orders Component Pick Release.

2. Select the work orders to which you want to perform material allocations.

Only work orders with a status of Released and that have open material quantity are available for selection.

The following list of parameters will be used to select work orders to perform material requirement allocations:

Parameter	Type	Default Value	Field/LOV
Days forward	Mandatory	1	To enter Number of days
Pick slip grouping rule	Mandatory	Default rule specified in WIP parameters (PICKSLIP_GROUPING_RULE_NAME in WIP_PARAMETERS_V)	Pickslip grouping rules LOV (PICK_SLIP_RULES in WSH_PICK_GROUPING_RULES
Print Pick slips	Optional	Yes	LOV values 'Yes' and 'No'

Example

Days forward: The number of days into the future to consider material requirements for the pick release.

If the Days forward value is entered as 3, then the program selects the work order material lines whose Date Required is less than or equal to the 'sys date + 3'.

3. Click the Submit button.

To generate a Material Issue Verification:

Assuming that you have set the eAM Parameters to automatically create a Material Issue Request upon work order release, the following procedures execute the Material Issue Request; they physically allocate material to a work order.

Note: Ensure that the requested material is available in subinventories that are enabled for picking. Enabled subinventories might be governed by picking rules. See: *Defining Picking Rules, Oracle Inventory User's Guide*.

1. Navigate to the Stores tab (Maintenance Super User: Stores tab).
2. Click the Material Issue link, and the Simple Search page appears.
You can also use the Advanced Search page.
3. Optionally enter at least one of the following fields in both the Simple and Advanced Search modes.
 - Material Request Number - to include results for a specific material request number.
 - Work Order Number - to include only requests for a specific work order.
 - Material - to include requests for specific a material.
 - Subinventory - to include requests for a specific Subinventory.
 - Line Number - if using the Advanced search mode (Advanced button), to include only specified lines on a request.
 - Operation number - to include requests or a specific operation on a work order.
 - Add Another search option from the list of values, and then choose Add.
 - Locator - if a subinventory was selected and requires a locator.
 - Created By value - to include the person who created the material request.

- Choose Go to display material issue request information in the Results region.

Material Issue

Maintenance Home Assets Work Requests Work Orders **Stores** Budget Forecasts Failure Analysis Construction Units Safety Management Reports

One Step Material Issue Return Material To Inventory **Material Issue**

Material Issue Save Search

Simple Search Advanced Search

Search for Material Allocations by Material Request Number or other fields.

Material Request Number Material
 Work Order WO% Subinventory

Material with no Lot or Serial Control

Select Material / Materials: **Issue** | ***

Show All Details Hide All Details

<input type="checkbox"/> Details	Material	Description	Work Order	Material Request Number	Material Request Line Number	Allocated Qty	Issue Qty	Reason	Reference	Delete Remaining Allocation	Update Material Requirement	Replaced Rebuild Details	Delete
<input type="checkbox"/>	R1	VG Servicing Material	WO355908	3086762	1	1	1			<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	R2	VG Servicing Item	WO355908	3086762	2	1	1			<input type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Fork Lift Lubrication	Lubrication for Masts	WO323908	3086762	1	1	1			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Shop Rags	Shop Rags for Clean up	WO325907	3086761	2	2	2			<input type="checkbox"/>	<input type="checkbox"/>		

The results region is divided between *Material with no Lot or Serial Control* and *Material with Lot or Serial Control*.

- Optionally update the default Issue Qty.
 - Optionally select a Reason for the Material Issue.
 - Optionally enter a Reference.
 - Optionally select the Delete Remaining Allocation check box to delete the remaining, unissued quantity, if the Issue Qty is lower than the allocated amount within the material requirements.
- Conditional Action:** The Update Material Requirements check box is also available.
- Optionally select the Update Material Requirement check box if you want to revise the material requirements for the work order.
- Conditional Action:** You must select the Delete Remaining Allocation check box before the Update Material Requirements check box is available.
- Click the Issue button to issue the material, and apply any changes to the remaining allocation and material requirements for the work order.

11. Optionally update the fields in the Material with Lot or Serial Control region of the page.
12. For results within the *Material with no Lot or Serial Control* region, optionally select the Replace Rebuild Details pencil icon to specify a Serialized Rebuildable to issue to the current work order. This icon is enabled if the associated work order is for Rebuildable Inventory maintenance.

If you are issuing material for multiple rebuild able serial numbers, the Replaced Rebuild Details region is unavailable. Material for multiple rebuild able items can then be issued in a single transaction. See Issuing Multiple Rebuildable Items, page 27-15.

If you are issuing material for one serialized rebuild able, indicate the following within the Replaced Rebuild Details region:

- Rebuild Item - defaults as the current Rebuild Item; you can update it.
- Rebuild Serial Number - optionally enter if you know what serial number is coming out (for serialized rebuilds only).
- Rebuild Activity - the activity you want to associate with the created rebuild work order.
- Rebuild Work Order - the name of the work order created for the replaced Rebuildable Item.

If you specify a replaced rebuild able item, a work order generates for the replaced rebuild able item because it is most likely problematic, and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the asset hierarchy and the configuration history is updated.

If nothing is specified within the Replaced Rebuild Details page, the rebuild item is issued for the selected work order. The rebuild work order is automatically created only if the replaced rebuild details are entered.

13. Optionally select the Delete icon to delete the current material allocation. You might want to use this feature if you want to free material and use it within the One-Step process.
14. Click the Issue button to issue the material to the work order.
15. Optionally for results within the *Material with Lot or Serial Control* region, perform these steps to issue material, delete remaining allocation, and update material requirements to the current work order:
 1. Select the material.
 2. Click the Proceed to Issue button, and the Issue Serial (Lot Control) Numbers

page appears.

3. Select the item in the Available for Issue check box that you want to issue.
You must select each specific serial or lot controlled item.
4. Click the right arrow to move the item into the Issue region.
5. Optionally select the Delete Remaining Allocation check box.
The Update Material Requirements button is available.
6. Optionally select the Update Material Requirements check box.
You must select the Delete Remaining Allocation check box before the Update Material Requirements check box is available.
7. Select a Reason and a Reference.
8. Click the Apply button.

This action will issue the material, and if selected, delete any remaining material allocation, and update material requirements for the work order.

One Step Material Issue | Return Material To Inventory | **Material Issue**

Stores: Material Issue >

Issue Serial Numbers Cancel Apply

Material	Subinventory	Spares	Locator	Allocated Qty
EAM-ACT2-ITEM1			4	4

Available for Issue

- EAM-ACT1-ITEM1/0002
- EAM-ACT1-ITEM1/0003
- EAM-ACT1-ITEM1/0004
- EAM-ACT1-ITEM1/0005
- EAM-ACT1-ITEM1/0006
- EAM-ACT1-ITEM1/0007
- EAM-ACT1-ITEM1/0008
- EAM-ACT1-ITEM1/0009
- EAM-ACT1-ITEM1/0010
- EAM-ACT1-ITEM1/0011

Issue

- EAM-ACT1-ITEM1/0001

☒ Delete Remaining Allocation

☒ Update Material Requirement

Reason

Reference

16. A confirmation message appears that the material was successfully issued.

To perform a one step material issue:

A one-step material issue is a substitute for the Material Issue Request and Material Issue Verification activities; a separate request is not created. This is performed if the Enable Material Issue Requests check box is not selected in the eAM Parameters (See: Defining eAM Parameters, page 3-13).

1. Navigate to the Stores tab.
2. Select the One Step Material Issue sub-tab.

3. Select the work order that you wish to issue material. It must be enabled for material issue requests. See: Routine Work Orders, page 4-4.

Click the **Go** button.

One Step Material Issue

The screenshot shows the 'One Step Material Issue' interface. At the top, there's a navigation bar with tabs: Maintenance Home, Assets, Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, Safety Management, and Reports. Below this, there are sub-tabs: One Step Material Issue, Return Material To Inventory, and Material Issue. The main form area has a title 'One Step Material Issue'. It includes input fields for 'Work Order' (with value WO102907) and 'Material'. Below these are 'Go' and 'Clear' buttons. A section titled 'Select Material / Materials:' contains a table with columns: Details, Material, Operation, Issued Qty, UOM, Qty, On Hand Details, Subinventory, Locator, Lot, From Serial, To Serial, Revision, and Replaced Rebuild Details. The table has several rows of material data, including '10-40W Oil' and 'Oil Filter'.

4. You can perform one-step material issues to work orders in different units of measure (UOMs).

Click the UOM field for the specific material issue; all other UOMs defined for that material will be available for selection.

If the default UOM is changed, then the Issued Qty field will display the default issued quantity *converted* to the new UOM.

5. Click the Show/Hide link for the material to view material details.

Details associated with the default UOM appear.

The converted quantity based on the transaction (new) UOM displays in the Required Qty, Allocated Qty, and Open Qty fields.

6. Click the icon in the On Hand Details column to view the on-hand quantity details for the material.

On Hand Details			
On Hand Details For Material: Oil Filter (Ea)			
Personalize Header Personalize Table			
<div> Previous 1-10 Next 10 </div>			
Subinventory	Description	Available Qty	On Hand Qty
FleetStore	Fleet Services Maintenance Stores	194	194
FklftStore	Fork Lift Maintenance Stores	98	98
AC Lot Inv	For testing bug	0	0
AbhiStore	AbhiStore Locator	0	0
FGI	Finished Goods Stores	0	0
FacStores	Facilities Maintenance Stores	0	0

The system displays on hand quantity for the material issue in the user-selected transaction UOM.

Close the popup window.

Enter values for the subinventory, locator, lot, serial information, and so on.

7. You can search to add inventory items by using one of these options:

- Item
- Description
- Cross Reference
- Cross Reference Description
- Manufacturer
- Manufacturer Part Number

Click the Select radiobutton for the item to be added.

Click the Select button.

8. Optionally select the specific Operation to view results on existing one step material issues that were issued to that operation. Only operations existing within the selected work order are available.

9. Optionally select a specific Material if your query is to view the existing one step material issues.

10. Click the Go button.

All planned material appears in the Select Material(s) region. Planned material is material that exists in the material requirements for the work order. See: Defining Inventory Material Requirements, page 4-38.

11. Within the Select Material(s) region, optionally select unplanned Material (material not part of the material requirements) to issue to the current work order.
 - Select an Operation to which to issue the material. The UOM default value comes from the current material.
12. Select the Quantity of the material that you are issuing to the work order.
13. Optionally select a Subinventory to pull the material from in Inventory.
14. If you previously selected a Subinventory requiring a Locator, select a Locator.
15. If the current material is lot controlled, select a Lot.
16. If the current material is serial controlled, select From and To Serial numbers.
17. Optionally select a Revision.
18. If the material is Rebuildable Inventory, optionally click the Replaced Rebuild Details button to specify the replacement Rebuildable Item information for the current Rebuildable Item. After selected, you can indicate the following within the Replaced Rebuild Details page:
 - *Rebuild Item* - defaults as the current Rebuild Item; you can update it.
 - *Rebuild Serial Number* - optionally enter if you know what serial number is coming out (for serialized rebuilds only).
 - *Rebuild Activity* - the activity you want to associate with the created rebuild work order.
 - *Rebuild Work Order* - the name of the work order created for the replaced Rebuildable Item.

If you specify a replaced rebuild able item, a work order generates for the replaced rebuild able item because it is most likely problematic and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the asset hierarchy and the configuration history is updated.

If nothing is specified within the Replaced Rebuild Details page, the replaced rebuild defaults as the same rebuild item that you are issuing. A work order is created for the replaced rebuild item.

19. Optionally select the Details Show/Hide toggle button.
 1. Optionally select a Reason for the current issue.
 2. Select the Date required for the material to the work order. Default values for Today's date and time appear.

3. Optionally enter a Reference.
20. Click the Select check box next to the lines you are issuing to the current work order.
21. Click the Issue button, and the system displays a confirmation message at the top of the page.

Related Topics

Overview of Move Orders, *Oracle Inventory User's Guide*

Returning Material to Inventory

You can return material to inventory from a maintenance work order. If excess or defective material is issued to a work order, it needs to be returned. Only material issued to work orders can be returned to inventory. The quantity returned cannot exceed the quantity issued; it must be 1 if the material is serial controlled.

To return material to inventory:

1. Navigate to the Stores tab.
2. Select the Return Material To Inventory sub-tab.
3. Optionally select a work order to narrow your results to one work order.
4. Optionally select a Material value to narrow your results to all work orders containing it as a material requirement.
5. Optionally select a Lot Number to narrow your results to all work order containing the previous Material with the current Lot Number.
6. Optionally select a specific Operation contained in the previously selected work order.
7. Optionally select a Serial Number to narrow your selection criteria to only work orders containing it as part of their material requirements.
8. Click the Go button.

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Material Issue One Step Material Issue **Return Material To Inventory**

Return Material To Inventory

Only materials issued to work orders are available for return. Quantity to return can never exceed quantity issued and has to be 1 if the material is under serial control.

Work Order: EM181738

Material:

Lot Number:

Operation:

Serial Number:

Select Material / Materials: **Return to Inventory** | ***

<input type="checkbox"/>	Work Order	Op	Material	Description	Serial	Lot	Revision	Issued Qty	Qty	UOM	Subinv	Locator	Date	Reason	Ref
<input type="checkbox"/>	EM181738	10	Shop Rags	Shop Rags for Clean up				2	1	Ea	<input type="text"/> <input type="button" value="Q"/>	<input type="text"/> <input type="button" value="Q"/>	16-Jul-2019: <input type="text"/> <input type="button" value="Q"/>	<input type="text"/> <input type="button" value="Q"/>	<input type="text"/>
<input type="checkbox"/>	EM181738	10	Fork Lift Battery	Batteries used for electric Fork Lifts	Battery1000			1		Ea	<input type="text"/> <input type="button" value="Q"/>	<input type="text"/> <input type="button" value="Q"/>	16-Jul-2019: <input type="text"/> <input type="button" value="Q"/>	<input type="text"/> <input type="button" value="Q"/>	<input type="text"/>

< >

9. Enter the return Quantity for each work order.
10. Select the Subinventory to which to return the material.
11. If the previous Subinventory requires a Locator, select a Locator.
12. Optionally select a Date to return the material. The default value is the current system date and time.
13. Optionally select a Reason code to indicate the reason the material is not needed.
14. Optionally enter Reference information.
15. Enable the Select check box to include the work order rows from which material is being returned.
16. The Delete Allocation & Material Requirements check box for the material line of the work order indicates that you want to delete all the outstanding (unused) material allocation. The default for this check box is selected.

This check box enables the following actions to occur when the return to inventory process is performed:

- Deletes the open and unused material allocation of the work order.
- Updates the material requirement quantity of the work order to reflect the net issued quantity (Qty Issued - Qty Returned).

Optionally clear this check box if you do not want to perform these functions.

17. Click the Return to Inventory button.

Issuing Multiple Rebuildable Items

You can issue multiple rebuild able items in one transaction, using the one-step or two-step issue methods. The rebuild able items include serial, non-serial, lot and non lot-controlled items.

A rebuild work order is automatically created only if the replaced rebuild details are entered.

To perform multiple rebuild able issues for non-serial or non lot-controlled items:

1. Create a work order (status of Released) with rebuild able items with the quantity greater than 1.

The Replace Rebuild icon will be available for non serialized and non lot-controlled items with a quantity of 1 or more.

Note: The system will automatically create a rebuild work order if the replaced rebuild details are entered.

See Creating Work Orders, page 21-46.

2. Allocate material for issue for the work order (See Materials, page 21-53).
3. Perform a one-step material issue for the work order. See To perform a one step material issue., page 27-9
4. Navigate to the Material Issue page (Maintenance Super User > Home > Stores > Material Issue), and search for the work order with multiple rebuild able items.
5. Enter the quantity for each rebuild able item to be issued.

6. Click Apply.

To perform multiple rebuild able issues for serial controlled items in a single transaction:

1. Create a work order (status of Released) with rebuild able items with the quantity greater than 1.

See Creating Work Orders, page 21-46.

