

Oracle® Complex Maintenance, Repair, and Overhaul
Implementation Guide
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Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide, Release 12.2

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Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide, Release 12.2

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- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
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Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Oracle E-Business Suite Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

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Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*.

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

Documentation Accessibility

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Structure

- 1 Oracle Complex Maintenance, Repair, and Overhaul Overview**
- 2 Setting Up**
- A Windows and Navigation Paths**

Related Information Sources

Oracle E-Business Suite User's Guide

This guide explains how to navigate, enter and query data, and run concurrent requests

using the user interface (UI) of Oracle E-Business Suite. It includes information on setting preferences and customizing the UI. In addition, this guide describes accessibility features and keyboard shortcuts for Oracle E-Business Suite.

Oracle Inventory User's Guide

This guide describes how to define items and item information, perform receiving and inventory transactions, maintain cost control, plan items, perform cycle counting and physical inventories, and set up Oracle Inventory.

Oracle Bill of Materials User's Guide

This guide describes how to create various bills of material to maximize efficiency, improve quality, and lower costs for the most sophisticated manufacturing and maintenance environments. By detailing integrated product structure and processes, flexible product and process definition, and configuration management, this guide enables you to manage product details within and across multiple sites.

Oracle Work in Process User's Guide

This guide describes how Oracle Work in Process provides a complete production management system. Specifically, this guide describes how discrete, repetitive, assemble-to-order, project, flow, and mixed manufacturing environments are supported.

Oracle Order Management User's Guide

This guide describes how to enter sales orders and returns, copy existing sales orders, schedule orders, release orders, create price lists and discounts for orders, run processes, and create reports.

Oracle Enterprise Asset Management User's Guide

This guide discusses maintenance work orders, how to manage them, and eAM's preventive maintenance solution. eAM's integration points and how to use them are described in detail.

Oracle Purchasing User's Guide

This guide describes how to create and approve purchasing documents, including requisitions, different types of purchase orders, quotations, RFQs, and receipts. This guide also describes how to manage your supply base through agreements, sourcing rules and approved supplier lists. In addition, this guide explains how you can automatically create purchasing documents based on business rules through integration with Oracle Workflow technology, which automates many of the key procurement processes.

Oracle Supply Chain Planning User's Guide

This guide describes how to anticipate and manage both supply and demand for your items. Using a variety of tools and techniques, you can create forecasts, load these forecasts into master production schedules, and plan your end-items and their component requirements. You can also execute the plan, releasing and rescheduling planning suggestions for discrete jobs and repetitive schedules.

Oracle Projects User's Guide

This guide provides instruction on how to set up and use Oracle Projects. If you install Oracle Projects, use this user guide to learn how to enter expense reports in Projects that you import into Payables to create invoices. You can also use this guide to see how to create Project information in Projects which you can then record for an invoice or invoice distribution.

Oracle Installed Base User's Guide

This guide provides an introduction to the concepts, and explains how to navigate the system, enter data, and query information in the Oracle Installed Base interface that forms part of Oracle Complex Maintenance, Repair, and Overhaul.

Oracle Warehouse Management User's Guide

This guide provides information about warehouse resource management, warehouse configuration, and advanced pick methodologies for material handling for warehouses, manufacturing facilities, and distribution centers. This product is one of the components of Oracle Mobile Supply Chain Applications.

Oracle Installed Base Implementation Guide

This guide provides information for setting up the contents of many of the lists of values (LOV) that you see in Oracle Installed Base.

Oracle Quality User's Guide

This guide describes how Oracle Quality can be used to meet your quality data collection and analysis needs. This guide also explains how Oracle Quality interfaces with other Oracle Manufacturing applications to provide a closed loop quality control system.

Oracle Contracts Core Concepts and Procedures Guide

This guide describes how Oracle Contract can be used to enable companies to author, execute, and manage virtually all business-to-business contracts required by complex global enterprises.

Oracle Customer Support Implementation Guide

This guide describes how to set up the list of values that you see in Oracle Customer Support. Oracle's service solution provides everyone in the organization - with a complete, real-time customer view that allows for immediate access to information on past interactions with the customer and also provides agents with knowledge of possible solutions to speed issue resolution. Additionally, the solution empowers customers to solve their own issues via a self-service portal with access to the same knowledge base that agents utilize for quick resolution.

Oracle Service Implementation Guide

This guide describes how to set up Oracle Service.

Oracle Self-Service Web Applications Implementation Guide

This guide contains detailed information about the overview and architecture and setup

of Oracle Self-Service Web Applications. It also contains an overview of and procedures for using the Web Applications Dictionary.

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.

Documents related to Installation and System Administration

Oracle E-Business Suite Concepts

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind Applications-wide features such as languages and character sets, and Self-Service Web Applications.

Oracle E-Business Suite Installation Guide: Using Rapid Install

This book is intended for use by anyone who is responsible for installing or upgrading Oracle E-Business Suite. It provides instructions for running Rapid Install either to carry out a fresh installation of Oracle E-Business Suite Release 12.2, or as part of an upgrade from Release 11i to Release 12.2. The book also describes the steps needed to install the technology stack components only, for the special situations where this is applicable.

Oracle E-Business Suite Upgrade Guide, Release 11i to 12.2

Refer to this guide if you are upgrading your Oracle E-Business Suite Release 10.7 or Release 11.0 products to Release 12.2. This guide describes the upgrade process and lists database and product-specific upgrade tasks. The instructions in this book apply only to upgrading from Oracle E-Business Suite Release 11i (11.5.9 or later) to Release 12.1.1. If your system is earlier than 11.5.9, then you must upgrade to Oracle E-Business Suite Release 11.5.10 CU2 before you can upgrade to Release 12.2.

Maintaining Oracle E-Business Suite

Use this guide to help you run the various AD utilities, such as AutoUpgrade, AutoPatch, AD Administration, AD Controller, AD Relink, License Manager, and others. It contains how-to steps, screenshots, and other information that you need to run the AD utilities. This guide also provides information on maintaining the Oracle applications file system and database.

Oracle E-Business Suite Setup Guide

This guide provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage concurrent processing.

Oracle E-Business Suite Developer's Guide

This guide contains the coding standards followed by the Oracle Applications development staff and describes the Oracle Application Object Library components that are needed to implement the Oracle Applications user interface described in the Oracle Applications User Interface Standards for Forms-Based Products. This guide also provides information to help you build your custom Oracle Forms Developer forms so that the forms integrate with Oracle Applications.

Oracle E-Business Suite User Interface Standards for Forms-Based Products

This guide contains the user interface (UI) standards followed by the Oracle Applications development staff. It describes the UI for the Oracle Applications products and how to apply this UI to the design of an application built by using Oracle Forms.

Other Implementation Documentation

Oracle Workflow Administrator's Guide

This guide explains how to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes, as well as how to monitor the progress of runtime workflow processes.

Oracle Workflow Developer's Guide

This guide explains how to define new workflow business processes and customize existing Oracle Applications-embedded workflow processes. It also describes how to define and customize business events and event subscriptions.

Oracle Workflow User's Guide

This guide describes how Oracle Applications users can view and respond to workflow notifications and monitor the progress of their workflow processes.

Oracle Workflow API Reference

This guide describes the APIs provided for developers and administrators to access Oracle Workflow.

Oracle E-Business Suite Flexfields Guide

This guide provides flexfields planning, setup and reference information for the Oracle Complex Maintenance, Repair, and Overhaul implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This guide also provides information on creating custom reports on flexfields data.

Oracle eTechnical Reference Manuals

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle

Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on My Oracle Support.

Oracle Applications Message Manual

This manual describes all Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 12.2.

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.

Oracle Complex Maintenance, Repair, and Overhaul Overview

This chapter covers the following topics:

- Overview
- Overview of Oracle Complex Maintenance Repair and Overhaul
- Oracle CMRO Module Overview

Overview

Oracle Complex Maintenance, Repair, and Overhaul (CMRO) enables maintenance, repair and overhaul organizations that manage complex configurable and regulated equipment systems, to define, plan and execute every aspect of their maintenance operations such as configuration management, engineering, maintenance planning, and execution. It provides maintenance organizations with the tools required to increase asset turnover, improve response times, and increase service levels. Oracle CMRO is a fully integrated component of Oracle's eBusiness suite.

This chapter includes the following topics:

- Overview of Oracle Complex Maintenance, Repair, and Overhaul, page 1-1
- Oracle CMRO Module Overview, page 1-3

Overview of Oracle Complex Maintenance Repair and Overhaul

Oracle Complex Maintenance, Repair, and Overhaul is designed to manage the entire business process of defining, planning and executing the maintenance of complex configurable and regulated equipment systems. Improved response times, increased service levels, and faster asset turnaround times are critical to maintaining successful long-term maintenance, repair, and overhaul (MRO) operations. Oracle CMRO offers features such as maintenance-based inventory management, reliability centered

maintenance, a fully web-based architecture, and online access to repair documentation that enable maintenance organizations to maximize efficiency and save costs. By integrating every component of the maintenance, repair, and overhaul operation, Oracle CMRO provides complete real-time visibility across the entire operation.

Oracle CMRO enables organizations to do the following:

- Maintain complex configurations.
- Effectively plan enterprise-wide operations.
- Optimize maintenance execution.
- Centrally manage all engineering data.

Maintaining Complex Configurations

Organizations that build or maintain products with complex configurations need to track the configuration history. Oracle CMRO enables you to establish master configurations. Requirements automatically flow to all units based on that master and the history is updated every time changes are made to the configuration. You can combine requirements with actual repair and usage results to provide unit-specific maintenance and configuration history. With this configuration control, you can easily track component history throughout the lifecycle. You can also classify units into smaller groups based on common attributes.

Effectively Planning Enterprise-Wide Operations

Maintenance frequency and scope continually change based on usage, new regulatory requirements, and issues discovered during operation. Maintenance plans must be updated periodically to ensure high asset reliability and safety. Oracle CMRO enables comprehensive fleet and unit-based maintenance planning and scheduling. You can establish Fleet maintenance programs to create maintenance requirements and to schedule maintenance activities. You can plan work across all locations to meet both short-term and long-term requirements. By using long-term planning, you can optimize capacity and resource utilization. Concurrently, you can make daily adjustments to respond to changes based on recent activities.

Optimizing Maintenance Execution

Oracle CMRO enables you to streamline the execution process and simplify processes such as creating work orders, deploying resources, and updating maintenance history and configurations. Basic maintenance tasks associated with job creation and job completion are automated to increase worker productivity and to minimize aircraft downtime. You can capture results to ensure regulatory compliance and to guarantee traceability. Maintenance history is updated when work is completed. You can enter new service requests and work orders based on additional findings during scheduled

maintenance activities. Oracle CMRO enables component shipping to and from third party maintenance providers. You can also charge costs associated with maintenance activities throughout the repair cycle.

Centrally Managing All Engineering Data

Using Oracle CMRO, you can create, store, and manage data centrally. Oracle CMRO enables companies to leverage electronic storage and delivery of technical documentation for real-time access to accurate information and to ensure regulatory compliance. For example, you can capture quality information from all sources (suppliers, original equipment manufacturers, operators, third party maintenance providers) and store it in this single location to ensure traceability. Oracle CMRO provides for route management with reusable templates for individual operation instructions or a series of operations and an integrated document index. By automatically updating all related operations, these templates eliminate the need to perform system queries when route information is changed. Automating these processes eliminates costly manual labor, resulting in higher productivity and improved quality.

Oracle CMRO Module Overview

Oracle CMRO enables organizations to streamline maintenance operations, meet the demands for transport and service, and improve profitability. Oracle CMRO includes the following modules:

Automatic Visit Scheduling and Auto-Packaging

The automated visit forecasting process is a tool for the maintenance planners to group maintenance requirements together to support both a rough-cut visit plan as well as an operational maintenance plan (Primary Plan), based on a maintenance organization. This enables the planner to approach the plan and focus on the exceptions for both short and long term planning. This feature is used primarily for heavy maintenance such as letter checks and modifications. It is typically used to forecast 12-18 months into the future.

There are two components to the Auto Visit Planning process:

- Process Flight Visit Schedules API (Short Term Planning)
- Create Primary Visits (Long Term Planning)

Important: Only visits with a status of Planning can be used with this feature.

This functionality will improve the creation and scheduling of visits for both line and base maintenance.

For base maintenance, there is a new Autovisit Planning Workbench where users can define a processing hierarchy by master configuration, program type, subtype and a date range. The user can then launch and monitor concurrent programs which will:

- Create new visits based on Primary Visit MRs.
- Cancel existing visits.
- Add UMP MRs to existing visits.

For line maintenance, users can define parameters for creating operational visits based off the flight schedule and maintenance capability of arriving and departing stations. The user can define both generic and specific parameters for flights which will:

- Create pre and post-flight visits.
- Create transit checks which will span an aircraft's downtime duration.
- Adjust visits based on flight changes.
- Cancel visits based on flight cancellations and re-routes.
- Notify users of changes to specific visits and flight associations.