2. Allocate material for issue for the work order (See Materials, page 21-53).
3. Navigate to the Material Issue page (Maintenance Super User > Home > Stores > Material Issue), and search for the work order with multiple rebuild able serial numbers.
4. Click the One Step Material Issue subtab.
5. Enter the quantity for each rebuild able item.

Note: The Replace Rebuild icon is unavailable if multiple serial numbers are entered for issue.

6. Click the Replace Rebuild icon to generate automatic rebuild able work orders.
7. Click Apply.

To perform multiple rebuild able issues for serial controlled items using the two-step method:

1. Create a work order (status of Released) with rebuild able items with the quantity greater than 1.

See Creating Work Orders, page 21-46.

2. Allocate the material for issue (See Materials, page 21-53).
3. Navigate to the Material Issue page (Maintenance Super User > Home > Stores > Material Issue), and search for the work order with multiple rebuild able serial numbers.
4. Select the serial numbers to be issued.
The Issue Serial Number page appears.

The screenshot shows the 'Material Issue' page. At the top, there's a navigation bar with tabs: Maintenance Home, Assets, Work Requests, Work Orders, Stores (selected), Budget Forecasts, Failure Analysis, Construction Units, Safety Management, and Reports. Below this, there's a sub-navigation bar with: Material Issue (selected), One Step Material Issue, and Return Material To Inventory. The main content area is titled 'Stores: Material Issue >' and 'Issue Serial Numbers'. It features a table with columns: Material (EAM-ACT1-ITEM1), Subinventory (Spares), Locator, and Allocated Qty (2). Below this table, there's a section 'Available for Issue' with a list of materials: EAM-ACT1-ITEM1/0003, EAM-ACT1-ITEM1/0004, EAM-ACT1-ITEM1/0005, EAM-ACT1-ITEM1/0006, EAM-ACT1-ITEM1/0007, EAM-ACT1-ITEM1/0008, EAM-ACT1-ITEM1/0009, EAM-ACT1-ITEM1/0010, EAM-ACT1-ITEM1/0011, and EAM-ACT1-ITEM1/0012. To the right of this list is an 'Issue' table with columns: Material, Locator, and Allocated Qty. The material 'EAM-ACT1-ITEM1/0002' is selected in the 'Issue' table. Below the tables, there's a checkbox for 'Delete Remaining Allocation', a 'Reason' field, and a 'Reference' field. The 'Apply' button is visible in the top right corner.

5. Click Apply.

To perform multiple rebuild able issues for lot controlled items using the one-step method:

1. Create a work order (status of Released) with rebuild able items with the quantity greater than 1.

Note: The Replace Rebuild icon is unavailable if the quantity is greater than 1.

See Creating Work Orders, page 21-46.






2. Allocate the material for issue (See Materials, page 21-53).
3. Navigate to the Material Issue page (Maintenance Super User > Home > Stores > Material Issue), and search for the work order with multiple rebuild able lot numbers.
4. Select the lot numbers to be issued.

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Material Issue One Step Material Issue Return Material To Inventory

Stores: Material Issue >

Issue Lot Numbers Cancel Apply

Material	Lot Rebuild	Locator
Subinventory	Spares	Allocated Qty
4		
    		
Lot Number Allocated Qty Issue Qty		
<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/> LOT001	4	2

☐ Delete Remaining Allocation

Reason

Reference

5. Click Apply.

Failure Analysis

This chapter covers the following topics:

- Failure Analysis Overview
- Defining Failure Codes and Sets
- Collecting Failure Information
- Analyzing Failure Information
- Setting Up Failure Tracking Associations Using WebADI

Failure Analysis Overview

Failure Analysis enables you to track an asset failure from the time it is reported until its resolution. Statistics from your collected failure data provide you with information on why an event occurs and causes your asset failure. You can then take the necessary steps to eliminate that event. Additionally, you can use the failure statistics, among others, to help you formulate your Reliability-Centered Maintenance (RCM) program. Failure hierarchies that support multiple-level failure reporting provide effective root cause and reliability analysis. For specific asset groups or rebuild able items, each failure (problem) has a defined number of root causes, with each root cause having a defined number of resolutions (remedies).

When failure is reported, each work order represents one single failure occurrence (event) for the asset specified on the work order. The cost to repair an asset that fails to a normal, operational state is assumed to be the charges accumulated in the work order that is associated with the failure. If the repair is outsourced to an external party and requisitioned on a purchase order, a work order must be created to collect the repair costs for failure analysis to pick it up.

You can also link the Failure, Cause, Resolution Code associations with asset groups using the Failure Setup Web ADI self-service page (Failure Analysis > Failure Tracing Setup > Failure Setup Web ADI > Create Document).

Failure Analysis topics include the following:

1. Defining Failure Codes and Sets, page 28-2
2. Collecting Failure Information, page 28-5
3. Analyzing Failure Information, page 28-5
4. Setting Up Failure Tracking Associations Using WebADI, page 28-1

Defining Failure Codes and Sets

A work order represents one single failure occurrence (event) for the asset specified on the work order. There are three main Failure Code Types: Failure Code, Cause Code, and Resolution Code. When creating a work order, these failure codes are specified on the work order, for example, Compressor Shaft Damage (Failure), Vibration (Cause), and Replacement and Re-calibration (Resolution).

Note: You can optionally update these codes' meanings. See: Failure Code Types, page 3-53.

User-defined failure codes, cause codes and resolution codes are organized into multiple tree structures called Failure Code Sets, which are then assigned to asset groups. Each set provides asset group-specific information on the possible failures of an asset group, the possible causes of each failure, and the possible resolutions for each cause. Assets within an asset group inherit the assigned Failure Code Set. At the work order level, Failure Tracking codes are entered to report a failure, its cause, and resolution. The assigned sets provide a disciplined methodology to collect failure data on assets. Inquiries on failure data are performed, based on user-entered criteria, such as date range, asset groups, assets, departments, or areas. Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) are calculated with each inquiry.

To define failure codes:

1. Navigate to the Failure Sets page (Maintenance Super User: Failure Analysis > Failure Tracking Setup).
2. Choose Define Failure Codes.
3. Select the appropriate Code Type, such as Failure Code (See: Failure Code Types, page 3-53).
4. Enter the Code, for example, Mechanical.
5. Enter the code Description, for example, Mechanical Parts Failure.
6. Optionally enter an End Date, to apply an expiration for the current code.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts **Failure Analysis** Construction Units Safety Management Reports

Failure History Failure Analysis **Failure Tracking Setup**

Failure Analysis: Failure Tracking Setup >

Define Failure Codes Cancel Save Apply

Search

Note that the search is case insensitive

Code


Code Type

Go

Description

Include Inactive Codes No

Failure Code



Failure Code <input type="button" value="v"/>	Description	End Date	Delete
Documentation	Used for documentati	<input type="text"/> <input type="button" value="v"/>	<input type="button" value="Delete"/>
<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="button" value="v"/>	<input type="button" value="Delete"/>
<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="button" value="v"/>	<input type="button" value="Delete"/>

7. Optionally choose Save to create the codes and remain on the current page.
8. Click the **Apply** button to create the codes and return to the previous page.

To define a failure set:

1. Navigate to the Failure Sets page.
2. Choose Create Failure Set.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts **Failure Analysis** Construction Units Safety Management Reports

Failure History Failure Analysis **Failure Tracking Setup**

Failure Analysis: Failure Tracking Setup >

Create Failure Set Cancel Save Apply

* Indicates required data

* Name DOC End Date

Description

Failure Codes

Copy From Failure Set Go

Failure	Description	Cause	Description	Resolution	Description	End Date	Clear
VIBR	Excessive Vibration	MECH	Mechanical	AJST	Adjust		

Assign Asset Groups

Asset Group	Description	Failure Code Required	Delete Assignment
Fleet	Fleet Asset Group	Yes	

3. Enter the Name for the failure set.
4. Optionally enter a Description for the failure set.
5. Optionally enter an End Date, to apply an expiration for the current failure set.
6. Optionally select an existing failure set from the *Copy From Failure Set* list of values.
 If the failure set that you are creating is similar to an existing failure set, you can copy failure codes from an existing failure set, aiding in multiple failure set entry. To copy the failure hierarchy from another failure set, you can use the *Copy From Failure Set* field. The list of values includes active failure sets.
 Click the Go button and the failure combinations of the selected failure set appear. You can delete any unwanted combinations.
7. Select a Failure code, and the description default value appears.
8. Select a Cause code, and the description default value appears.
9. Select a Resolution code, and the description default value appears.
10. Optionally enter an End Date to apply an expiration for the current group of codes.
11. Assign the current failure set to an asset group or rebuild able item.
 Asset numbers or rebuild able serial numbers within an asset group or rebuild able item, respectively, inherit the assigned Failure Code Set.

1. Select an asset group from the list of values.

The Description default value comes from the asset group definition.

2. Select whether Failure Code entry is required on work orders created for assets within the current asset group.

For example, select Yes from the *Failure Code Required* list of values to ensure that Failure Codes are entered when creating work orders for assets within the current asset group. The *Failure Code Required* value defaults to the work order, but you can optionally change it.

12. Optionally click the Save button to create the failure set and remain on the current page.
13. Click the Apply button to create the failure set and return to the previous page.

Collecting Failure Information

Failure reporting for an asset is performed by entering failure tracking codes, when creating the failure work order or when completing it. Asset failure history is available after the work order is completed. This information assists in the maintenance management decisions and provides data for reliability analysis.

Related Topics

Creating Work Orders, page 21-46

Completing Work Orders, page 21-106

Analyzing Failure Information

You can analyze failures that are reported against assets with the Failure History and Failure Analysis pages. The Failure History page displays detailed failure data, reported at the work order level. The Failure Analysis page aggregates failure data, based on the user-selected View By and displayed measures, such as Mean Time Between Failures (MTBF), and Mean Time To Repair (MTTR).

The three main measurements for asset maintainability and reliability are:

1. Mean Time Between Failures (MTBF): Average elapsed time between failures. MTBF is the duration in days between two asset failure dates, and is a reliability metric indicating how often an asset fails.
2. Mean Time To Repair (MTTR): Average time between when an asset fails (reported failure date) and when it is repaired to its normal operating condition (actual work order completion date). MTTR is a maintainability metric, indicating how fast

repair is completed after a failure is reported.

3. Mean Time Between Repairs (MTBR): Average duration when an asset is in acceptable functional condition. The calculation is as follows:

$$\text{MTBR} = \text{MTBF} - \text{MTTR}$$

Note: Only completed work orders are included in Failure History and Failure Analysis.

To analyze failure history information:

1. Navigate to the Failure History page (Failure Analysis tab > Failure History sub-tab).
2. Enter an asset number (or Rebuildable Serial Number).
3. Optionally enter a range of failure reporting dates.
4. If there is a Primary Failure Meter specified for the asset, its readings appear in the Search Result table.

However, you can select any Required meters that are associated with the asset from the Display Readings from Meter list of values, to have the selected meter's readings appear in Failure History. This field is enabled only for the Simple Search, with a specified asset number.

5. Click the **Go** button.

Additional Information: When calculating Mean Costs to Repair, all work orders that are associated with the failure results are included, if their costs are in the same currency. An asset can move between organizations if work orders have multiple currencies. All work order costs that are expressed in a currency that is different than the current maintenance organization's primary currency are excluded. A warning icon appears, informing you that there are repair costs that are not included because they are not in the current maintenance organization's currency.

To analyze failure information:

Based on your search criteria, work order failure data is filtered for analysis. The View By selection determines how the failure data is aggregated for the MTBF, MTTR, and Mean Cost To Repair calculations. If there is a Primary Failure meter or if a Required meter is selected, the Mean Readings Between Failures are also calculated. You can compare MTBF, frequency, and MTTR calculations by Asset Number, Asset Group,

Asset Category, or Failure.

1. Navigate to the Failure Analysis page (Maintenance Super User: Failure Analysis tab > Failure Analysis sub-tab).
2. Optionally enter an asset number or rebuild able serial number.
3. Optionally enter an asset group or rebuild able item.
4. Optionally select an Asset Category of the selected asset group or rebuild able item that is assigned to the current organization.
5. Select the Include Children option to include child assets in the inquiry results, even if they do not meet the search criteria.
6. Enter a value in the Include Position Code list of values to include assets associated with a specific position code in the functional location hierarchy.
7. Optionally select a View By value. You can view failure information by Asset Number, Asset Group, Asset Category, or Failure Code.

Note: Use Advanced Search if you want to search by other criteria such as Area. You cannot add View By values.

8. Optionally select a Display Readings from Meter value to display meter readings from a non-primary meter.

Meters that are associated with the selected asset, with the Required check box selected, and that are identified as a non-primary meter, are available for selection. By default, readings from the primary meter, if it exists, appear. This field is enabled only for the Simple Search, with a specified asset number and if you View By asset number.

9. Optionally select a failure code to further narrow your failure results by code.
10. Optionally enter a range of failure reporting dates.
11. Click the **Go** button.

The number of failure occurrences appear. A link from the Failure Count value provides a drill down to the Failure History information.

Setting Up Failure Tracking Associations Using WebADI

Using the Failure Tracking WebADI, if the failure, cause, resolution codes are not available, the application will also create the codes and then create the failure, cause, resolution code association with the asset group. In addition, use this WebADI to make

changes to the existing setup using the same set of information in different organizations.

To create failure, cause and resolution code associations using the Failure Setup Tracking WebADI:

1. Navigate to the Failure Setup Tracking WebADI page (Maintenance Super User > Maintenance Home > Failure Analysis > Failure Tracking Setup > Failure Setup Web ADI).

Failure Sets - Search

The screenshot shows the 'Failure Sets - Search' page. At the top, there is a navigation bar with tabs: Maintenance Home, Assets, Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis (selected), Construction Units, Safety Management, and Reports. Below this, there are sub-tabs: Failure History, Failure Analysis, and Failure Tracking Setup (selected). The main heading is 'Failure Sets' with a 'Save Search' button. Below the heading is a 'Simple Search' section with a note: 'Note that the search is case insensitive'. There are two search fields: 'Name' with the value 'Equipment Failure Set' and 'Asset Group'. Below these fields are 'Go' and 'Clear' buttons. To the right of the search fields is an 'Advanced Search' button. Below the search section, there are three tabs: 'Create Failure Set' (selected), 'Define Failure Codes', and 'Failure Setup Web ADI'. Below the tabs is a table with the following data:

Name	Description	End Date	Update
Equipment Failure Set	Equipment Failure Set for General Use		

2. Search for a specific failure set, and then click **Go**.
3. Click the **Update** icon for the failure set.
4. The Create Document page appears.

Failure Setup Tracking WebADI - Create Document

The screenshot shows the 'Create Document' page. At the top, there is a 'Create Document' heading with a 'Create' button. Below the heading is a 'Primary Parameters' section. In this section, there are several fields: 'Integrator' with the value 'EAM FA SET INTEGRATOR', 'Viewer' with a dropdown menu showing 'Excel 2013', 'Reporting Flag' with a checkbox, 'Layout' with the value 'EAMFALAYOUT2', 'Content' with the value 'EAMFACNT2', and 'Mapping' with the value 'EAMFAMAP2'. Below the 'Primary Parameters' section is a 'Content Parameters' section, which is currently empty.

5. Select the viewer.
6. Click **Create**, and the following message appears:

Information

A file will be downloaded to your desktop.

When prompted, choose to open the file and to enable macros. If no prompt appears, ensure your browser security settings allow files to be downloaded.

7. Open the file, and click the **Enable Content** button.
8. Enter information in the columns to create the complete setup of codes and asset group associations.
9. Save your work.
10. Click the **Upload** button, and the Upload Page appears.
11. Select the values for the upload parameters:
 - **Rows to Upload:** All Rows or Flagged Rows
 - **Commit Rows:** Validate Before Upload, All Rows, Each Row, Automatically Submit Import
12. Click **Upload**.