Route Management

Using Route Management, you can maintain work cards in electronic form, so that they are easily accessible. You can use these work cards to provide technicians with task instructions and information on labor estimates, skill requirements, tools, parts, and materials required by the job. You can also remove redundant tasks and processes by storing each task card once in the database and then reusing it in multiple operations.

Document Index

Using the Document Index module, you can maintain references to paper documentation and include links that technicians can use to access electronic documents, either in the database or on the Web. You can keep all document references under version control to simplify compliance with regulations. You can also link document references to part types or individual serialized parts to eliminate searches, maintain lists of suppliers, and automatically alert everyone on a distribution list when new documents or revisions arrive.

Enigma Integration

The integration between Oracle's CMRO and Enigma's 3C provides a unique solution for maintenance service providers. This integration provides the maintenance technicians with a set of tools that connects Oracle CMRO's extensive back office

functionality for configuration management, engineering, maintenance planning, and execution with Enigma's documentation centric maintenance execution system in a wireless environment. This combination of the two products supports the maintenance technicians in efficiently executing all their maintenance tasks, achieving highest level of quality by providing the right information in the right place at the right time in a most user-friendly form.

Fleet Maintenance Program

You can use the Fleet Maintenance Program module to create maintenance requirements for all planned and unplanned maintenance. You can associate work cards and maintenance documents with maintenance requirements and define effectivity by associating these maintenance requirements with a master configuration, unit configuration or a product classification. To forecast maintenance due dates, you can designate intervals and thresholds on maintenance requirements. The Affected Items Listing enables maintenance personnel to view all units affected by a maintenance requirement.

Master Configuration

Using the Master Configuration module, you can record the *as designed* configuration of the equipment that is maintained. This enables you to easily navigate through the hierarchy, specify which parts can be used in the assembly, and provide technicians with permissible part choices for each location. To enable technicians to easily access the information that they need, you can link documents to part positions and work cards. Master configurations can be used as templates for creating unit configurations.

Unit Configuration

You can use the Unit Configuration module to track the current *as operated* configuration of the equipment and to maintain the life cycle service history of the system and all the component parts, while considering the special conditions that affect service life measurements. To enable easy access to information, you can record the positions in the assembly where serialized parts are located and associate documents with them.

In the case of an aircraft accident, the unit configuration can be quarantined (frozen) to prevent changes to be made to the configuration that could affect the current state of the affected unit. Only the CMRO super user can request a quarantine to a unit configuration.

Related Topics

Configuration Access Control Management and Working with Unit Configurations, *Oracle Complex Maintenance, Repair, and Overhaul User's Guide*

Product Classification

The Product Classification module enables you to classify units into various groups for maintenance activities and associate documentation and maintenance requirements to these product classifications. The maintenance plans are automatically updated when units move from one group into another.

Unit Maintenance Plan

The Unit Maintenance Plan module enables you to maintain utilization forecasts, determine the remaining service time of units, and calculate due dates for maintenance requirements. Material requirements associated with the forecasted maintenance requirements are planned through Oracle Demantra Demand Planning application.

Minimum Equipment List (MEL) and Configuration Deviation List (CDL) functionality identifies equipment, as opposed to structural items, that can be inoperative or missing on aircraft, but still enable the aircraft to maintain airworthiness. MEL/CDL instructions are added to the CMRO planning process, enabling you to defer non-routine requirements.

Visit Work Package

The Visit Work Package module enables you to create equipment-based maintenance visit definitions that connect equipment with a block of tasks, location and date. You can manage maintenance requirements, calculate costs incurred on a visit using the visit task work breakdown structure, and define job hierarchy for all tasks in a visit.

Planning

The Planning module enables you to assess the maintenance workload capacity for all facilities and define a maintenance visit's resource requirements. You can schedule maintenance visits across the organization based on resource and facility availability, and compare resource capacities with resources required for the projected workload. Material requirements associated with the maintenance requirements in a visit are scheduled through Oracle's Advanced Supply Chain Planning application.

Production

The Production module enables you to view job assignments, component and material availability; record maintenance activities, job completion, material and component consumption; and update maintenance compliance details. To satisfy regulatory requirements, quality inspection results can be issued. You can initiate new service requests for unplanned maintenance discovered during planned maintenance visits.

The Production module enables you to track all time and materials associated with jobs throughout the repair cycle and interfaced to Oracle Costing, to provide maintenance

organizations with a real view into service costs.

Production Planning

The Production Planning module offers maintenance organizations an extensive site-level planning tool. Production planners managing shop floor activities assign personnel and equipment to jobs, fine tune work schedules, manage procurement and create material requirements for unplanned maintenance. Using Production planning, you can track components sent out for repair against the maintenance visit. Planners and shop floor managers consider working conditions when planning thereby ensuring a safe working environment.

Outside Processing for Work Orders

Using Outside Processing (OSP), you can ship serialized parts to independent service organizations for service. Production planners assign jobs to third-party providers and group jobs that are marked for outside servicing onto an OSP work order. The work order contains all the information required for executing the required service. When the OSP work order is finalized, purchase orders and shipping orders are created. After the work is completed, jobs are reassigned to internal personnel for quality checks and parts receiving.

Outside Processing for Inventory Service Orders

Using Outside Processing for Inventory service orders, you can create a service order directly from an inventory location without having to create a visit and an execution work order. The work order contains all the information required to reduce the time to create a service order and reduces the risk of errors. This feature increases the productivity of service order clerks, and improves the quality and accuracy of service order data.

Setting Up

Overview

This chapter discusses setting up Oracle Complex Maintenance, Repair and Overhaul (CMRO). It includes the following topics:

- Getting Started, page 2-1
- Oracle CMRO Implementation Checklist, page 2-2
- Setting Up Oracle CMRO, page 2-7
- Setting Up Other Related Oracle Applications, page 2-7
- CMRO Specific Setups, page 2-73

Getting Started

Before setting up CMRO, you must identify all your implementation users, and the access privileges that they require. You can create additional implementation responsibilities if you want to restrict access.

Important: After you install or upgrade Oracle E-Business Suite, access to Oracle Complex Maintenance, Repair and Overhaul JavaServer Pages (JSPs) may be restricted by default. To enable access, add the Oracle Complex Maintenance, Repair and Overhaul JSPs to the allowed JSPs configuration files. See: Allowed JSPs, *Oracle E-Business Suite Security Guide*.

You must use the System Administrator responsibility to create the required Oracle Applications users. Implementation users need access to one or more of the following responsibilities:

- System Administrator
- AHL Super User
- Foundation Administrator
- Support Administrator

Use the Users window to define Oracle Applications users. An Oracle Application user is uniquely identified by an application user name.

For detailed instructions on creating application users, refer to *Oracle E-Business Suite Setup Guide*

Oracle E-Business Suite Maintenance Guide

Oracle E-Business Suite Security Guide

Oracle CMRO Implementation Checklist

This section contains a checklist that includes the steps that you must follow to implement Oracle CMRO. They include setup steps for data that is shared with other Oracle Applications, but is required by Oracle CMRO.

You must set up other related Oracle applications prior to setting up CMRO.

Setting Up an Organization, page 2-8

Description	Reference
Step 1 - Set Up an Operating Unit	<i>Oracle Human Resources User's Guide</i>
Step 2 - Create an Organization	
Step 3 - Set Up an Inventory Organization	

Setting Up Oracle Inventory, page 2-25

Description	Reference
Step 1 - Set Up Master Items	<i>Oracle Inventory User's Guide</i>
Step 2 - Set Up Subinventory	

Setting Up Oracle Bills of Material (BOM), page 2-36

Description	Reference
Step 1 - Set Up Departments and Resources	<i>Oracle Bills of Material User's Guide</i>

Setting Up Oracle Warehouse Management, page 2-39

Description	Reference
Step 1 - Associate Departments with Subinventories	<i>Oracle Warehouse Management User's Guide</i>
Step 2 - Set Up Material Status	
Step 3 - Associate Material Status with Subinventories	
Step 4 - Set Up Profile Options	

Setting Up Oracle Purchasing, page 2-44

Description	Reference
Step 1 - Set Up Buyers	<i>Oracle Purchasing User's Guide</i>
Step 2 - Set Up Approvals	
Step 3 - Set Up Purchasing Options	
Step 4 - Set Up Receiving Options	
Step 5 - Set Up Financial Options	
Step 6 - Set Up Open Accounting Periods	

Setting Up Oracle Advanced Planning and Scheduling, page 2-46

Description	Reference
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Step 1 - Set up Oracle Advanced Supply Chain Planning	<i>Oracle Advanced Planning Implementation and User's Guide</i>
Step 2 - Set up Oracle Demantra Demand Planning	<i>Oracle Demantra Demand Planning Implementation and User's Guide</i>
Step 3 - Set up Available to Promise	<i>Oracle Global Order Promising Implementation and User's Guide</i>

Setting Up Oracle Order Management, page 2-48

Description	Reference
Step 1 - Set Up Security Processing Constraints	<i>Oracle Order Management User's Guide</i>
Step 2 - Set Up Customers	<i>Oracle Shipping Execution User's Guide</i>

Setting Up Oracle Projects, page 2-49

Description	Reference
Step 1 - Create a Project Template	<i>Oracle Projects User's Guide</i>
Step 2 - Assign a Project Template Name to User Profile	

Setting Up Oracle Enterprise Asset Management, page 2-52

Description	Reference
Step 1 - Set Up WIP Accounting Classes	<i>Oracle Enterprise Asset Management User's Guide</i>
Step 2 - Set Up EAM Parameters	
Step 3 - Set Up Asset Category Codes	
Step 4 - Verify the WIP_EAM_Activity_Priority Lookup	

Setting Up Oracle Service, page 2-55

Description	Reference
Step 1 - Define Service Request Statuses	<i>Oracle Customer Support Implementation Guide</i>
Step 2 - Define Service Request Types	
Step 3 - Define Service Request Severities	
Step 4 - Set Up Profile Options	

Setting Up Oracle Contracts, page 2-61

Description	Reference
Step 1 - Set Up Buyers	<i>Oracle Contracts Core Concepts and Procedures Guide</i>
Step 2 - Set Up Suppliers	
Step 3 - Set Up Standard Articles	
Step 4 - Set Up Categories and Sources	
Step 5 - Set Up Contract Groups	
Step 6 - Set Up Contract Events	

Setting Up Oracle Installed Base, page 2-63

Description	Reference
Step 1 - Set Up Install Parameters	<i>Oracle Installed Base Implementation Guide</i>
Step 2 - Set Up Instance Statuses	
Step 3 - Set Up Asset Locations	

Setting Up Oracle Counters, page 2-64

Description	Reference
Step 1 - Define Counter Groups	<i>Oracle Installed Base User's Guide</i>

Setting Up Oracle Quality, page 2-67

Description	Reference
Step 1 - Set Up Route and Operation Quality Plans	<i>Oracle Quality User's Guide</i>
Step 2 - Set Up Deferral, MRB Disposition Quality, Non-Routine Job Inspection and Non-Routine Operation Inspection Plans	
Step 3 - Create Counter Readings Quality Plan	

Oracle Complex Maintenance, Repair, and Overhaul Standard Setup, page 2-74

Description	Reference
Step 1 - Set Up Profile Options	<i>Oracle Complex Maintenance, Repair and Overhaul Implementation Guide</i>

Oracle CMRO Approval Workflow Setup, page 2-78

Description	Reference
Step 1 - Set Up Profile Options	<i>Oracle Complex Maintenance, Repair and Overhaul Implementation Guide</i>
Step 2 - Create Approval User(s) and Role	

Description	Reference
Step 1 - Set Up Document Index	<i>Oracle Complex Maintenance, Repair and Overhaul Implementation Guide</i>
Step 2 - Set Up Route Management	
Step 3 - Set Up Master Configuration	
Step 4 - Set Up Unit Configuration	
Step 5 - Set Up Fleet Maintenance Program	
Step 6 - Set Up Unit Maintenance Plan	
Step 7 - Set Up Visit Work Package	
Step 8 - Set Up Planning	
Step 9 - Set Up Production	
Step 10 - Administrative Setup	

Setting Up Oracle CMRO

This section includes the following topics:

- Setting Up Other Related Oracle Applications, page 2-7
- CMRO Specific Setups, page 2-73

Setting Up Other Related Oracle Applications

Oracle CMRO is integrated with other Oracle eBusiness suite applications. This integration lends additional functionality to Oracle CMRO and enables it to fully support the maintenance, repair and overhaul needs of operators, third-party maintenance, and original equipment manufacturers. You must first set up an organization and then install and implement the Oracle applications or components.