Construction Units

This chapter covers the following topics:

- Overview of Construction Units
- Using Construction Units
- Creating Construction Units
- Copying Construction Units
- Viewing and Modifying Construction Units
- Defining Difficulty Codes
- Creating Construction Estimates
- Modifying Construction Estimates
- Viewing Construction Estimates
- Copying Construction Estimates
- Generating Work Orders for Construction Estimates
- Using the Construction Estimate Workbench
- Capitalizing Actual Costs Associated with Construction Estimates
- Capitalizing Work Order Costs for Construction Estimates

Overview of Construction Units

Construction units (specifically known as compatible units in the utility and telecommunications industry) are standardized repetitive units of work, which involve labor, material and equipment. An example of a construction unit is the erection of transmission towers, which involves the similar efforts of excavation, erection, and so on, and requires similar materials and equipment. Installing multiple towers includes performing the same repetitive work, while allowing for specific factors such as terrain, accessibility, and so on. One construction unit is used as a typical requirement of such work, including resources and equipment to be used repetitively. The use of

construction units can reduce estimating and planning efforts.

By using this feature, you can:

- Define a construction unit and associate activities, operations and resources.
- Copy construction units.
- View and modify a construction unit.
- Group construction units to create construction estimates.
- Define difficulty codes.
- Generate construction estimates.
- View and modify a construction estimate.
- Generate work orders for the construction work, including estimates.
- Use the Construction Estimate Workbench to create and modify work orders for construction units and estimates.
- Capitalize actual costs associated with construction estimates.

Using Construction Units

You must perform several prerequisite tasks before you can use the construction units feature.

Prerequisites

- ☐ You must perform the following before you can create construction units:
 1. Define activities to be used with the construction units, and associate the activities to your organization. See *Defining Activities*, page 3-69
 2. Create material BOMs for the activities. See *Setting Up Maintenance Bills of Material*, page 3-134
 3. Define operations for the construction units. See *Preparing Work Order Operations*, page 4-31
 4. Assign resources to be used with the activities.

Creating Construction Units

One construction unit is a collection of activities, as defined in the eAM Master Items table. You can also define a routing and bill of material for the construction unit.

Construction units are defined at the organization level, and can include only those activities that are assigned to the same inventory organization. However, you can query construction units associated with different organizations and copy them to another organization. You can search by name, description, and organization.

When you define a construction unit, you enter the activity quantities for materials, resources, and resource multipliers for the construction unit.

Perform the following steps to create construction units:

To create a construction unit:

1. Navigate to the Maintenance Super User responsibility, select a value in the Organization field, and then click the Go button.
2. Click the Construction Units tab, and then click the Create Construction Unit button.

The Create Construction Unit page appears.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis **Construction Units** Safety Management Reports

Construction Unit Construction Estimate Difficulty Codes

Create Construction Unit Cancel Save Apply

* Name Doc Construction Unit * Effective From 17-Jul-2019 21:29:29
Description Effective To

Attachments

TIP Attachments option is enabled after saving the Construction Unit.

Flexfields

Context Value

Activities

Activity	Description	Quantity	WIP Accounting Class	Effective From	Effective To
Construction	Construction Asset Activity	2	Maintenanc	17-Jul-2019 21:29:29	

3. Enter a name for the construction unit (required).
4. Enter a description.
5. Enter a date in the Effective From (required) and Effective To fields.
Note that the Effective From date is required.
6. Add at least one activity the construction unit.

7. Enter a Quantity to indicate the amount of the activity that is required for the construction unit.

The quantities defined in the activity routing and material BOM would be multiplied with this quantity.

8. Optionally enter a WIP Accounting Class to identify the expense cost elements associated with the work performed, such as materials, labor, and resources.
9. Save your work.

Copying Construction Units

You can copy an existing construction unit to create a new construction unit.

To copy a construction unit:

1. Navigate to the Maintenance Super User responsibility.
2. Click the Construction Units tab.
3. Enter the search criteria to query for construction units that you want to copy.
4. Click the Go button.
5. Select the construction units that you want to copy.

6. Click the Copy Construction Unit button.

The Copy Construction Unit page appears.

7. Enter a name and a description for the new construction unit.
8. Optionally enter dates in the Effective From and Effective To fields.
9. You can revise the quantity, WIP Accounting Class and effective dates to apply to the new construction unit.

The effective dates of the activities must occur after the effective date of the construction unit. You must enter an effective from date.

10. Optionally select the Assign to Org check box.

Select this check box to assign the activities to the organization. If this check box is selected, the activity has been assigned to the organization, the check box is display only.

Important: Although an activity is assigned to a new organization,

you must define the BOM and the routing for the activity.

11. Save your work.

Viewing and Modifying Construction Units

You can search for construction units to add, delete or modify the activities, quantities, factors, and other related attributes. These attributes may require changes depending on the user requirements relating to specific construction projects.

To view and modify a construction unit:

1. Navigate to the Maintenance Super User responsibility, select a value in the Organization field, and then click the Go button.
2. Click the Construction Units tab.
3. Enter the organization for the construction unit that you want to view or modify.

By entering a value in the Organization field and leaving all the other fields blank will return all construction units that are associated with the organization. You can further refine your search by including values in the other fields such as Name, Description, and so on.
4. Click the Go button.
5. Click the link for the construction unit to view the details.

The Construction Unit page appears.
6. To modify the construction unit, click the Update button for the construction unit.

The Update Construction Unit page appears. Use this page to add attachments to the construction unit. You can hover or click the Add button to add new attachments to the construction unit, or hover over the View attachment link to view or update an existing attachment.

Note: You must first create and save a construction unit before you can add an attachment.
7. Make revisions to the construction unit such as adding flexfields, attachments, and additional activities.
8. Save your work.

Defining Difficulty Codes

Difficulty codes are defined as a multiplier with resource quantities that specify the additional resource usage required relating to factors such as soil condition, accessibility of the work site, and so on. The quantities defined for resource and material requirements are multiplied with quantities on the construction unit for cost estimation and on work orders. Difficulty codes are defined with a value assigned with them (a number larger than zero), which gets multiplied with resource quantities.

To define a difficulty code:

1. Navigate to the Maintenance Super User responsibility, enter a value in the Organization field, and then click the Go button.

2. Click the Construction Units tab, and click the Difficulty Codes link.

The Difficulty Codes page appears. You can use this page to search and define difficulty codes.

3. Click the Add 5 Rows button to define difficulty codes.

4. Add an alphanumeric name for your difficulty code.

5. Optionally add a description for the difficulty code.

6. Add a resource multiplier.

You must enter a number larger than zero. This value which gets multiplied with the labor and equipment quantities derived from the BOM, routing, construction unit and estimate definitions.

7. Save your work.

Creating Construction Estimates

You can group one or more construction units to create construction estimates and

define work requirements. Grouping construction units enables you to combine various operations that are involved (and their resource and material requirements), and this assists in the design, planning and estimation of the costs.

You can also create a construction estimate and add activities directly, without adding any construction units.

You can use the construction estimates for cost estimation, planning and scheduling the work and creating work orders for execution. All the operations defined on the activities appear as default values in the Construction Estimate Workbench, but you can make changes to the defaulted resources, materials, quantities, factors, and so on.

To create a construction estimate:

1. Navigate to the Maintenance Super User responsibility, select a value in the Organization field, and then click the Go button.
2. Click the Construction Units tab, and then click the Construction Estimates link.
The Construction Estimates page appears.

3. Click the Create Construction Estimate button.

The Select Activities page appears.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis **Construction Units** Safety Management Reports

Construction Unit Construction Estimate Difficulty Codes

Select Activities Estimate Workbench

Select Activities Cancel Next

Name DocConstructionEstin Description Doc Construction Esti

Estimate Activities

Construction Unit	Construction Unit Quantity	Activity	Activity Quantity	Difficulty Code	Resource Multiplier	WIP Accounting Class
Doc Construction Unit	2	Construction	4	Rocky Terrain	1.25	Maintenanc

4. Add a Name for the new construction estimate.
This is a required field.
5. Optionally add a description.
6. Select the construction units and activities that you want to add to this construction estimate.

You can add construction units, activities or a combination of both construction units and activities to the construction estimate.

7. Click the Next button to access the Construction Estimate Workbench where you can add other information such as:
 - Attachments
 - Descriptive Flexfields
 - Work Order default information

You can update the default value for the Work Order Status to a different status assigned to your organization.
 - Model Work Order information

You can update the default value for the Work Order Status to a different status assigned to your organization.
 - Parent Work Order default information

You can update the default value for the Work Order Status to a different status assigned to your organization.
8. Make additional changes to the estimate, if required.
9. Optionally perform other tasks by clicking one of these buttons:
 - Select Activities: Click this button to revise or add other activities.
 - Estimate Costs: Click this button to generate an cost estimate for the construction estimate.
 - Save: Click this button if you are finished to commit the construction estimate to the system.
 - Cancel: Click this button to delete all changes that you made.
 - Create Work Order: Click this button to generate work orders for the construction estimate.

See Generating Work Orders for Construction Estimates, page 29-12

Modifying Construction Estimates

You can modify construction estimates. You may need to change the construction units or the quantity of the construction unit.

To modify a construction estimate:

1. Navigate to the Maintenance Super User responsibility, select a value in the

Organization field, and then click the Go button.

2. Click the Construction Units tab, and then click the Construction Estimates link.
The Construction Estimates page appears.

3. Enter the Name of the construction estimate that you want to modify.

If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.

4. Click the Go button.

5. Click the Update icon for the construction estimate that you want to modify.

The Construction Estimate Workbench appears.

6. Modify the components of the construction estimate.
7. Save your work.

Viewing Construction Estimates

You can view a construction estimate.

Construction estimates are organization specific.

To view a construction estimate:

1. Navigate to the Maintenance Super User responsibility, select a value in the Organization field, and then click the Go button.
2. Click the Construction Units tab, and then click the Construction Estimates link.
The Construction Estimates page appears.

3. Enter a construction estimate in the Name field.

If you want to retrieve all the construction estimates assigned to the current

organization, leave the Name field blank.

4. Click the Go button.
5. Select a construction estimate that you want to view by clicking the link for the construction estimate.
6. View the details of the construction estimate such as:
 - Cost estimate
 - Model work order details such as Work Order Number, Asset Number, Cost
 - Parent Work Order details such as Asset Number, Status

Copying Construction Estimates

You can copy existing construction estimates to create new construction estimates. This can eliminate the need for manual entry of information for a construction project that has similar costs associated to it.

To copy a construction estimate:

1. Navigate to the Maintenance Super User responsibility, select a value in the Organization field, and then click the Go button.
2. Click the Construction Units tab, and then click the Construction Estimates link.
The Construction Estimates page appears.
3. Enter the Name of the construction estimate that you want to copy.
If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.
4. Click the Go button.
5. Click the Copy icon for the construction estimate that you want to use for the new construction estimate.
The Construction Estimate Workbench appears.
6. Enter a name in the Construction Estimate field.
7. Optionally add a description.
8. Optionally add attachments by clicking the Add button.
The Add Attachment page appears. You can add a Desktop File, Text or URL or a

file from the Document Catalog. Add a title and description for the attachment. Select and enter information in the Define Attachments region of the page.

If you are finished, click the Apply button. Click Add Another to add other attachments to the construction estimate.

9. Click the Select Activities button to add activities.

The Select Activities page appears.

10. Enter a construction unit.
11. Select activities.
12. Enter a value in the Activity Quantity field for each activities.
13. Optionally enter difficulty codes for each activity.
14. Enter a number in the Resource Multiplier field for each activity.
15. Optionally enter a WIP Accounting Class.
16. Click the Next button.
17. Click one of these buttons:
 - Select Activities - to add or delete activities by using the Construction Estimate Workbench.
 - Estimate Costs - to run the cost estimation
 - Save - save the construction estimate
 - Cancel - to discard the entire new construction estimate

- Create Work Order - to create work orders for the construction estimate
See Generating Work Orders for Construction Estimates, page 29-12

Generating Work Orders for Construction Estimates

You can generate work orders for construction estimates.

To generate work orders for a construction estimate:

1. Navigate to the Maintenance Super User responsibility, select an organization, and then click the Go button.

2. Click the Construction Units tab, and then click the Construction Estimates link.

The Construction Estimates page appears.

3. Enter the Name of the construction estimate that you want to view.

If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.

4. Click the Go button.

The Construction Estimate Workbench page appears.

5. Optionally select a value in the Group Rows By drop-down list.

Values are None, Activity, Construction Unit, Single Work Order and WIP Accounting Class.

If you want specific information to default into the fields in the Model Work Order region, optionally enter values for these fields:

- Work Order
- WIP Accounting Class
- Start Date
- End Date
- Asset Number
- Department
- Project
- Task

- Status - Unreleased, Awaiting Scheduling, Released, On Hold or Draft
6. Click the Apply Defaults button to populate the default values in the Model Work Order fields.
 7. Enter the Work Order Sequence to indicate the order in which each work order should be executed.
 8. You can optionally perform these actions:
 - Delete Row - Select the rows that you want to delete from the work order and then click this button.
 - Export - Select the rows that you want to export and then click this button.
 - Sort - Click this button to sort the rows based on the Group Rows By field.
 9. Optionally enter the Operation Sequence to indicate at which operation step the specific work order should be executed.

The default value for the operation sequence comes from the activity.
 10. Optionally select the Parent Work Order check box to create a parent work order for the construction estimate work orders.

Optionally enter a value for these fields:

 - Parent Work Order Description
 - WIP Accounting Class
 - Asset Number
 - Project
 - Task
 - Status
 11. If you want to link these work orders to an existing work order, enter a value in the Parent Work Order field.
 12. Click the Create Work Order button when you are satisfied with the work order estimate.

Construction Unit | **Construction Estimate** | Difficulty Codes

Select Activities | Estimate Workbench

Confirmation
Work Order Doc1 was successfully created.

Construction Estimate Workbench Cancel

Construction Estimate

Construction Estimate	DocConstructionEstimate	Description	Doc Construction Estimate

Cost Estimate

Doc1 -	USD 72,000.00
Total -	USD 72,000.00

Attachments

None

Flexfields

Context Value

Model Work Order

Export | ...

Show All Details | Hide All Details

Details	Work Order Sequence	Work Order	Work Order Description	Asset Number	WIP Accounting Class	Source Activity	Activity Sequence	Operation Sequence	Operation Description	Department	Resource Sequence	Resource	Item	Req Qui
▶	1	Doc1		Construction	Maintenanc	Construction	1	10	General Labor as Required for Construction	Construct	20	Foreman		2

13. The system generates the work orders.

Note: You cannot enter Descriptive Flexfields (DFFs) for work orders in the Construction Estimate Workbench. To enter DFFs, query the individual work order using the work order pages.

Using the Construction Estimate Workbench

You can use the Estimation Workbench to:

- Search and view the costs association with a construction estimate.
- View work order details associated with the construction estimate.
- Add components to the model work order such as work orders, work order sequence, asset number, WIP Accounting Classes, resources, resource descriptions, items and their required quantity, and so on.

To use the Estimate Workbench:

1. Navigate to the Maintenance Super User responsibility, select a value in the Organization field, and then click the Go button.
2. Click the Construction Units tab, and then click the Construction Estimates link.

The Construction Estimates page appears.

3. Enter the Name of the construction estimate that you want to view.
If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.
4. Click the Go button.
5. View the details associated with the construction estimate such as:
 - Estimate Costs
 - Attachments
 - Work Order Details
6. Optionally click the Update Estimate button to make changes to the construction estimate.
7. Save your changes.

Capitalizing Actual Costs Associated with Construction Estimates

Work executed using construction units results into the creation of new assets or value addition to the existing assets. This feature enables you to collect the costs on such work orders and post them for capitalization in Fixed Asset (FA) module through mass update.

If eAM asset numbers are not associated with FA serial numbers until work order completion, you can generate the asset numbers in the FA module and use them during capitalization.

Use the Work Order Capitalization process to capitalize the costs associated with construction estimates.

Before you can capitalize the costs associated with the construction estimate, you must first set up the EAM: FA Book Type profile. This profile enables the system to select the appropriate book when new fixed asset numbers are created.

To capitalize actual costs associated with a construction estimate:

1. Navigate to the System Administrator responsibility, and click the Define Profile Options link.
The Profiles page appears.
2. Click the Search icon (Flashlight).