This section covers the following topics:

- Setting Up an Organization, page 2-8
- Setting Up Oracle Inventory, page 2-25
- Setting Up Oracle Bills of Material (BOM), page 2-36

- Setting Up Oracle Warehouse Management, page 2-39
- Setting Up Oracle Purchasing, page 2-44
- Setting Up Oracle Advanced Planning and Scheduling, page 2-46
- Setting Up Oracle Order Management, page 2-48
- Setting Up Oracle Projects, page 2-49
- Setting Up Oracle Enterprise Asset Management, page 2-52
- Setting Up Oracle Service, page 2-55
- Setting Up Oracle Contracts, page 2-61
- Setting Up Oracle Installed Base, page 2-63
- Setting Up Oracle Counters, page 2-64
- Setting Up Oracle Quality, page 2-67

Setting Up an Organization

In general, an organization can be a company, department, division, cost center, or virtually any other organizational unit within a business. The organizational setup includes these steps:

- Setting Up an Operating Unit, page 2-8
- Creating an Organization, page 2-8
- Setting Up an Inventory Organization, page 2-8

Setting Up an Operating Unit

An operating unit is the organization unit through which you create, process, report, and secure financial applications data.

To set up an operating unit, you must:

1. Develop an organization structure.
2. Define set of books.
3. Define locations.
4. Define business groups (optional).

5. Associate responsibilities with business group (optional).
6. Define organizations.
7. Define organization relationships.
8. Define responsibilities.
9. Set the MO: Operating unit profile option.
10. Convert to the Multiorg Architecture (required only if current set up is not multiorg enabled).
11. Verify Order Management System parameters.
12. Set the profile options that are specific to the operating unit.
13. Define the Inventory organization security (optional).
14. Implement the application products.

Creating an Organization

To create an organization:

1. Select the Manufacturing and Distribution Manager responsibility. From the Navigator, select Inventory > Setup > Organizations > Organizations. The Find Organization window appears.
2. Click the New (A) button.
3. Enter an organization Name.
4. Select the following values from the Organization Classification list of values:
 - Business Group
 - HR Organization
 - GRE/Legal Entity
 - MRP Organization
 - Operating Unit
 - Project Expenditure
 - Project Manufacturing Organization

- Project Task Owning Organization

Organization

Name: Vision Project Manufacturing USD Type: Division

Dates: From: 01-JAN-1987 To:

Location: PMM-Los Angeles Project Internal or External: Internal

Location Address: 1025 Sepulveda Blvd...El Segundo, CA, 90245, Los Angeles, United States.....

Internal Address: [..]

Organization Classifications

Name	Enabled
Asset Organization	<input checked="" type="checkbox"/>
GRE / Legal Entity	<input checked="" type="checkbox"/>
HR Organization	<input checked="" type="checkbox"/>

Others

5. Select the Enable check box for all the Organization Classification parameters.
6. Save your work.

Organization Classifications

Business Group: The purpose of the business group is to partition human resource information. The business group is the highest level in an organization structure hierarchy in the E-Business Suite. You can use the business group to model the consolidated enterprise or a major division of a company that is an employer.

HR Organization: The HR Organization classification is applied to the organizations to which the user assigns employees.

Government Reporting Entities (GRE): The GRE in the Oracle Human Resources products is the same organization as the legal entity that appears in the Oracle Financials products. The GRE represents the real-world legal entity that pays employees, withholds their taxes, and provides reports on various matters to government agencies.

Setting Up an Inventory Organization

The Inventory Organization is an organization for which you track inventory transactions and balances.

To set up an Inventory Organization:

1. From the Navigator, select Inventory > Setup > Organizations > Organizations. The Find Organization window appears.
2. Click the New (A) button. The Organization window appears.
3. Enter an organization name in the Name field.
4. Within the Organization Classification block, select the following values from the Name list of values (LOV):
 - HR Organization
 - Inventory
 - MRP
 - Project Expenditure
 - Project Manufacturing Organization
 - Project Task Owning Organization
 - WIP Organization

Inventory Organization Setup

Name	Vision Project Manufacturing USD	Type	Division
Dates	From: 01-JAN-1987	To:	
Location	PMM-Los Angeles Project	Internal or External	Internal
Location Address	1025 Sepulveda Blvd...El Segundo, CA, 90245, Los Angeles, United States,		
Internal Address			
Organization Classifications			
Name	HR Organization	Enabled	<input checked="" type="checkbox"/>
	Inventory Organization	Enabled	<input checked="" type="checkbox"/>
	Operating Unit	Enabled	<input checked="" type="checkbox"/>
		<input type="button" value="Others"/>	

5. Select the Enable check box for each of the organization classifications that you selected.
6. Save your work.
7. Now you will set up the parameters for each of the above mentioned organization classifications.

To set up HR Organization parameters:

1. In the Organizations window, select the HR Organization value. Click the Others button. The Additional Organization Information window appears.
2. Select Costing Information from the list. Enter a value in the Costing Information field.
3. Save your work.
4. Navigate to the Additional Organization Information window and select the Parent Organization value. Select Primary Reporting Hierarchy from the Hierarchy LOV.
5. From the Name LOV, select the organization that you have defined and enabled as a business group.
6. Save your work.

Parent Organization

Hierarchy	Name
Global	Vision Administration
Primary Reporting Hierarchy	Vision Corporation
Single Establishment Reporting	Vision Corporation
Vision Corp - Global	Vision Corporation
Vision Global Reporting	Vision Corporation

OK

To set up Inventory Organization parameters:

1. Select Inventory Organization in the Organizations window. Click the Others button. Select the Accounting Information value from the list of values.
2. Click in the Accounting Information field. The Accounting Information descriptive flexfields window opens.
3. Select the Set of Books, Legal entity and Operating Unit values. Click OK.
4. Save your work.

Accounting Information

Primary Ledger: Projmfg Vision Project Mfg

Legal Entity: Vision Project Manufacturing USD

Operating Unit: Vision Project Manufacturing USD

OK Cancel Clear Help

5. Navigate to the Additional Organization Information window and select Inventory Information. The Organization Parameters window opens.
6. Click the Inventory Parameters tab. Enter an organization code.
7. Select the Item Master Organization and Calendar values.
8. Select the EAM Enabled check box.

- Save your work.

Organization Parameters - Inventory Parameters

- Click the Revision, Lot, Serial parameters tab. Enter the following information:

Field	Value
Lot Control Uniqueness	None
Lot Control Generation	At Organization Level
Serial Control Uniqueness	Within Inventory Items
Serial Control Generation	At Item Level

Organization Parameters - Revision, Lot, Serial

Organization Parameters (PMM)

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

Starting Revision: A

Lot Control

Uniqueness: None

Generation: At organization level

Lot Name Generation

Zero Pad Suffix

Prefix: []

Total Length: 30

Child Lot Control

Child Generation: Parent+Child

Zero Pad

Prefix: []

Total Length: []

Format Validation

Copy Lot Attributes

Auto Create Lot UOM Conversion: []

Allow Different Material Status: []

Serial Control

Uniqueness: Within inventory items

Generation: At item level

Prefix: A

Starting Serial Number: 1

Allocate Serial Numbers: No

LPN Generating Option

Total Length: []

Prefix: []

Starting LPN Number: []

Suffix: []

UCC-128 Suffix (Modulo-10)

11. Save your work.
12. Click the Costing Information tab. Select the Costing Method that is applicable to your organization.
13. Select the Enable Project Cost Collection check box.
14. Enter the required information in the Valuable Accounts block.

Organization Parameters - Costing Information

Costing Organization	Vision Project Manufacturing USD
Costing Method	Average
Rates Cost Type	AvgRates
Transfer to GL	Yes
<input type="checkbox"/> Reverse Encumbrance	
<input checked="" type="checkbox"/> Project Cost Collect. Enabled	
<input type="checkbox"/> Defer Logical Transactions	
Cost Cutoff Date	
Default Material Sub-Element	
Material Overhead Sub-Element	
Default Cost Group	CG-2221

Valuation Accounts	
Material	101.0000.000.140500.0000.000.0000.00
Outside Processing	101.0000.000.142500.0000.000.0000.00
Material Overhead	101.0000.000.141000.0000.000.0000.00
Overhead	101.0000.000.142000.0000.000.0000.00
Resource	101.0000.000.141500.0000.000.0000.00
Expense	101.0000.740.711000.0000.000.0000.00

15. Save your work.
16. Click the ATP, Pick, Item-Sourcing parameters tab. Select an ATP Defaults Rule from the Rule LOV.

Organization Parameters - ATP, Pick, Item-Sourcing

The screenshot shows the 'Organization Parameters (PMM)' window with the 'ATP, Pick, Item-Sourcing' tab selected. The window is divided into several sections:

- ATP Defaults:** A 'Rule' field containing 'Total ATP, No DC'.
- Picking Defaults:** A 'Rule' field containing 'Rotate stock pick UOM', 'Subinventory Order' and 'Locator Order' text boxes, and four checkboxes: 'Pick Confirmation Required' (unchecked), 'Overpicking For Manufacturing Enabled (X)' (unchecked), 'Overpicking For Transfer Orders Enabled' (checked), and 'Enable Rules Override for Lot-Level Reservations' (unchecked).
- Item-Sourcing Detail:** A 'Type' dropdown menu set to 'Supplier', and 'Organization' and 'Subinventory' text boxes.
- Distributed Parameters:** Two checkboxes: 'Distributed Organization' (unchecked) and 'Carrier Manifesting Organization' (unchecked).

17. Save your work.

To set up MRP Organization parameters:

1. In the Organization window, select the MRP Organization.
2. Click the **Others** button.
The Planning Parameters window opens.
3. Select the Net WIP and Net Reservations check boxes.

Planning Parameters

The screenshot shows the 'Planning Parameters (VP1)' window. At the top, there is a checkbox for 'Snapshot Lock Tables' and a text field for 'Default ABC Assignment Group'. Below this is the 'Execution Defaults' section, which includes several checked options: 'Demand Time Fence Control', 'Planning Time Fence Control', 'Net Purchases', 'Net WIP', and 'Net Reservations'. There are also unchecked options for 'Plan Safety Stock'. Below these are three input fields: 'Material Scheduling Method' set to 'Order start date', 'Planned Items' set to 'All planned items', and 'Include MDS Days' set to '7'. The 'Repetitive Planning Parameters' section includes a 'Use' dropdown set to 'Calendar dates', an 'Anchor Date' set to '17-JAN-2008', and three bucket day settings: 'First Bucket Days' (7), 'Second Bucket Days' (14), and 'Third Bucket Days' (40). Additionally, there are 'First Horizon' (35) and 'Second Horizon' (56) settings.

4. Save your work.

To set up Work in Process (WIP) Organization parameters:

1. Select the WIP Organization value in the Organization window.
2. Click the **Others** button, and click the Backflush Defaults tab.
3. Select Supply subinventory from the LOV.
Enter a Supply Locator (if required).

Work In Process Parameters - Backflush Defaults

Work in Process Parameters

Discrete Costing Move Transaction **Material** Intraoperation Outside Processing Scheduling Mobile Serial Other

Include Component Yield

Backflush Controls

Supply Subinventory Stores

Supply Locator 1.1.1..

Lot Selection Method Expiration Date

Alternate Lot Selection Method

Lot Verification Exceptions Only

Release Backflush Components

Allow Quantity Changes During Backflush

[]

4. Click the Move Transaction tab. Select the Allow Creation of New Operations and the Allow Moves Over No Move Shop Floor Statuses check boxes.

Work in Process Parameters - Move Transaction

Work in Process Parameters

Discrete Costing **Move Transaction** Material Intraoperation Outside Processing Scheduling Mobile Serial Other

Require Scrap Account

Allow Creation of New Operations

Allow Moves Over No Move Shop Floor Statuses

[]

5. Click the Intraoperation tab. Enable the Queue check box. Clear the other check boxes.

Work In Process Parameters - Intraoperation

Work in Process Parameters

Discrete Costing Move Transaction Material **Intraoperation** Outside Processing Scheduling Mobile Serial Other

Queue Run
 To Move Reject
 Scrap

[]

6. Save your work.
7. From the Navigator, select WIP > Setup > WIP Accounting Class.
8. Enter a value in the Class and Description fields.
9. Select Standard Discrete from the Type drop-down list. Enter Accounts information.

WIP Accounting Classes

The screenshot shows the 'WIP Accounting Classes (EM1)' window. The 'Class' is set to 'Discrete', the 'Description' is 'Discrete Job WIP Accounting Class', and the 'Type' is 'Standard Discrete'. The 'Accounts' section contains a table with columns for 'Valuation' and 'Variance'. The 'Costing' section shows 'Completion Cost Source' as 'System Calculated' and 'System Option' as 'Use Actual Resources'.