3. Select the EAM: FA Book Type Code option, and then click the OK button.
4. Make sure that the Hierarchy Type is set to Organization.
5. Enter a beginning effective date.
6. Click the Save button.

Capitalizing Work Order Costs for Construction Estimates

You can capitalize the work order costs associated with a construction estimate.

To capitalize work order costs for a construction estimate:

1. Navigate to the Find Work Orders form in the Enterprise Asset Management responsibility (Billing and Capitalization > Work Order Capitalization).
2. Enter an Estimate Number to select a work order associated with a construction estimate.

Find Work Orders (EM1)

Work Order: V-FA1-WO1
 Estimate Number: V-FA1
 Asset Group: V-FA1
 Asset Number: V-FA1/001
 Asset Activity:
 Start Date:
 Completion Date:
 Owning Department:
 Project:
 Task:

Work Request:
 Status:
☒ Closed
☒ Complete - No Charges
☒ V-COMP-NO CHANGE
☐ Previously Billed
 Reference Invoice:
☐ Internal Customer
 Customer:
 Clear Find

Work Orders

Work Order	Estimate Number	Asset Group	Asset Activity	Status	Project	Task
V-FA1-WO1	V-FA1	V-FA1		Complete - No C		

Capitalize Work Order View Past Details

3. Click the Find button.
4. Click the Capitalize Work Order button.
5. View the capitalized costs associated with the construction estimate.
6. Save your work.

Safety Management

This chapter covers the following topics:

- Safety Management Overview
- Using Safety Management with EAM
- Creating Lockout Device Codes
- Defining Positional Assets
- Defining an Isolation Status
- Defining Isolation Types
- Creating Isolations
- Updating Isolations
- Viewing Isolations
- Using the Isolation Approval Work flow
- Defining Work Clearance Statuses
- Creating Work Clearances
- Updating Work Clearances
- Associating Work Orders with a Work Clearance
- Viewing Work Clearances
- Using the Work Clearance Approval Work flow
- Defining Work Permit Statuses
- Defining Work Permit Types
- Creating a Work Permit
- Updating a Work Permit
- Associating Work Orders to a Work Permit
- Viewing Work Permits

- Printing Work Permits
- Using the Work Permit Approval Work flow

Safety Management Overview

Use safety management to create work permits mandated by regulatory authorities. You can also create, view and update isolations and work clearances. You can also associate work permits with work clearances.

Note: The phrases "work permit" and "safety permit" are used interchangeably.

By using safety management, you can:

- Create, update, and view isolations.
- Create, update, view and copy work clearances.
- Associate work orders with a work clearance.
- Use the Work Clearance work flow to approve the work clearance status be changed to Released.
- Create a work permit.
- Using the Create Permit or Update Permit pages, create work permits or associate existing work permits to a work order or work clearance.
- Print work permits.
- Use the Work Permit Work flow to route a work permit for approval.

Related Topics

See Oracle Work flow User's Guide

Using Safety Management with EAM

Before you can use safety management, you must perform these setup tasks.

Prerequisites

- ☐ You must perform the following setup tasks before you can use safety management with EAM:

- Verify that the Enable Work flow for Safety option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 3-13.
- Verify that the Enable Work flow for Workorders option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 3-13.
- Create lockout device codes.
- Define asset numbers as positional assets or lockout devices.
- Associate lockout codes with asset numbers, asset groups, and rebuild able and serial-controlled numbers.
- Define isolation statuses and types.
- Define permit statuses and types.
- Define work clearance statuses and types.
- Create approval groups and approval rules for isolations, work permits and work clearances, if you are using work flow. See *Oracle Work flow User's Guide*.

Creating Lockout Device Codes

When you change the normal operating position of a positional asset, you must ensure that it remains in that position until the repair work is completed and the maintainable asset is safe to work on. Use lockout devices to secure the positional assets in proper positions so that they are not accidentally changed while asset is still under maintenance.

Lockout device codes indicate what type of lockout device would be used to lock this positional asset. This helps to identify that a certain type of positional asset requires a certain type of lockout device.

Create lockout device codes that can be would be used to associated with asset groups, asset numbers including rebuild able (and capital) and serial controlled items.

Important: A positional asset cannot be a lockout device, and a lockout device cannot be a positional asset.

To create lockout device codes:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management > Lookups).

The Manufacturing Lookups page appears.

2. Click the New button.
3. Enter the Type, Meaning, Application, and Description of the lockout codes such as:
 - Type = EAM_LOCKOUT_DEVICE
 - Meaning = EAM_LOCKOUT_DEVICE
 - Application = Enterprise Asset Management
 - Description = eAM Safety Lockout Devices
4. Enter values in the Code sequence, Meaning, Description, Tag (optional) and beginning Effective Date fields.
5. Click the Enabled button to indicate that you want users to be able to use these lockout codes.

The screenshot shows the 'Manufacturing Lookups' window. It has a top section for defining a new lookup and a bottom table for existing ones.

Top Section Fields:

- Type: EAM_LOCKOUT_DEVICE
- Meaning: EAM_LOCKOUT_DEVICE (highlighted)
- Application: Enterprise Asset Management
- Description: eAM Safety Lockout Devices
- Access Level:
 - ☒ User
 - ☐ Extensible
 - ☐ System

Table Section:

Code	Meaning	Description	Tag	From	To	Effective Dates	Enabled
1	PADLOCK	Padlock		17-FEB-2011			<input checked="" type="checkbox"/>
2	VALVE COVER	Valve Cover		17-FEB-2011			<input checked="" type="checkbox"/>
3	SEAL	Seal		17-FEB-2011			<input checked="" type="checkbox"/>

6. Save your work.

Defining Positional Assets

You can indicate if an asset number is a positional asset or a lockout device to be used in safety management.

Positional assets represent the equipment used to change the operational status of a maintainable asset to isolate it from its surroundings or energy sources.

For example, in the normal operating conditions of a boiler, the inlet valve is open and the drain valve is closed. To isolate a boiler before it is repaired, the inlet valve is closed and the drain valve is opened. In this example, the maintainable asset is the boiler, and the positional assets are the inlet and drain valves. Therefore, the boiler is not physically isolated, but the positions of the valves, switches, and other positional assets are altered in order to isolate the boiler from its surroundings.

Define positional assets during asset number creation.

To define positional assets:

1. Navigate to the Define Asset Numbers page (Enterprise Asset Management > Assets > Asset Numbers > New).

The Define Asset Numbers page appears. For more information on defining assets, see Defining Asset Numbers, page 3-85

2. Click the Safety tab.

The screenshot shows the 'Define Asset Number (EM1)' window. The 'Main' tab is selected, and the 'Safety' sub-tab is active. The 'Positional Asset' checkbox is checked. The 'Operating Position' is set to 'OPEN', 'Operating Tag' to 'GREEN', 'Shutdown Position' to 'CLOSE', 'Shutdown Tag' to 'RED', and 'Lockout Device' to 'PADLOCK'. The 'Lockout Device' checkbox is unchecked. The 'Asset Number' is 'MDE-PO-100', 'Asset Group' is 'MDE-GRP', 'Asset Serial Number' is 'MDE-AN-305', 'Asset Category' is empty, 'Organization' is 'EM1', and 'Asset Type' is 'Capital'. The 'Attributes', 'Resource Usage', 'GIS Workbench', 'Meters', and 'Associate Activity' buttons are visible at the bottom.

3. Select the Positional Asset check box.
4. Select the appropriate values for the Operating Position, Operation Tag, Shutdown Position, Shutdown Tag, and Lockout Device fields.
5. You can select the Lockout Device check box to indicate that this asset is a lockout device.

A lockout device uses a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Lockout devices are defined during asset creation using the Define Asset Numbers or Define Rebuildable Asset Numbers forms.

Important: A positional asset cannot be a lockout device, and a lockout device cannot be a positional asset.

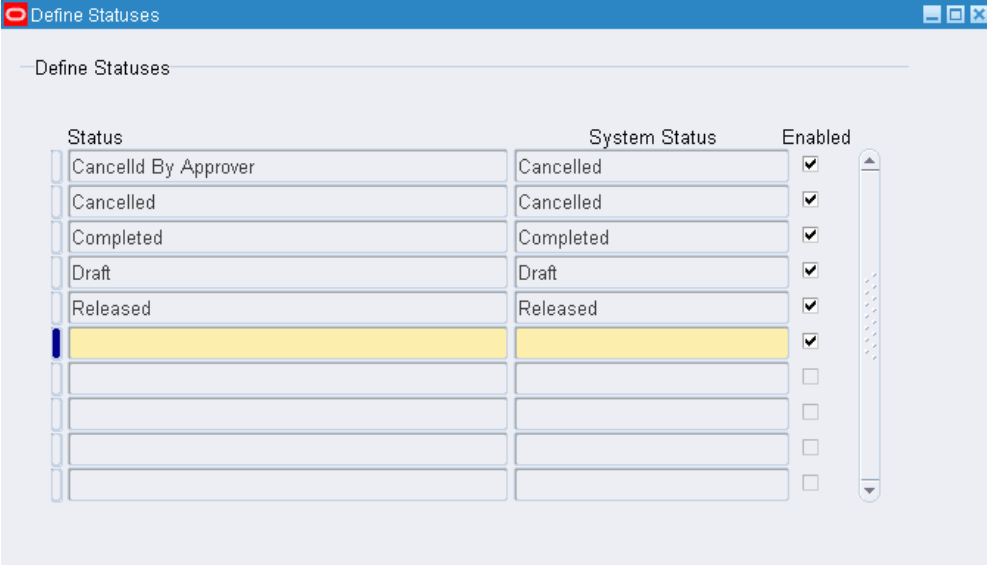
Defining an Isolation Status

Isolation statuses must be defined before you create an isolation. Seeded (predefined) isolation statuses are Draft, Released, Complete and Cancelled. You can define new statuses that are mapped to these seeded statuses.

To define an isolation status:

1. Navigate to the Define Status page (Enterprise Asset Management > Setup > Isolation Statuses).

The Define Statuses page appears.



Status	System Status	Enabled
Cancelled By Approver	Cancelled	<input checked="" type="checkbox"/>
Cancelled	Cancelled	<input checked="" type="checkbox"/>
Completed	Completed	<input checked="" type="checkbox"/>
Draft	Draft	<input checked="" type="checkbox"/>
Released	Released	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

2. Enter a name for the new isolation status.

The System Status default value appears.

3. Select the Enabled check box if you want users to be able to use the new isolation status.

4. Save your work.

Defining Isolation Types

Follow these steps to define isolation types.

To define isolation types:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management >

Lookups).

The Manufacturing Lookups page opens in the add mode.

Manufacturing Lookups page

Manufacturing Lookups

Type: EAM_ISOLATION_TYPE
Meaning: EAM ISOLATION TYPE
Application: Enterprise Asset Management
Description: EAM ISOLATION TYPE

Access Level:
☒ User
☐ Extensible
☐ System

Effective Dates: From To Enabled

Code	Meaning	Description	Tag	From	To	Enabled
01	ELECTRICAL	ELECTRICAL ISOLATION		23-MAR-2011		<input checked="" type="checkbox"/>
02	MECHANICAL	MECHANICAL ISOLATION		23-MAR-2011		<input checked="" type="checkbox"/>
03	HAZARDOUS	HAZARDOUS		24-MAR-2011	24-MAR-2011	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

2. In the Access Level group box, select the User value.
3. In the Type field, enter the name of the isolation type, EAM_ISOLATION_TYPE.
4. In the Meaning field, enter EAM Isolation Type.
5. In the Application field, enter Enterprise Asset Management.
6. In the Description field in the header, enter EAM Isolation Type.
7. In the Code field, enter the code number to be associated with the isolation type such as 10.
8. Enter the Meaning such as Electrical.
9. Enter the Description such as Electrical Isolation.
10. Enter the Effective Dates for the isolation type.
You must enter a date in the From field. You can leave the To date blank.
11. Select the Enabled check box if you want to enable users to select this isolation type.
12. Save your work.

Creating Isolations

You use isolations with a status of Draft or Released to copy their associated steps to a new isolation. In addition, you can use a work clearance with a status of Released or Complete to copy its steps to the new isolation.

Use these steps to create an isolation of equipment or an area.

To create an isolation:

1. Navigate to the Create Isolation page (Maintenance Super User > Safety Management > Create Isolation).
The Create Isolation page appears.
2. You can optionally accept the system generated value or enter a specific name Isolation number field.
3. Enter a value in the Description field.
4. Select a value from the Isolation Type drop-down list.
5. Optionally select an existing isolation in the Copy From Isolation field to create a new isolation.
6. Optionally select an existing work clearance from which you want to copy the isolation steps to this new isolation.
7. The state of the Permit Required check box (unselected/selected) comes from the isolation, if you selected a value in the Isolation field. You can unselect or select this option, and it is used for informational purposes only.
8. Optionally select a Status; the default value is Draft.
9. Enter a date in the Effective From field; the default value is the current system time and date.
10. Optionally select a value in the Context Value field.

This field may contain descriptive flexfields (DFFs). These values can be configured by your organization and can be used to capture additional information regarding the isolation. If you select a DFF, then the appropriate fields will appear where you will be required to enter information.

For information regarding defining DFFs, see *Oracle Applications Flexfields Guide*.

Maintenance Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units **Safety Management** Reports

Isolation Work Clearance Permit

Safety Management: Isolation >

Create Isolation Cancel Save Apply

* Indicates required field
Time = hours

Isolation 100 Description Isolation for Doc Attachments
* Isolation Type MECHANICAL Isolation Type Description MECHANICAL ISOLATION Context Value ☐

Copy From Isolation Permit Required ☐
Copy From Work Clearance Status Draft Effective To

* Effective From 17-Jul-2019 21:46:06

Establishment Sequence

Select Row: Copy Re-Establishment Sequence Ascending Order Descending Order ***

* Sequence Number	* Positional Asset	Asset Description	* Establishment Description	Position	Tag	Lockout Device	Department	Resource
<input type="radio"/> 20	MDE-PO-100			CLOSE				
<input type="radio"/>								
<input type="radio"/>								

11. Click the Establishment Sequence region to optionally enter information for an establishment sequence for the assets to be included in the isolation.

Enter values in any of the fields. You can also copy the list from the Establishment Sequence region by clicking the Ascending or Descending buttons.
12. Optionally enter a value in the Sequence Number, Positional Asset, Tag Position, Establishment Description fields.

The values available in the Positional Assets field are based on the assets created and associated with the organization. See Defining Positional Assets, page 30-4.
13. Save your work if you want to add Flexfields or Attachments to the positional assets in the Establishment Sequence region.

You can also add attachments or flexfields (DFFs) during the update process.
14. Optionally click the Flexfields button to select a DFF.
15. You can optionally click the Attachments button to add a desktop file, text, or URL.
16. Optionally enter information in the Re-Establishment Sequence region. This region contains information relating to the equipment after the isolation has expired.

Enter values in any of the fields. You can also copy the list from the Establishment Sequence region by clicking the Ascending or Descending button.
17. Select the Isolated Assets to be included in the isolation.

You can select additional information such as the effective dates, comments, descriptive flexfields, and attachments.

▲ Re Establishment Sequence

Select Row: Copy Establishment Sequence Ascending Order Descending Order ...

* Sequence Number	* Positional Asset	Asset Description	* Re Establishment Description	Position	Tag	Lockout Device	Department	Resource
<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

< Table Diagnostics >

▲ Isolated Assets

...

* Isolated Asset	Asset Description	* Effective From	Effective To	Comments	Flexfields
MD-AWB-ANM12	Asset Number #6	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

18. Click the Save button.

Updating Isolations

You can update various isolation information.

To update an isolation:

1. Navigate to the Update Isolation page (Maintenance Super User > Safety Management > Search).

Search for the isolation that you want to update, and then click the Update button. The Update Isolation page appears.

2. Update any of the available fields on the page.

You can add attachments and descriptive flexfields (DFFs) to the positional assets in the Establishment and Re-establishment Sequences and to the Isolated Assets.