Accounts	Valuation	Variance
Material	01-520-5320-0000-000	01-580-5320-0000-000
Material Overhead	01-580-5320-0000-000	
Resource	01-580-5321-0000-000	01-520-5321-0000-000
Outside Processing	01-580-5322-0000-000	01-520-5322-0000-000
Overhead	01-580-5323-0000-000	01-520-5323-0000-000
Standard Cost		
Bridging		
Expense		
Estimated Scrap		
Encumbrance		

10. Save your work.
11. You must also create Expense Non-Standard, Maintenance, and Asset Non-Standard Accounting Classes. For more information about setting up accounting classes, see the Oracle Work in Process User's Guide.
12. Save your work.
13. From the Navigator, select Inventory > Setup > Organizations > Organizations. Query for your organization.
14. Select the WIP Organization value within the Organization Classifications block. Click the Others button. The Work in Process parameters window appears.
15. Click the Discrete tab. Select a default value from the Discrete Class drop-down list.
16. Save your work.

To set up Project Manufacturing parameters:

1. In the Organizations window, select the Project Manufacturing Organization value.
2. Click the **Others** button.

The Project Manufacturing Parameters window opens.

3. Click the General tab.
4. Select the Enable Project Reference check box.
5. Select Task from the Project Control Level drop-down list.

Project Manufacturing Parameters

The screenshot shows the 'Project Manufacturing Parameters (PM)' window with the 'General' tab selected. The window title bar includes standard OS controls. Below the tabs, there are several settings:

- Enable Project References
- Allow Cross Project Issues
- Allow Cross Unit Number Issues
- Cost Group Option: By Project (dropdown)
- Project Control Level: Task (dropdown)
- Common Project: Common (text field)

A section titled 'Default Common Project Tasks' contains three input fields:

- Material: 2.0
- Resource: 3.0
- WIP Material: (empty)

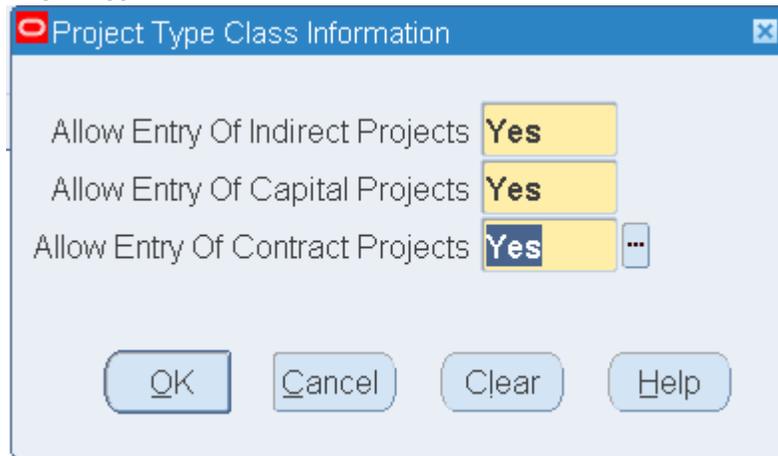
6. Click the Invoice Transfer tab.
Select the IPV check box to enable IPV.
7. Select Material from the Expenditure Type LOV.
8. Save your work.

To set up Project Task Owning Organization parameters:

1. In the Organizations window, select the Project Task Owning Organization value.
Click the **Others** button, and the Additional Organization Information window opens.
2. Click in the Project Type Class Information field. In the Project Type Class Information window, select Yes for all the following parameters:

- Allow Entry of Indirect Projects
- Allow Entry of Capital Projects
- Allow Entry of Contract Projects

Project Type Class Information



3. Click OK. Save your work.

To set up Project Expenditure/Event Organization parameters:

1. In the Organizations window, select the Project Expenditure/Event Organization value. Click the Others button.
2. Click in the Exp Org Defaults field. The Exp Org Defaults sub-window appears.
3. Enter or select an operating unit (the same as the item master organization).
4. Save your work.

Additional Setup

1. From the Navigator, select Inventory, Accounting Close Cycle, Inventory Accounting Periods.
2. Select an Inventory Accounting Period value, and change the status to Open.
3. Save your work.

Inventory Accounting Periods

Status	Period	Num	Year		Period Dates		Close Date
					From	To	
Future	May-13	5	2013	01-MAY-2013	31-MAY-2013		
Future	Apr-13	4	2013	01-APR-2013	30-APR-2013		
Future	Mar-13	3	2013	01-MAR-2013	31-MAR-2013		
Future	Feb-13	2	2013	01-FEB-2013	28-FEB-2013		
Future	Jan-13	1	2013	01-JAN-2013	31-JAN-2013		
Future	Dec-12	12	2012	01-DEC-2012	31-DEC-2012		
Future	Nov-12	11	2012	01-NOV-2012	30-NOV-2012		
Future	Oct-12	10	2012	01-OCT-2012	31-OCT-2012		
Future	Sep-12	9	2012	01-SEP-2012	30-SEP-2012		
Open	Aug-12	8	2012	01-AUG-2012	31-AUG-2012		

Pending... Values at Close Distributions Change Status...

Setting Up Oracle Inventory

In Oracle CMRO, you use instances of Oracle Inventory when defining the allowable parts in a master configuration, and when describing the components in a unit configuration. Oracle CMRO invokes Oracle Inventory methods to populate the database with information on allowable components in a configuration, and the components actually available to create a unit configuration. The Production module uses predefined inventory items as references when invoking the inventory methods that issue and return parts, or when defining the material requirements for an organization job. The Route Management module uses the predefined inventory items as material and tool requirements used to perform a route or an operation.

Setting up Oracle Inventory includes the following steps:

- Creating component items.
- Creating service items.
- Setting up Subinventories.

You must define items and set up at least one subinventory for each Inventory organization.

Creating Component Items

1. Select the Manufacturing and Distribution Manager responsibility. From the Navigator, select Inventory > Items > Master Items.

Note: All items must be set up at the Master Inventory Organization level and then assigned to specific Inventory Organizations. Oracle recommends that you define an item template for each type of item that will be used in your organization.

2. Enter a name in the Item field.
3. Enter a description.
4. Click the Main tab. The default value for the Item Status field is Active, however, you can select a different status from the drop-down menu.

Master Item - Main

The screenshot displays the Oracle Master Item - Main form. At the top, the Organization is set to 'V1' (Vision Operations) and the Item is 'AS20001'. The Description is 'Aircraft Engine Assembly'. The 'Main' tab is selected, showing fields for Unit of Measure (Primary: Each, Tracking: Primary, Pricing: Primary, Secondary: blank, Defaulting: blank), Deviation Factor + (0%), and Deviation Factor - (0%). The Item Status is set to 'Active'. The 'Long Description' field is empty.

5. Click the Inventory tab. Select the following check boxes:
 - Inventory Item
 - Stockable
 - Reservable
 - Transactable
6. Select the No Control option in the Lot Expiration and Lot regions.