For more information to define DFFs, see *Oracle Applications Flexfields Guide*.

Re Establishment Sequence

Select Row: Copy Establishment Sequence

Ascending Order

Descending Order

Sequence Number	Positional Asset	Asset Description	Re Establishment Description	Tag Position	Safety Tag	Lockout Device	Department	Resource
40	DrainValve-003		turn towards 90 degrees to cl	CLOSED	RED	SEAL	Prd Maint	PrdMaint
50	OutletValve-002		turn towards 90 degrees to o	OPEN	GREEN	PADLOCK	Prd Maint	PrdMaint
60	InletValve-001		turn towards 90 degrees to o	OPEN	GREEN	PADLOCK	Fac Maint	MaintTech

Add

Isolated Assets

Isolated Asset	Asset Description	Effective From	Effective To	Comments	Attachments	Flex Fields	Delete
TF-PS-01	Thermic fluid circulation pump unit 001			Isolation of Pump unit 001			

Add

Cancel

Save

Apply

3. Save your work.

Viewing Isolations

You can view isolations by following these steps.

To view an isolation:

1. Navigate to Maintenance Super User > Safety Management and search for an isolation.
2. Click the link for the isolation that you want to view.
3. The View Isolation page appears.
View the associated isolation details.
4. You can also click the Update button to make changes to the isolation.

Using the Isolation Approval Work flow

The Isolation Approval Flow is initiated when a user changes the status of isolation to Released.

The conditions under which you can use the approval work flow are organization code and isolation type.

Before you can use the Isolation work flow:

1. Verify that the Enable Work flow for Safety option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 3-13.

2. Create approval groups and approval rules for isolations.

See *Oracle Work flow User's Guide*.

Defining Work Clearance Statuses

You must define work clearance statuses before you can create a work clearance. Seeded (predefined) work clearance statuses are Draft, Released, Complete, and Cancelled. You can define new statuses that are mapped to these seeded statuses.

To define work clearance statuses:

1. Navigate to the Define Statuses page (Enterprise Asset Management > Setup > Work Clearance Statuses).

The Define Statuses page appears.

2. Enter the name of the new work clearance status.
3. Select the Enabled check box if you want users to be able to use the new work clearance status.
4. Save your work.

Creating Work Clearances

You can add work orders and work permits during work clearance creation.

Note: You must first create and save a work clearance before you can add attachments.

Follow these steps to create a work clearance.

To create a work clearance:

1. Navigate to the Create Work Clearance page (Maintenance Super User > Safety Management > Work Clearance > Create Work Clearance).
2. Enter a value in the Work Clearance field or accept the system-generated number.
3. Optionally enter a description.
4. Optionally select a value in the Isolation field.

You can use an existing isolation to copy the isolation sequences (establishment and re-establishment steps) to the work clearance. Isolations must have a status of Released before they are available for selection.

You can add isolations using this field. You can manually add and delete isolation sequences, or change the order of the steps.

5. Enter a value in the Scheduled Establishment Start Date and Scheduled Establishment End Date fields (required).

The default values are the system date and time, but you can change these values.

6. Enter a value in the Scheduled Re-Establishment Start Date and Scheduled Re-Establishment End Date fields (required).

The default values are the system date and time, but you can change these values.

7. The Permit Required check box is associated with the isolation, if selected.

You can unselect or select this option, and it is used for informational purposes only.

The screenshot shows the 'Create Work Clearance' form in the Oracle Asset Management interface. The top navigation bar includes 'Home', 'Logout', 'Preferences', 'Personalize Page', and 'Diagnostics'. The main navigation tabs are 'Home', 'Assets', 'Work Requests', 'Work Orders', 'Stores', 'Budget Forecasts', 'Failure Analysis', 'Construction Units', and 'Safety Management'. The 'Safety Management' tab is selected, and the sub-tab 'Work Clearance' is active. The form contains the following fields and controls:

- Work Clearance:** Text field with value '13005'.
- Isolation:** Text field with a search icon.
- Scheduled Establishment Start Date:** Date-time field with value '18-Apr-2011 11:06:01'.
- Scheduled Establishment End Date:** Date-time field with value '18-Apr-2011 11:06:01'.
- Scheduled Re-Establishment Start Date:** Date-time field with value '18-Apr-2011 11:06:01'.
- Scheduled Re-Establishment End Date:** Date-time field with value '18-Apr-2011 11:06:01'.
- Permit Required:** Check box, currently unchecked.
- Attachments:** Text field.
- Description:** Text field.
- Status:** Dropdown menu with 'Draft' selected.
- Context Value:** Dropdown menu.
- Buttons:** 'Cancel', 'Save', and 'Apply'.
- Expandable Sections:** 'Establishment Sequence' and 'Re-Establishment Sequence'.

8. Optionally select a value in the Context Value field.

This field includes any descriptive flexfields (DFFs) that have been defined for your organization. These values can be used to capture additional information regarding the work clearance. If you select a DFF value, then the appropriate fields will appear where you will be required to enter information.

9. The values in the Establishment Region are populated from the Isolation number, if one is selected.

You can override these values and add sequences. You can add contingent workers as resources. See Creating Isolations, page 30-8.

10. The values in the Re-Establishment Region are populated from the Isolation Number, if one is selected.

You can override these values and add sequences. You can add contingent workers as resources. See Creating Isolations, page 30-8.

11. Click the Work Orders region to add a work order.

You can add the following in this region; all other fields are view only:

- Work Order
- Attachments: Click this button to access the Add Attachments page where you can add a desktop file, text, or URL.
- Flexfields: Optionally click the Flexfields icon to add a descriptive flexfield (DFF).

DFFs can be defined to capture additional information specific to your organization. When you select a DFF, additional fields may be required.

For information regarding defining DFFs, see *Oracle Applications Flexfields Guide*.

The screenshot shows the Oracle Asset Management interface for creating a work clearance. The top navigation bar includes links for Home, Logout, Preferences, Personalize Page, and Diagnostics. The main navigation bar has tabs for Home, Assets, Work Requests, Work Orders, Stores, Budget Forecasts, Failure Analysis, Construction Units, and Safety Management. The breadcrumb trail indicates the path: Safety Management: Work Clearance > Create Work Clearance >. The 'Flexfields' section is active, showing a 'Work Order' section with a 'Context Value' dropdown menu. The dropdown menu is open, showing three options: 'Clearance-WO-Assoc', 'Permit-Clearance-Assoc', and 'Permit-WO-Assoc'. The page also displays 'Work Clearance 15012' and 'Work Clearance Description WO Description'. There are 'OK' buttons in the top right and bottom right corners.

12. Click the Permits region to add work permits to the work clearance.

You can add the following in this region; all other fields are view only:

- Work Permit
- Attachments: Click this button to access the Add Attachments page where you can add a desktop file, text, or URL.
- Flexfields: Optionally click the Flexfields icon to add a descriptive flexfield (DFFs).

DFFs can be defined to capture additional information specific to your organization. When you select a DFF, additional fields may be required.

For information regarding defining DFFs, see *Oracle Applications Flexfields Guide*.

13. Save your work.

Updating Work Clearances

1. Navigate to the Work Clearance Report page (Maintenance Super User > Safety > Work Clearance).

2. Enter the search criteria for the work clearance that you want to update, and then click the Go button.

Click the Update button for the appropriate work clearance, and the Update Work Clearance page appears.

3. You can optionally add attachments by clicking the Add button.

Use the Add Attachment page to attach a desktop file, text, or URL to the work clearance.

4. You can optionally select a value in the Context Value field.

This field may contain descriptive flexfields (DFFs). These values can be configured by your organization and can be used to capture additional information regarding the isolation. If you select a DFF, then the appropriate fields will appear where you will be required to enter information.

For more information to define DFFs, see *Oracle Applications Flexfields Guide*.

ORACLE Asset Management

Home | Assets | Work Requests | Work Orders | Stores | Budget Forecasts | Failure Analysis | Construction Units | Safety Management

Safety Management: Work Clearance > Maintenance Organization: FAC

Update Work Clearance: 2001

Work Clearance: 2001
Isolation: 6001
Scheduled Establishment Start Date: 18-Apr-2011 06:43:03
Scheduled Re-Establishment Start Date: 18-Apr-2011 06:43:03
Permit Required: ☐
Prepared By: Stock, Ms. Pat
Prepared Date: 18-Apr-2011 06:43:25
Attachments: None Add...

Cancel Copy Work Clearance Save Apply

Description:
Status: Released
Scheduled Establishment End Date: 18-Apr-2011 06:43:03
Scheduled Re-Establishment End Date: 18-Apr-2011 06:43:03
☐ Pending
Approved By:
Context Value:

Establishment Sequence

Select Establishments Mass Complete: Go

Select All | Select None

Sequence	Positional Asset	Description	Establishment Description	Tag Position	Safety Tag	Lockout Device	Lock Number	Department	Resource
<input type="checkbox"/> 10	KA-PA01	Positional Asset	Isolation Initiation	ON	RED	VALVE COVER		Safety	SafetyEng
<input type="checkbox"/>									
<input type="checkbox"/>									

Add

5. Revise the fields as required.

Positional assets are the asset numbers which are defined as positional assets in Asset Numbers form. Only positional assets are available for selection. In addition, only lockout devices are available for selection in the Lockout Device field.

The Resource field will show only People resources and the Instance field will show Persons. This is because these resources are the actual people who perform the task given in the work clearance.

You can add attachments and descriptive flexfields (DFFs) to the positional assets in the Establishment and Re-establishment Sequences.

Re-Establishment Sequence

Select Re-Establishments Mass Complete:

[Select All](#) | [Select None](#)

Sequence	Positional Asset	Description	Re-Establishment Description	Tag Position	Safety Tag	Lockout Device	Lock Number	Department	Resource
<input type="checkbox"/> 10	Drain-Valve-TF-01	Drain valve attached to TF-PS-01	Turn 90 degrees to close	CLOSED	RED	PADLOCK		W-Maint	FltMed
<input type="checkbox"/> 20	Outlet-Valve-TF-01	Outlet valve attached to TF-PS-01	Turn -90 degrees to open	OPEN	GREEN	PADLOCK		W-Maint	FltMed
<input type="checkbox"/> 30	Inlet-Valve-TF-01	Inlet valve attached to TF-PS-01	Turn -90 degrees to open	OPEN	GREEN	PADLOCK		W-Maint	FltMed

Work Orders

Work Order	Work Order Description	Asset Number	Asset Number Description	Status	Scheduled Start Date	Schedule Completion Date	Attachments	Flexfields	Delete
WO-TF-PS-01-2	Inspected TF-PS-01, found leakage in thermic fluid circulation system. Need emergency repair.	TF-PS-01	Thermic fluid circulation pump unit 001	Draft	12-Apr-2011 06:19:00	12-Apr-2011 06:19:00			
<input type="text"/>									
<input type="text"/>									

- You can optionally copy the work clearance by clicking the Copy Work Clearance button.

Permits

Permit	Permit Description	Permit Type	Status	Valid From	Valid To	Attachments	Flexfields	Delete
15018	Permit to work on Pump TF-PS-01	Hazardous Work	Draft	12-Apr-2011 06:20:39	14-Apr-2011 05:21:18			
<input type="text"/>								
<input type="text"/>								

- Save your work.

Associating Work Orders with a Work Clearance







You can associate work order with a work clearance by using the Work Clearances or Work Orders pages. The work orders and work clearances must have a status of Draft or Released.

To associate work orders with a work clearance:

- Navigate to the Update Work Clearances page (Maintenance Super User > Safety Management > Work Clearances).
- Enter the search criteria for the work clearance that you want to update and then click the Go button.

The Update Work Clearance page appears.

- Expand the Work Orders region of the page.
- Select the work orders that you want to associate with this work clearance.

Work Orders								
Work Order	Work Order Description	Asset Number	Asset Number Description	Status	Scheduled Start Date	Schedule Completion Date	Attachments	Flexfields Delete
ka-wo20		L400	Backhoe ID#400	Draft	18-Apr-2011 06:50:00	18-Apr-2011 06:50:00	 	
<input type="text" value="ka-wo40"/>		L400	Backhoe ID#400	Draft	18-Mar-2010 07:05:20	18-Mar-2010 09:05:20	 	

- You can add attachments and descriptive flexfields (DFFs) to the positional assets in the Establishment and Re-establishment Sequences.
- Save your work.

Viewing Work Clearances

- Navigate to the View Work Clearances page (Maintenance Super User > Safety Management > Work Clearances).
- Enter the search criteria for the work clearance that you want to view and then click the Go button.

The View Work Clearance page appears where you can view associated details such as:

- Work Clearance and Description
 - Establishment Start and End Dates
 - Establishment and Re-Establishment details
- You can optionally perform the following tasks by clicking the appropriate button:
 - Copy Work Clearance - copy to create a new work clearance
 - Update - to access the Update Work Clearance page to make revisions to the work clearance

Using the Work Clearance Approval Work flow

The Work Clearance Approval Work flow is initiated when a user changes the status of the work clearance to Released.

The conditions under which you can use the approval work flow are organization code, isolation type, and work clearance number.

Before you can use the Work Clearance Approval Work flow:

1. Verify that the Enable Work flow for Safety option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 3-13.
2. Create approval groups and approval rules for work clearances.
See Oracle Work flow User's Guide

Defining Work Permit Statuses

Follow these steps to define a work permit status.

To define a work permit status:

1. Navigate to the Define Status page (Enterprise Asset Management > Setup > Permit Statuses).
2. Click the New button to add a new work permit status.
The Define Statuses page appears.
3. Enter the name of the new permit status.
4. Select a System Status value to associate to the new work permit status (required).
5. Select the Enabled check box if you want users to be able to use the new work permit status.
6. Save your work.

Defining Work Permit Types

Follow these steps to define a work permit type.

To create work permit types:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management > Lookups).
The Manufacturing Lookups page opens in the add mode.
2. In the Access Level group box, select the User value.
3. In the Type field, enter the name of the permit type, WORK_PERMIT_TYPES.
4. In the Meaning field, enter Work Permit Types.
5. In the Application field, enter Enterprise Asset Management.

6. In the Code field, enter the name of the code to be associated with the permit type such as HAZARD.
7. Enter the Meaning for the permit type such as Hazardous Work.
8. Enter the Description for the permit type such as Hazardous Work.
9. Enter the Effective Dates for the permit type.
The From (beginning) date will default to the system date, but you can override this value. The To (ending) date is optional.
10. Select the Enabled check box if you want to enable users to select this permit type.

The screenshot shows the 'Manufacturing Lookups' application window. It features a form for configuring 'Work Permit Types' and a table of existing entries.

Form Fields:

- Type: WORK_PERMIT_TYPES
- Meaning: Work Permit Types (highlighted)
- Application: Enterprise Asset Management
- Description: (empty)
- Access Level:
 - ☒ User
 - ☐ Extensible
 - ☐ System

Table: Effective Dates

Code	Meaning	Description	Tag	From	To	Enabled
HAZARD	Hazardous Work	Hazardous Work		14-JUN-2010		<input checked="" type="checkbox"/>
HOT	Hot Work	Hot Work		14-JUN-2010		<input checked="" type="checkbox"/>
HIGH	High Work	High Work		14-JUN-2010		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

11. Save your work.

Creating a Work Permit

Use the Create Permit page to create a work permit.

To create a new work permit:

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the Create Permit button and the Create Permit page appears.

3. Enter a permit number or accept the default number in the Permit field.

4. (Optional) Enter a description for the work permit.

5. Select a work permit type (required).

6. Select a work permit status (required).

All new work permits are automatically created in the Draft status, but you can change this value.

7. Enter a date in the Valid From and Valid To fields (both are required fields).

The default value in the Valid From field is the system date and time that you are creating the work permit, but you can override this value.

8. (Optional) Click the Flexfields button to select a flexfield to add to the page.

See eAM Descriptive Flexfields, *Oracle Enterprise Asset Management Implementation Guide* and *Oracle Applications Flexfields Guide*.

9. Click the Work Order collapsible section to add work orders to the work permits.

10. Select the work orders to add.

You can add attachments and descriptive flexfields (DFFs) to the positional assets in the Establishment and Re-establishment Sequences.

See Updating a Work Permit, page 30-21 for information regarding adding work orders to a work permit.

11. Click the Apply button.

12. You can add attachments to the work permit after you have saved the work permit.

Click the Attachments button to add attachments.

Updating a Work Permit

Use the Update Work Permit page to update a safety permit.

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the Update Permit button for the safety permit that you want to update.

The Update Permit page appears.

ORACLE® Asset Management

Home Logout Preferences Diagnostics

Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management

Safety Management: Permits > Maintenance Organization : EM1

Update Permit: 58002

* Indicates required field
Time = hours

Permit: 58002
Description: 58002
Permit Type: Confined Space
Permit Status: XB3 Released
Attachments: None Add...

Valid From: 23-Jun-2010 16:50:00
Valid To: 24-Jun-2010 16:50:00
Prepared By: Moll, Mr. Joe
Prepared Date: 23-Jun-2010 16:53:25
Approved By: Moll, Mr. Joe
* Pending
* st3 58002

Work Order

Work Order	Work Order Description	Asset Number	Asset Number Description	Status	Date	Schedule Completion Date	Attachments	Flex	Fields	Delete
WO385948		XB3-AN-100	XB3-AN-100	Draft	23-Jun-2010 16:49:00	23-Jun-2010 16:49:00				

Add 3 Rows

3. Revise the permit details.

You can revise the following information:

- Description
- Permit Status

If you update a work permit to a status of Released (or a user-defined equivalent), a work flow notification is triggered upon save. The Completed status will open a new field in which you can enter the completion date and time.

- Attachments (add)
- Valid From and Valid To dates

4. Click the Work Order collapsible section to add work orders to the work permits.
5. Select the work orders to add.

6. Optionally click the Flexfields button to select additional flexfields to add to the page.
See eAM Descriptive Flexfields, Oracle Enterprise Asset Management Implementation Guide and Oracle Applications Flexfields Guide.
7. Click the Work Clearance region to associate a work clearance to the work permit.
8. You can click one of these buttons to perform other actions:
 - Cancel: To return to the Safety Permits page without saving any changes.
 - Copy Permit: To copy the current work permit to a new permit.
 - Save: To save your changes and remain on the Update Permit page.
 - Apply: To save your changes and return to the Safety Permits page.

Associating Work Orders to a Work Permit

You can add (associate) existing work orders to a work permit when you create the work permit or when you update the work permit.

Important: You cannot create a new work order through the work permit.

To associate (add) a work order to a work permit:

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the Update Permit button for the safety permit to which you want to add a work order.
The Update Permit page appears.
3. Enter the work order number in the Work Order field, or click the search button.
4. Search and select the appropriate work order to add.

ORACLE® Asset Management

Home Logout Preferences Personalize Page Diagnostics

Home Assets Work Requests Work Orders Stores Budget Forecasts Failure Analysis Construction Units Safety Management

Safety Management: Permits > Maintenance Organization : EM1

Update Permit: Documentation

* Indicates required field
Time = hours

Permit Description:

Permit Type: **Hazardous Work**

Permit Status: **Draft**

Attachments: None

Valid From: 14-Jun-2010 11:21:02

Valid To: 28-Jun-2010 11:32:16

Prepared By: **Stock, Ms. Pat**

Prepared Date: 14-Jun-2010 11:31:39

Approved By:

☐ Pending

Context Value:

Work Order

Work Order	Work Order Description	Asset Number	Asset Number Description	Status	Scheduled Start Date	Schedule Completion Date	Attachments	Flex Fields	Delete
VB-WO-05		FL1010	Fork Lift 1010	Released	06-May-2010 00:49:03	06-May-2010 00:49:03			

5. Repeat these steps to add work orders to the safety permit. Click the Flexfields button to add flexfields to the page.

See eAM Descriptive Flexfields, *Oracle Enterprise Asset Management Implementation Guide* and *Oracle Applications Flexfields Guide*.

6. You can click one of these buttons to perform additional tasks on the safety permit:
 - Cancel: To return to the Safety Permits page without saving any changes.
 - Copy Permit: To copy the current work permit to a new permit.
 - Save: To save your changes and remain on the Update Permit page.
 - Apply: To save your changes and return to the Safety Permits page.
7. Save your work.

Viewing Work Permits

Use the View Work Permits page to view existing safety permits.

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the link for the safety (work) permit that you want to view.
The View Permit page appears.
3. View the permit details.

4. You can click one of these buttons to perform other actions:
 - Cancel: To return to the Safety Permits page.
 - Update Permit: To make changes to the permit.
 - Copy Permit: To copy the current work permit to a new permit.

Printing Work Permits

You can print work permits.

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the Print Permit button for the work permit that you want to print.

The Permit Report page appears.

3. Select the report parameters that you want to include such as Work Orders and File Attachments.
4. Select a template (if applicable).
5. The Locale defaults to the template (if applicable), and this describes the language in which you want the permit to be printed.
6. Select one of the following report formats:
 - Excel
 - HTML
 - PDF

- RTF
7. Click the Run button to print the work permit.
 8. View the printed work permit.

HTML Work Permit

ORACLE Enterprise Asset Management – Permit To Work
 Page | 1

Permit Name	Documentation	Permit Status	Draft
Permit Description		Permit Type	Hazardous Work
Prepared Date	14-JUN-2010 11:31:39	Prepared By	Stock, Ms. Pat
Valid From	14-JUN-2010 11:21:02	Valid To	28-JUN-2010 11:32:16

Approvers

Work Order Details

Work Order Name	Asset Number	Description	Scheduled Start Date	Scheduled Completion Date
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File Attachment

File Name	Description	Category
-----------	-------------	----------

Using the Work Permit Approval Work flow

You can use Oracle Work flow to use the Work Permit Work flow.

The conditions include permit status, permit type, and organization code.

Before you can use the Work Permit Work flow:

1. Verify that the Enable Work flow for Workorders option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 3-13.

This option will enable the Work Permit Work flow to be triggered for work permits.

2. Create approval groups and approval rules for work permits.

Related Topics

See *Oracle Work flow User's Guide*, for more information about adding approval groups.

Reports and Processes

This chapter covers the following topics:

- Activity Cause Report
- Department Actual Cost Report
- PAC EAM Estimates Versus Actuals Report
- Work Order Cost Report
- EAM Weekly Schedule Report
- Load Production Equipment Maintenance Downtime
- Maintenance Work Order Detail Report
- Maintenance Work Order Report With Summary
- Maintenance Work Order Package Print with AutoVue
- Maintenance Work Order Update PO/requisition Need-by Date (SRS)
- Material Issue Request Pick List Report
- Preventive Maintenance Work Order Report
- Retrieve Timecard Data from OTL to EAM
- Simulate Transfer Shop Floor Invoice Variance
- Shop Floor Invoice Variance Report

Activity Cause Report

Use the Activity Cause Report to report the reasons for asset failures reported by department or asset number. An activity cause is a reason for the failure of an asset, for example, Preventive, Normal Wear, Rework, and Breakdown. This information enables you to understand the dynamics that affect the ability of an asset to perform. Activity causes establish critical data that can be used for reporting and analysis of asset failure causes and the frequency of such conditions. Asset cause codes are referenced when

setting up an activity (See: Defining Activities, page 3-122 and Activity Causes, page 3-39).

Report Submission:

You can generate the Activity Cause Report - Self Service by using the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Note: The Activity Cause Report Self-Service report does not include the Asset Group From and Asset Group to report parameters.

1. In the Submit Requests window, select Activity Cause Report from the Name list of values.

Report Parameters

Report Type

Select By Department or By Item Type (Capital Asset or Rebuildable Inventory) to indicate whether the report displays information relative to the Owning Department or Asset Group, respectively.

Period From

Enter the beginning period, for a data range, to indicate the starting point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*.

Period To

Enter an ending period, for a data range, to indicate the ending point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*, *Oracle General Ledger User's Guide*.

Currency

Select the Currency. See: Defining Currencies, *Oracle General Ledger User's Guide*.

Exchange Rate

Select the Exchange Rate. See: Understanding Multiple Reporting Currencies, *Oracle General Ledger User's Guide*.

Department From

Optionally, select a beginning department, for a data range, to indicate the beginning department for which the report encompasses information. This parameter is enabled if you selected By Department in the Report By parameter.

Department To

Optionally, select an ending department for a data range to indicate the ending department for which the report encompasses information. This parameter is enabled if you selected By Department in the Report By parameter.

Item Type

Select an Item Type. Valid values are Asset Items only, Rebuild Items only, and Asset and Rebuild Items.

Maintained Item From

Optionally select the Maintained Item From field to display a System Items window that provides Low and High fields. You can enter the Asset Item data range within the Low and High fields, which populates the Asset Item From and Asset Item To fields, respectively.

Maintained Item To

Optionally select the Maintained Item To field to display a System Items window that provides Low and High fields. You can enter the Asset Item data range within the Low and High fields, which populates the Maintained Item From and Maintained Item To fields, respectively.

Maintained Unit From

Optionally, select a beginning Maintained Group, for a data range, to indicate the beginning Maintained Group for which the report encompasses information.

Maintained Unit To

Optionally, select an ending Maintained Group, for a data range, to indicate the ending Maintained Group for which the report encompasses information.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Department Actual Cost Report

Use the Department Actual Cost Report to determine the actual costs charged to an Owning Department for a specified period of time.

You can generate the Department Actual Cost Report from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. In the Submit Requests window, select EAM Weekly Schedule report from the Name list of values.

Report Parameters

Report Type

Select Summary or By Department Total.

- *Summary:* The one report total reflects the actual cost for all Departments within the selected Department data range (Department From and Department To fields). If Departments were not selected within the Department From and Department To fields, the report total reflects the actual cost for all Departments.
- *Department Total:* The report reflects actual cost totals for all Departments, separately, within the selected Department data range (Department From and Department To fields). If Departments were not selected within the Department From and Department To fields, the report totals reflect the actual costs for all Departments.

Department From

Optionally select a beginning department, for a data range, to indicate the beginning department for which the report encompasses information.

Department To

Optionally select an ending department for a data range to indicate the ending department for which the report encompasses information.

Period From

Enter the beginning period, for a data range, to indicate the starting point of time for which the report encompasses information. See: *Period Types, Oracle General Ledger User's Guide*, *Defining Period Types, Oracle General Ledger User's Guide*, and *Adding Periods to a Calendar, Oracle General Ledger User's Guide*.

Period To

Enter an ending period, for a data range, to indicate the ending point of time for which the report encompasses information. See: *Period Types, Oracle General Ledger User's Guide*, *Defining Period Types, Oracle General Ledger User's Guide*, and *Adding Periods to a Calendar, Oracle General Ledger User's Guide*.

Include OSP

Select No or Yes. If you select Yes, Outside Service Processing information is included in the report.

Currency

Select the Currency. See: Defining Currencies, *Oracle General Ledgers User's Guide*.

Exchange Rate

Select the Exchange Rate. See: Understanding Multiple Reporting Currencies, *Oracle General Ledger User's Guide*.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

PAC EAM Estimates Versus Actuals Report

Use the PAC EAM Estimates Versus Actuals Report to determine the estimated costs charged to a legal entity for a specific cost type, cost group, specific job or range of jobs.

You can generate the PAC EAM Estimates Versus Actuals Report from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. In the Submit Requests window, select PAC EAM Estimates Vs Actual Report from the Name list of values

Report Parameters

Legal Entity

Select the appropriate legal entity that you want to use.

Cost Type

The default cost type value associated with the legal entity appears in the field.

Cost Group

Select the appropriate cost group. The default cost group appears in the field.

Job Selection Option

You can choose one of these options:

- **All jobs**
- **Range of jobs:** If you select this option, the Job From and To fields are available

for entry.

- **Specific job:** If you select this option, the Job field is available for entry.

2. Click the **OK** button.
3. Click the **Submit** button.

Work Order Cost Report

Use the Work Order Cost Report to determine the costs charged to work orders for a specified period of time, and optionally, a Department range.

You can generate the Work Order Cost Report from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. In the Submit Requests window, select Work Order Cost Report from the Name list of values.

Report Parameters

Report Type

Accept the default, High Cost Work Orders.

Department From

Optionally select a beginning department, for a data range, to indicate the beginning department for which the report encompasses information.

Department To

Optionally select an ending department for a data range to indicate the ending department for which the report encompasses information.

Cost Ceiling

Optionally enter an amount to indicate a work order cost limit for which the report encompasses.

Period From

Enter the beginning period, for a data range, to indicate the starting point of time for which the report encompasses information. See: *Period Types, Oracle General Ledger User's Guide*, *Defining Period Types, Oracle General Ledger User's Guide*, and *Adding Periods to a Calendar, Oracle General Ledger User's Guide*.

Period To

Enter an ending period, for a data range, to indicate the ending point of time for which the report encompasses information. See: *Period Types, Oracle General Ledger User's Guide*, *Defining Period Types, Oracle General Ledger User's Guide*, and *Adding Periods to a Calendar, Oracle General Ledger User's Guide*.

Include OSP

Select No or Yes. If you select Yes, Outside Service Processing information is included in the report.

Currency

Select the Currency. See: *Defining Currencies, Oracle General Ledger User's Guide*.

Exchange Rate

Select the Exchange Rate. See: *Understanding Multiple Reporting Currencies, Oracle General Ledger User's Guide*.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, Oracle Applications User's Guide

EAM Weekly Schedule Report

Use the EAM Weekly Schedule Report to display work order details, specific owning department, within the start date by calendar week for your crew. This report includes details such as work order number, status, work description, start date, operation, department, resources, instance, priority, duration, estimated completion date, and the distribution of hours on a weekly basis.

You can generate the EAM Weekly Schedule Report from the Reports menu under the Enterprise Asset Management responsibility, or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. In the Submit Requests window, select EAM Weekly Schedule report from the Name list of values.

Report Parameters

Owning Department

Select an Owning Department to report for one Owning Department. This is the department that owns the responsibility for the asset number. This parameter is

required.

Assigned Department

Optionally, select an Assigned Department to narrow selection criteria to schedule information for one Assigned Department. This is the department that is currently assigned to the asset number.

Week Starting

Optionally select the starting date from which the user requires this report. The report displays information for seven days from the selected date. If this parameter is left blank, the report displays information starting from the first date of the current week.

Area

Optionally select an area to narrow selection criteria to where a asset number is located.

Asset

Optionally select an asset to narrow selection criteria to only the work orders that are assigned to the selected asset.

Rebuild Item

Optionally select a serialized Rebuildable Item to narrow selection criteria to only work orders that are assigned to the selected Rebuildable Item.

Shutdown Type

Optionally select a Shutdown Type to narrow selection criteria to only work orders that have the selected Shutdown Type required for its operations.

Resource

Optionally select a resource associated with the operations of the current work order. This parameter is optional.

Instance

The Person or Equipment used as the resource for an operation. This parameter is optional.

Sort By

Select a Sort By value to indicate how you want to display your schedule information. If you select Workorder, for example, the report displays scheduling information, sorted by work order number.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Load Production Equipment Maintenance Downtime

Enterprise Asset Management (eAM) integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify Enterprise Asset Management asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in an Outside Processing organization. After establishing, you can view the resource usage (maintenance work orders, batches, or FPOs) emanating from production, associated with a maintainable asset. You can also use the Load Production Equipment Maintenance Downtime process to view or purge your maintenance production equipment downtime.

You can generate the Load Production Equipment Maintenance Downtime process from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. In the Submit Requests window, select Load Production Equipment Maintenance Downtime from the Name list of values.

Report Parameters

Simulation Set

Select a valid Simulation Set.

Run Option

Select a Run Option. Valid values are Load Maintenance Downtime and Purge Maintenance Downtime.

- *Load Maintenance Downtime:* The process reports all production equipment downtime.
- *Purge Maintenance Downtime:* The process purges all production equipment downtime records from the appropriate tables.

Include Unreleased Maintenance Orders

Select Yes or No. If you select Yes, the report process includes work orders at an Unreleased Status when reporting or purging production equipment downtime records.

Firm Maintenance Work Orders Only

Select Yes or No. If you select Yes, only work orders that are firm (the dates on the

work order cannot automatically re-schedule) are considered.

Department

Optionally, select an Owning Department. Only work orders belonging to the selected Department are considered.

Resource

Optionally select a Resource. Only work orders containing the selected Resource are considered.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Maintenance Work Order Detail Report

Use the Maintenance Work Order Detail Report to view and analyze all information related to a maintenance work order. You can create a report that displays user-defined values. For example, you can view all unreleased work orders for a specified date range, or see material requirements for work orders in a specified area. You can filter reporting information according to work orders, start and end dates, assigned department, assigned planner, work statuses, asset area, asset number, asset criticality, asset status, and GIS asset details. You can display details on the report including asset route work order information, additional description details up to 2,000 characters, operations, resources, persons (including contingent workers), target start date, target completion date, materials, direct items, work requests, meters, quality plans (parent and child work orders), attachments, safety permits and safety clearances.

You can generate the Maintenance Work Order Detail Report from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. Select Maintenance Work Order Detail Report from the Name list of values.

Report Parameters

All report parameters are optional.

Work Order From and To: Enter the starting and ending work order number range.

Scheduled Start Dates From

Enter the beginning scheduled date for a data range. This is the starting point to calculate the scheduled end date and duration for allocated resources and materials.

To

Enter the ending date for a date range. This indicates the requested end by date of the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and materials.

Asset Area from and To: Enter the beginning and ending asset area ranges.

Asset Number: Enter an asset if you want to view only work order information associated with a specific asset.

Work Order Status

Enter the status of the work order. Only work orders at this status appear on the report.

Assigned Department

Enter the assigned department (crew). This is the department associated with the asset on the work order.

Select *No* or *Yes* to display related information for any of the following:

- **Display Operation**
- **Display Resources**
- **Display Material**
- **Display Direct Items**
- **Display Work Request**
- **Display Meters**
- **Display Quality Plans:** If you select Yes, the quality plans including any child plans with results will appear in the report.
- **Mandatory Plans:** Select All or Mandatory Only.
- **Display Attachments**
- **Display Asset BOM**
- **Display Safety Permits**
- **Display Safety Clearances**

2. Click the OK button.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Maintenance Work Order Report With Summary

Use the Maintenance Work Order Report With Summary to print a summary of all the work orders selected.

Report Submission:

1. Navigate to Maintenance Super User > Work Orders page, and search for work orders.
2. Click the **Print Work Orders** button.
3. Select the work orders that you want to include in the summary report.
4. Select any of these options to be included in the summary report.
 - Operations
 - Inventory Items
 - Resources
 - Direct Items
 - Work Requests
 - Meters
 - Short Text Attachments
 - Long Text Attachments
 - File Attachments
 - Asset BOM
 - Permits
 - Clearances
5. Select if you want to include the quality plans for the parent and any child. Values

are null (blank), Mandatory only, and All.

6. Select a locale.
7. Select a format for the report; values are Excel, HTML (default), PDF, and RTF.
8. Click the **Run** button to generate the report.

Maintenance Work Order Package Print with AutoVue

Use the Maintenance Work Order Package Print with AutoVue option to print work order packets that contain file attachments through the AutoVue server.

Note: Only files with Attachment types selected are printed with the Work Order Details Report using the AutoVue server.

1. In the Submit Requests window, select Maintenance Work Order Package Print with AutoVue from the Name list of values.

The Parameters window appears.

2. Optionally select values for any of the following fields:

- **Work Order From and To**
- **Scheduled Start Dates From and To**
- **Asset Area From and To**
- **Asset Number**
- **Asset Status**
- **Work Order Status**
- **Assigned Department**

3. Select at least one of the following File Attachments type categories:

- **Miscellaneous Attachments**
- **Asset Attachments**
- **Maintenance Job Attachments**
- **Routing Attachments**

- **Work Request Attachments**

4. Enter the name of an AutoVue printer.
5. Select the Paper Size and Orientation.
6. Click OK.
7. Click Submit.

Maintenance Work Order Update PO/requisition Need-by Date (SRS)

Use the Maintenance Work Order Update PO/requisition Report to view and analyze all PO and requisition updates related to a maintenance work order.

You can generate the Maintenance Work Order Update PO/requisition Need-by-Date (SRS) report from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. Maintenance Work Order Update PO/requisition Need-by Date (SRS) report in the Name field.

Report Parameters

Project Number

Select a value in the Project Number field.

Task Number

Select the appropriate task number.

Days Forward From and Days Forward To

You can optionally indicate a numerical value in these fields.

2. Click the **OK** button.
3. Click the **Submit** button.

Material Issue Request Pick List Report

Stocked inventory items may be necessary to perform work on maintenance work orders. Use the Material Issue Request Pick List Report to display all reserved stock for maintenance work orders, so that you can easily retrieve the necessary material.

You can generate the Material Issue Request Pick List Report from the Reports menu under the Enterprise Asset Management responsibility, or the Material Issue Request Pick List Report - Self Service Report tab under the Maintenance Super User (self-service) responsibility.

Note: The Material Issue Request Pick List Report - Self Service does not include the Source Locator report parameter. In addition, report process under the Enterprise Asset Management responsibility does not include the "Self Service" suffix.

Report Submission:

1. In the Submit Requests window, select Material Issue Request Pick List Report from the Name list of values.

Report Parameters

All report parameters are optional.

Request Number From

Optionally select a beginning Request Number, for a data range, to indicate the beginning Request Number for which the report encompasses information.

Request Number To

Optionally select an ending Request Number, for a data range, to indicate the ending Request Number for which the report encompasses information.

Date Required From

Optionally select a beginning date, for a data range, to indicate the starting date for which the report encompasses information.

Date Required To

Optionally select an ending date, for a data range, to indicate the ending date for which the report encompasses information.

Source Subinventory

Optionally select a Source Subinventory to indicate an exact subinventory for which to issue the material.

Source Locator

If you previously selected a subinventory that contains a Locator, select a Source Locator to indicate an exact Locator from which to issue the material.

Work Order

Optionally select a to indicate a specific for which to issue material.

Material

Optionally narrow your selection criteria by selecting a Material.

Requestor

Optionally select a Requestor.

Sort By

Optionally select a Sort By option to indicate how the report is sorted. Valid values are Request Number and Date Required.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Preventive Maintenance Work Order Report

You can generate the Preventive Maintenance Work Order Report that lists the details of work orders generated from the Preventive Maintenance Work Order Generation concurrent program. Use the Generate Preventive Maintenance Work Orders - Self Service program from the Reports tab in the Maintenance Super User responsibility, or the Reports menu under the Enterprise Asset management responsibility to generate the report.

Report Submission:

1. Navigate to Maintenance Super User > Reports.
2. In the Submit Requests window, select Preventive Maintenance Work Order Report from the Name list of values.
3. Enter values in any of the following fields:
 - Report Name
 - Format
 - Language for Labels
 - Language for Data
 - Date and Number Formats
 - Font

4. Click the **Submit** button to generate the report.

Related Topics

Viewing the Preventive Maintenance Work Order Report, page 5-8

Retrieve Timecard Data from OTL to EAM

Oracle Time and Labor (OTL) is the repository in which time is entered by employees working in a particular organization. Employees working on Oracle Enterprise Asset Management (eAM) s enter their time using OTL Self-Service. Information collected is stored in OTL Time Store, and is composed of a series of business rules and processes. eAM extracts information from the Time Store and charges eAM work orders for the time spent by employees that work on them.

There are multiple steps within the integration flow:

1. Timecard information is entered for a specific time period within Oracle Time Store (part of Oracle Time and Labor).

2. Information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management.

This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management.

3. The Cost Manager process is executed.

This process charges the resource transaction. After this process executes, you can view the actual costs for the period that you charged within the time period.

The Retrieve Timecard Data from OTL to EAM process is the process that extracts timecard information, entered within OTL for specific s, from OTL to eAM.

You can run the Retrieve Timecard Data from OTL to EAM process from the Reports menu under the Enterprise Asset Management responsibility or the Reports tab under the Maintenance Super User (self-service) responsibility.

Report Submission:

1. In the Submit Requests window, select Retrieve Timecard Data from OTL to EAM from the Name list of values.

Report Parameters

All report parameters are optional.

Start Date

Optionally select a beginning date, for a data range, to indicate the starting date for which the process retrieves information.

End Date

Optionally select an ending date, for a data range, to indicate the ending date for which the process retrieves information.

Organization

Optionally, select an OTL Organization to determine only one organization for which the process retrieves information.

Asset Group

Optionally select a Asset Group.

Asset Number

Optionally select a Asset Number.

Project

Optionally select a Project, if the selected organization is a Project Manufacturing organization.

Task

If you previously selected a Project, you can optionally select a Task.

Resource

Optionally select a Resource.

Employee/Worker

Optionally select an employee or contingent worker.

Owning Department

Optionally select an Owning Department.

Work Order

Optionally select a work order.

Operation

If you previously selected a work order, you can optionally select a specific Operation.

Change Department

Optionally select a Change Department.

Process Code

Optionally select a Process Code.

2. Choose OK.

3. Choose Submit.

Related Topics

Oracle Time and Labor Integration Setup, page 3-252

Submitting a Request, *Oracle Applications User's Guide*

Simulate Transfer Shop Floor Invoice Variance

You can transfer variances between purchase order price and invoice price, back to a maintenance work order, from your user-defined, adjustment account. This enables you to value your maintenance costs at the actual costs.

You can generate the Simulate Transfer Shop Floor Invoice Variance report to display the details of each invoice variance and a summary total of the variance amount that may transfer. The report format is similar to the Shop Floor Invoice Variance Report. You can view this report to determine whether or not you are executing the variance transfer. You should complete this task before you run the Shop Floor Invoice Variance Report (See: Shop Floor Variance Report, page 31-20).

Report Submission:

1. Navigate to the Shop Floor Invoice Variance window.
2. Select Simulate Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

Transfer Description

Optionally enter a description for the invoice transfer.

Specific Work Order

You can view the variance transfer details for a specific work order by selecting a work order. Maintenance work orders with statuses of Cancelled, Closed, and Complete - No Charges are not available.

IPV Item Type

You can transfer invoice variances for:

Direct Shop Floor Delivery items only

Outside Processing and Direct Shop Floor Delivery items

Outside Processing items only

Item Range

If you chose Outside Processing items only as the value for the IPV Item Type

parameter, you can specify an item range for your transfer.

Specific Item

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify an item for your transfer.

Category Set

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify a Category Set for your transfer.

Specific Category

If you chose Outside Processing items only as the value for the IPV Item Type parameter and a value in the Category Set parameter, you can specify a specific category from the previously chosen category set.

Specific Project

You can choose to transfer invoice variances only for items associated to a specific project.

Adjustment Account

You can enter an adjustment account from which the invoice variance is transferred.

Invoice Cutoff Date

Enter a date. Approved and posted invoices through this date are included in your transfer.

3. Choose OK.
4. Choose Submit.

Related Topics

Transferring Invoice Variances to Maintenance Work Orders, page 7-14

Submitting a Request, *Oracle Applications User's Guide*

Shop Floor Invoice Variance Report

You can transfer invoice variances from your specific adjustment account to maintenance work orders (See: Transferring Invoice Variances, page 7-15). For each invoice variance transfer processed successfully, you can use the Shop Floor Invoice Variance Report to view the invoice variance transferred into your maintenance work orders. This report displays the adjustment account and the summary total amount transferred. It also displays the detail information for each work order, item, purchase order line, and invoice included in the transfer.

Report Submission:

1. Navigate to the Shop Floor Invoice Variance window.
2. Select Simulate Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters**Batch Date**

Enter a date to filter out batches that you do not want to select. Only batches processed on or after this date are included in the Batch ID list of values.

Batch ID

Enter the identifier for the batch you would like to report on. The list of values displays the parameters entered when you run your transfer process, such as description, work order number, item number, and so on.

3. Choose OK.
4. Choose Submit.

Related Topics

Transferring Invoice Variances to Maintenance Work Orders, page 7-14

Submitting a Request, *Oracle Applications User's Guide*

Windows and Navigation Paths

This appendix covers the following topics:

- Windows and Navigation Paths
- Default Navigation Paths for Standard Application Windows

Windows and Navigation Paths

This appendix provides the default navigator paths for the windows used in Oracle Enterprise Asset Management. The following table provides the default navigation paths. Brackets [] indicate a button.

Default Navigation Paths for Standard Application Windows

eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Activity and Asset Number/Rebuildable Association	Enterprise Asset Management: Asset Activities > Asset Activity Association
Activity Workbench	Enterprise Asset Management: Activities > Activity Workbench
Advanced Pricing (Price Lists)	Order Management: Pricing > Price Lists > Price List Setup
Area	Enterprise Asset Management: Setup > Area

Window Name	Navigation Path
Asset Genealogy Import	Enterprise Asset Management: Interfaces > Import Asset Genealogy
Asset Meter	Enterprise Asset Management: Meters > Asset Meter Association
Asset Number Import	Interfaces > Import Asset Number
Asset Status	Enterprise Asset Management: Assets > Asset Statuses
Bills of Material (Activity BOM)	Enterprise Asset Management: Asset Activities > Maintenance BOM
Bills of Material (Asset BOM)	Enterprise Asset Management: Assets > Asset BOM
Bills of Material (Rebuildable BOM)	Enterprise Asset Management: Rebuildables > Rebuildable BOM
Categories	Enterprise Asset Management: Setup > Category > Category Codes
Category Sets	Enterprise Asset Management: Setup > Category > Category Sets
Close Rebuild Work Order	Enterprise Asset Management: Work Orders > Close Rebuildable Work Orders
Close Work Order	Enterprise Asset Management: Work Orders > Close Work Orders
Collection Elements	Quality Manager: Setup > Collection Elements
Collection Plans	Quality Manager: Setup > Collection Plans
Create Asset	Maintenance Super User: Maintenance Home > Assets > [Create Asset]
Create Property	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Properties > Create Property

Window Name	Navigation Path
Create Element Type	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Element Types > Create Element Type
Create Relationship Type	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Relationship Types > Create Relationship Type
Create Reference Method	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Map Actions > Create Reference Method
Create Status	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Asset Statuses > Create Status
Create Icon	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Icons > Create Icon
Create Line Type	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Line Types > Create Line Type
Create ESRI Map Entity	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Map Managers > Create ESRI Map Entity
Create Map Toolbar	Maintenance Super User: Maintenance Home > Assets > GIS Assets > Map Actions > Create Map Toolbar
Define Asset Number	Enterprise Asset Management: Assets > Asset Numbers
Define Asset Route	Enterprise Asset Management: Assets > Asset Route
Define Rebuildable Serial Number	Enterprise Asset Management: Rebuildables > Rebuildable Serial Numbers
Departments	Enterprise Asset Management: Setup > Routing > Departments

Window Name	Navigation Path
Department Approvers	Enterprise Asset Management: Setup > Department Approvers
Descriptive Flexfield Segments	Enterprise Asset Management: Setup > Flexfields > Descriptive > Segments Order Manager: Setup > Flexfields > Descriptive > Segments
EAM Asset Documents	Enterprise Asset Management: Assets > Asset Numbers > Documents
EAM Work Order Documents	Enterprise Asset Management: Work Orders > Documents
Electronic Records	ERES Administrator: Setup
Enter Meter Readings	Maintenance Super User: Assets > Mass Meter Readings
Enter Quality Results	Enterprise Asset Management: Quality > Results > Entry > Enter Quality Results
Enterprise Asset Management Parameters	Enterprise Asset Management: Setup > Parameters
Express Work Order	Maintenance Super User: Maintenance Home > Work Orders > Express Work Orders
Failure History	Maintenance Super User: Failure Analysis > Failure History
Failure Sets	Maintenance Super User: Failure Analysis > Failure Tracking Setup
Financials Options	Purchasing Manager: Setup > Organizations > Financial Options
Find Asset Number	Enterprise Asset Management: Assets > Asset Numbers > Asset Number field > [Find] icon

Window Name	Navigation Path
Find Category Associations	Enterprise Asset Management: Setup > Category Associations
Find Meter Readings	Enterprise Asset Management: Interfaces > Pending Meter Readings
Find Pending Work Orders	Enterprise Asset Management: Interfaces > Pending Work Orders
Find Preventive Maintenance Schedules	Enterprise Asset Management: Preventive Maintenance > Schedule Template Definition
Find Projects	Project Manufacturing Manager: Projects > Project Definition > Projects
Find Project Status	Project Manufacturing Manager: Project Status > Project Status Inquiry
Find Rebuild Work Orders	Enterprise Asset Management: Work Orders > Rebuild Work Orders
Find Requests (PRC: Refresh Project Summary Amounts)	Project Manufacturing Manager: Other > Requests > Run OR View menu > Requests
Find Requisition Lines	Enterprise Asset Management: Purchasing > AutoCreate
Find Resource Transactions	Enterprise Asset Management: Work Order Transactions > View Resource Transactions
Find Work Orders	Enterprise Asset Management: Work Orders > Work Orders Enterprise Asset Management: Billing > Work Order Billing
Forecasts	Maintenance Super User: Forecasts
Generate Preventive Maintenance Work Orders	Enterprise Asset Management: Preventive Maintenance > Generate Work Orders

Window Name	Navigation Path
Import Items	Enterprise Asset Management: Interfaces > Import Items
Import Jobs and Schedules	Enterprise Asset Management: Interfaces > Import Work Orders or Import Meter Readings
Interface Managers	Enterprise Asset Management: Inventory > Setup > Transactions > Interface Managers
Item Costs Summary	Enterprise Asset Management: Inventory > Items > Master Items > (M) Tools, Item Costs
Launch MRP	Enterprise Asset Management: Material Planning > MRP > Launch
Load Production Equipment Maintenance Downtime	Enterprise Asset Management: Work Order Planning > Production Equipment Downtime
Maintenance Workbench	Enterprise Asset Management: Work Order Planning > Maintenance Workbench
Maintenance Work Orders	Enterprise Asset Management: Work Orders > Work Orders
Maintenance Work Order Value Summary	Enterprise Asset Management: Work Orders > Work Orders > [Costs] > [Value Summary]
Mass Time Entry	Maintenance Super User: Work Orders > Mass Time Entry
Master Demand Schedules	Enterprise Asset Management: Material Planning > MDS > Names
Master Item	Inventory: Items > Master Items

Window Name	Navigation Path
Material Requirements Note: This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: <i>Implementing Function Security, Oracle Applications System Administrator's Guide - Security</i> .	Enterprise Asset Management: Work Order Details > Material Requirements
Meters	Enterprise Asset Management: Meters > Meter Definition
Meter Reading	Enterprise Asset Management: Meters > Meter Readings
Miscellaneous Documents	Enterprise Asset Management: Setup > Miscellaneous Documents
MRP Names	Enterprise Asset Management: Material Planning > MRP > Names
My Work Queue	Maintenance User Workbench: sign in
Open Work Orders Dashboard	Maintenance Super User: Maintenance Home > (Select Organization) > Work Orders
Operations Note: This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: <i>Implementing Function Security, Oracle Applications System Administrator's Guide - Security</i> .	Enterprise Asset Management: Work Order Details > Operations
Organization	Enterprise Asset Management: Inventory > Setup > Organizations > Organizations > [New]

Window Name	Navigation Path
Organization Parameters	Enterprise Asset Management: Inventory > Setup > Organizations > Parameters
Oracle Manufacturing Lookups	Enterprise Asset Management: Setup > Lookups
Pending Asset Number	Enterprise Asset Management: Interfaces > Pending Asset Numbers
Pending Meter Reading	Enterprise Asset Management: Meters > Meter Readings > Pending Meter Reading
Personal Profile Values	Enterprise Asset Management: Setup > Profiles > Personal
Plan Options	Enterprise Asset Management: Material Planning > MRP > Options
Purchase Orders	Purchasing Manager: Purchase Orders > Purchase Orders
Preferences	Time and Labor Administration: Preferences
Preventive Maintenance Schedules	Enterprise Asset Management: Preventive Maintenance > Schedule Definition
Project Parameters	Project Manufacturing Manager: Projects > Project Definition > Project Parameters
Rebuild Completion	Maintenance Super User or Maintenance User Workbench: Work Orders Enterprise Asset Management: Work Order Planning > Maintenance Workbench

Window Name	Navigation Path
Rebuild Work Orders Note: This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: <i>Implementing Function Security, Oracle Applications System Administrator's Guide - Security</i> .	Enterprise Asset Management: Work Orders > Rebuildable Work Orders
Requisitions	Enterprise Asset Management: Purchasing > Requisitions > Requisitions
Resource Requirements Note: This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: <i>Implementing Function Security, Oracle Applications System Administrator's Guide - Security</i> .	Enterprise Asset Management: Work Order Details > Resource Requirements
Resource Usage	Enterprise Asset Management: Assets > Asset Numbers > Asset Numbers
Routings	Enterprise Asset Management: Asset Activities > Maintenance Routings
Run AutoInvoice	Order Manager: Receivables > Interfaces > AutoInvoice
Select Work Order	Enterprise Asset Management: Work Order Details > Operations, Material Requirements, or Resource Requirements
Service Request	Service: Service Requests > Find Service Requests
Service Request Types	Service: Setup > Definitions > Service Request Type

Window Name	Navigation Path
Scheduler Workbench	Enterprise Asset Management: Work Order Planning > Scheduler WorkBench
Set Name	Preventive Maintenance > Set Name Definition
Shop Floor Invoice Variance	Enterprise Asset Management Cost > Work Order Shop Floor Invoice Variance
Submit Request	Enterprise Asset Management: Reports
Supply/Demand	Enterprise Asset Management: Material Planning > MRP > Workbench > [Supply/Demand] > [Find]
Time	Self-Service Time and Expenses: Time Entry
Transaction Sources	Order Manager: Receivables > Setup > Transactions > Sources
Update Work Order	Maintenance Super User: Work Orders > Search for work order >[Update Work Order]
Users	System Administrator: Security > User: Define
View Operations	Enterprise Asset Management: Work Order Details > View Operations
View Material Requirements	Enterprise Asset Management: Work Order Details > View Material Requirements
View Resource Requirements	Enterprise Asset Management: Work Order Details > View Resource Requirements
View Resource Transactions	Enterprise Asset Management: Work Order Transactions > View Resource Transactions > [Find]
View Work Order	Enterprise Asset Management: Work Order Details > View Work Orders
Work In Process Parameters	WIP Manager: Setup > Parameters

Window Name	Navigation Path
Work Order Capitalization	Enterprise Asset Management: Billing and Capitalization > Work Order Capitalization
Work Order Completion	Maintenance Super User or Maintenance User Workbench: Work Orders > Complete Work Order drop-down list Enterprise Asset Management: Work Order Planning > Maintenance Workbench
Work Order Note: This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: Implementing Function Security, <i>Oracle Applications System Administrator's Guide - Security</i> .	Enterprise Asset Management: Work Orders > Work Orders
Work Orders	Maintenance Super User or Maintenance Workbench role: Work Orders

Glossary

activity

Identifies a maintenance activity for an asset. An oil change is an activity for a car. An activity is often preplanned and can be used repetitively to create work orders that require similar maintenance on assets.

area code

User-defined lookup that can be utilized to logically sort assets by where they are physically located or typically maintained.

asset attributes

Unique information that describes the characteristics of an asset. Each asset can have unlimited asset attributes.

asset bills of material

A "parts list" of items and rebuild able spares that make up a particular asset item, and can be defined for each asset group. The items defined on an asset BOM are standard inventory items (set up in the Master Item window).

asset category

A standard naming convention that defines assets with familiar terms and establishes how to classify assets for reporting and analysis.

asset group

Represent the classification of equipment. Examples include Trucks, Pumps, Towers, Buildings, Storage Tanks, and Turbines. Assets that have similar physical configurations and maintenance requirements should belong to a single asset group.

asset hierarchy

A single structure that depicts assets and their constituent elements in parent/child relationships, as maintained by the maintenance organization. It provides information that enables a user to quickly identify the relationship via an Asset Navigator that displays appropriate asset details.

asset maintenance bill of material

BOM used to list all items and rebuild able spares needed to perform a particular asset activity, and can be defined for each asset activity. For example, you may have an asset activity titled, Oil Change. The items necessary to perform this activity include a filter, oil, and so on. As maintenance BOMs are created, they are associated to an asset activity.

asset number

A unique number that represents an asset or piece of equipment on which maintenance will be performed. An example of an asset number would be a Pump-101, or Truck 01.

asset route

A virtual asset that enables multiple assets to be associated to a single work order. It eliminates the need for creating multiple work orders for the same activity.

base interval

The minimum of a space of time (90 days), or meter reading (7,500 miles) between when PM activities included in one PM schedule should be performed. It can be considered a common denominator among the multiple activities included in one PM schedule that share a common base interval.

breach based maintenance

Work generated by violating established tolerances, based on asset specifications. This can include changes to pressure, flow rates, or temperature. These violated tolerances can automatically generate work requests for further service.

CMMS (computerized maintenance management system)

A computerized system to assist with the effective and efficient management of maintenance activities through the application of computer technology. It generally includes elements, such as a computerized work order system, as well as facilities for scheduling Routine Maintenance Tasks, recording and storing work orders, Bill of Material and Application parts lists, as well as other numerous features.

craft

Personnel performing maintenance tasks, such as "hands on tools". Personnel may include mechanics, electricians, instrumentation technicians, machinists, utilities and facilities workers, and so on. For personnel performing both operation and maintenance functions (for example, roll grinder, boiler room, or air compressors) include in the numbers that percentage of time spent maintaining. Contract employees that are on-site, full time are included.

crew

A group of employees that work together, usually under one supervisor. Sometimes a

crew is in charge of a specific area and may have the same craft, such as general mechanics or they may have mixed crafts, such as electricians, and instrumentation technicians.

component (See: rebuild able spare)

A section, piece, or part of an asset that is removable, can be rebuilt or repaired, and interchangeable with other standard components (for example, engine).

condition based maintenance

The result of the meter readings for an asset that may reflect the current condition of an asset. The results of such readings will affect the sequence of preventive maintenance work orders. Condition of an asset can also be tracked by tracking its quality results.

current cycle

The current execution cycle of a Preventive Maintenance cycle for an asset. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed.

current interval count

The current execution interval within a current running cycle. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed. It is advisable not to change the current cycle and current interval count after initial definition, unless really required to do so. These fields can be disabled for edit by users through function based menu exclusions.

cycle

A complete round of maintenance activities performed on an asset that share a common base interval of a meter or time period, or both, or a multiple of the shared intervals. Once the cycle of activities is completed, the cycle should start over.

cycle interval

The duration of time or meter readings to complete the entire cycle.

dependent steps

Operations can be dependent upon another operation; you cannot uncomplete the operation dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 once operation 20 has been completed.

direct items

Represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are contrived as "one off", bought directly from a vendor for a specific work order and Operation.

downtime

Specifies the time the asset was unavailable to production due to maintenance.

duration (hours)

Identifies the total elapsed time of the work order. It has a unit of measure in hours. It is manually entered, or is calculated as the difference between the Estimated Start Date and Estimated End Date.

easy work order

Referred to as an unplanned work order, it enables quick entry of a work order; it is automatically created at a Released status, enabling you to execute work immediately.

equipment

All items of a durable nature, capable of continuing or repetitive utilization by an individual or organization, defined to the level at which maintenance is to be managed.

fixed asset

Identifies the Fixed Asset Accounting asset ID used for reporting.

forecast

Projected work that is or will be required within a user defined period of time.

handover

Enables a supervisor to re-assign an operation to another supervisor, for the continuation of incomplete work.

intervals per cycle

The number of base intervals that comprise the complete cycle. For example, 12 monthly intervals would comprise a one-year cycle, and four 7,500 miles base intervals would comprise a 30,000-mile cycle.

labor

Assignment of work to repair, inspect, or resolve a problem. It is expressed in hours, and can be divided by crafts or skills.

maintained group

Represents an asset group or rebuild able item.

maintained number

Represents an asset number or serialized rebuild able.

maintenance schedule

A list of planned maintenance tasks to be performed during a given period of time, together with the expected start times and duration of each of these tasks. Schedules can apply to different time periods (for example, Daily Schedule, Weekly Schedule, and so on).

maintenance user

An internet-based user interface for both maintenance and operations personnel. It provides an easy approach to entering and searching for information from any browser, and designated for the casual user (for example, tradespeople, such as fitters, mechanics, and electricians), in a plant or facility.

meters

Used to measure asset usage and periodically service the asset, based on the measurement. For example, an odometer. Another example is a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced.

non-stock items

These items are included in the internal catalog, but the decision has been made to not maintain them in an inventory balance or ordering policy, other than to purchase or make them as required.

operation completion

The completion of tasks/steps within a work order.

organization

A distinct entity in a company. It may include separate manufacturing facilities, warehouse distribution centers, and branch offices. Organizations often define boundaries within information sharing.

owning department

Identifies the role responsible for owning the work outlined within a work order.

planned work

Maintenance work for which a detailed work order has been written. All materials have been made available before the work order starts. The equipment to be maintained has been taken out of service, cleaned, and prepared, before the work starts, if required. Special tools, equipment, resources, and services have been scheduled for this work order. The work order must appear on a plan before the start of the period in which the work is to be carried out.

preventive maintenance

Maintenance carried out periodically, or by usage (throughput), that is intended to reduce the probability of failure or degradation of physical condition of an asset. This can be based on a meter or time.

preventive maintenance (PM) work order

A work order referencing a maintenance activity, sometimes referred to as a PM work order, and is created by the PM Scheduling process.

RCM (reliability centered maintenance)

The predictive approach to maintenance that trends the performance of an asset and captures data. This data will help the maintenance organization to better plan and execute Preventive Maintenance programs.

rebuild able item

Represents the classification of serialized or non-serialized rebuildables.

routine maintenance work order

These are the work orders that result from inspection, requests, and so on. There are two types: work orders referencing a maintenance activity but created manually, and work orders created manually and not referencing a maintenance activity.

scheduled start date

This date is manually entered and is used to communicate to the system the scheduled date for the current work order.

serialized items

Typically tracked, and are often times rebuilt and issued properly. They are tracked with a history of failure and repair data, that is maintained for each serialized instance, regardless of their location.

serialized or non-serialized rebuild able (See: component)

Items that are installed, removed, and refurbished. Examples of rebuildables include, motors, control boxes, and computer boards. These items are not assets, however, they need to be associated with work orders for maintenance purposes. They are inventory items, and can be serialized. They are also referenced as portables or "components".

shutdown type

Indicates if a shutdown is required of the asset when performing the work order. If it is associated with an asset activity, it will inherit the value from the asset activity.

stock items

Items for which either the frequency of use or equipment criticality/lead time to obtain replacement parts, mandates that they be stocked in Inventory. Therefore, they utilize planning parameters to generate replenishment orders.

tagout required

Indicates that the asset needs to be secured before carrying out the work order, usually for safety reasons. Tags are generally printed and placed on an asset, warning workers that the asset is shutdown and should not be started. This field is intended for future use in eAM.

work in process (WIP) accounting class

A set of accounts that you use to charge the production of an assembly. You assign accounting classes to discrete jobs, and repetitive schedules. Each accounting class includes distribution accounts and variance accounts, and they are used in cost reporting.

work order

A plan that defines the resources and material equipment needed to conduct work, and then associated start and end dates.

work order closure

A work order that is unavailable for charges or any type of transaction. Closing a work order calculates final costs and variances, creating history for the work order.

work order completion

The completion of the entire work order. The operations within a work order do not need to be complete in order to complete the work order.

work order duration

The duration of the work order. The difference between completion date and start date.

work order operation

Operations (also known as tasks/steps) that prepare the instructions to perform a single activity, within the context of the work order.

work request

A request to have work performed on a maintainable asset.

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Symbols

GIS assets
See GIS assets

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