7. Select the Serial Control: At Receipt option) in the Serial Generation field if items are serial number trackable. If they are not, then select the Non-Serialized option.
8. Select the No Control option from the Locator Control drop-down menu.

Master Item - Inventory

The screenshot displays the 'Master Item - Inventory' configuration window. At the top, the Organization is 'V1' (Vision Operations) and the Item is 'AS20001' (Aircraft Engine Assembly). The 'Inventory' tab is selected, showing various control options. The 'Lot Expiration (Shelf Life)' section has 'Control' set to 'No Control'. The 'Lot' section also has 'Control' set to 'No Control'. The 'Serial' section has 'Generation' set to 'At Receipt'. The 'Locator Control' field at the bottom is set to 'No Control'. Other options like 'Stogkable', 'Reservable', and 'Cycle Count Enabled' are checked.

9. Click the Bills of Material tab. Select the BOM Allowed check box.
10. Click the Asset Management tab. Select the Rebuildable option from the Asset Item Type drop- down menu.

Note: You can select a value in the Asset Item Type field only if the Oracle Enterprise Asset Management (eAM) setup is complete. Set up at least one item with an asset group of Rebuildable in eAM.

11. Click the Costing tab. Select the following check boxes:
 - Costing Enabled
 - Inventory Asset Value
 - Include in Rollup
12. Enter a value in the Cost of Goods Sold Account field.

Master Item - Costing

The screenshot shows the 'Master Item - Costing' form. The 'Costing' tab is selected in the navigation bar. The form displays the following fields and options:

- Organization: V1 (Vision Operations)
- Item: AS20001
- Description: Aircraft Engine Assembly
- Display Attributes: Master (selected), Org, All
- Costing Enabled:
- Inventory Asset Value:
- Include In Rollup:
- Cost of Goods Sold Account: 01-510-5110-0000-000
- Standard Lot Size: [Empty field]

13. Click the Purchasing tab. Select the following check boxes:

- Purchased
- Purchasable
- Allow Description Update

14. In the Invoice Matching group box, select No in the Receipt Required field.

Master Item - Purchasing

Organization: V1 Vision Operations
Item: AS20001
Description: Aircraft Engine Assembly

Display Attributes: Master Org All

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

Purchased Purchasable Use Approved Supplier
 Allow Description Update Outsourced Assembly
 Outside Processing Item Unit Type: [dropdown] RFQ Required: No Taxable: No
Input Tax Classification Code: [text]
Invoice Matching: Receipt Required: No Inspection Required: [dropdown]

Default Buyer: [text] Unit of Issue: [text]
Receipt Close Tolerance: [text] % Invoice Close Tolerance: [text] %
UN Number: [text] Hazard Class: [text]
List Price: 0 Market Price: [text]
Price Tolerance: 0 % Rounding Factor: [text]
Encumbrance Account: [text]
Expense Account: 01-510-7530-0000-000
Asset Category: [text]

15. Click the Physical Attributes tab.

Note: When you enter values for the Weight, Volume, and Dimensions fields, you must select the Container check box to ensure that the shipment flow works properly.

16. Click the General Planning tab.

Select the Min-Max option from the Inventory Planning Method drop-down list.

17. Click the MSP/MRP Planning tab.

- Select the MRP Planning option from the Planning Method drop-down menu.
- Select the Hard Pegging option from the Pegging drop-down list.

Master Item - MSP/MRP Planning

Receiving Physical Attributes General Planning **MPS/MRP Planning** Lead Times Work In Process Order Management

Planning Method: MRP planning
Forecast Control:
Pegging: Hard Pegging
 Round Order Quantities
 Exclude From Budget
 Planned Inventory Point
 Repetitive Planning
Overrun: %
Acceptable Rate +: 0
Acceptable Rate -: 0
MPS Planning
 Calculate ATP
Reduce MPS:
Exception Set:
Shrinkage Rate:
Acceptable Early Days:
 Create Supply
 Critical Component
Planning Time Fence: User-Defined
Demand Time Fence:
Release Time Fence:
Substitution Window:
Days: 1
Incremental Supply Pattern
Continuous Inter-Org Transfers: Use Global Value

Incremental Supply Pattern
Continuous Inter-Org Transfers: Use Global Value
Convergence Pattern: Use Global Value
Divergence Pattern: Use Global Value
Distribution Planning
 Distribution Planned
Days Of Supply Window
Maximum Inventory:
Target Inventory:
Repair
Repair Program: Repair Return
Repair Yield:
Repair Lead-time:
 Preposition Point

18. Click the Order Management tab. Select the following check boxes:

- Customer Ordered
- Internal Ordered
- Customer Orders Enabled
- Internal Orders Enabled
- Shippable
- The Check ATP attribute should be set to **Material Only** and the applicable ATP rule should be defined.
- OE Transactable

- Returnable

Master Item - Order Management

The screenshot displays the 'Master Item - Order Management' form for item AS20001. The form is organized into several sections:

- Organization and Item Information:** Organization: V1 Vision Operations; Item: AS20001; Description: Aircraft Engine Assembly.
- Display Attributes:** Radio buttons for Master, Org, and All.
- Navigation Tabs:** MPS/MRP Planning, Lead Times, Work In Process, **Order Management**, Invoicing, Process Manufacturing, Service.
- Order Management Section:**
 - Customer Ordered
 - Internal Ordered
 - Pick Components
 - Assemble to Order
 - Ship Model Complete (K)
 - Returnable
 - RMA Inspection Required
 - Financing Allowed
- Order Management Settings:**
 - Customer Orders Enabled
 - Internal Orders Enabled (G)
 - Shippable
 - OE Transactable (J)
 - Check ATP: None
 - ATP Rule: None
 - ATP Components: None
 - Picking Rule: [Empty]
 - Default Shipping Organization: Vision Project Manufacturing USD
 - Default SO Source Type: Internal
 - Shipping SubInventory: [Empty]
 - Charge Periodicity: [Empty]
- Tolerances:**
 - Over Shipment: [Empty]
 - Under Shipment: [Empty]
 - Over Return: [Empty]
 - Under Return: [Empty]

19. Click the Work in Process tab.

- Select the Build in WIP check box.
- Select the Push option from the Supply Type drop-down list.

20. Click the Invoicing tab.

Select the Invoiceable Item and Invoice Enabled check boxes.

Master Item - Invoicing

Organization V1 Vision Operations

Item AS20001

Description Aircraft Engine Assembly

Display Attributes: Master Org All

MPS/MRP Planning Lead Times Work In Process Order Management **Invoicing** Process Manufacturing Service

Invoiceable Item

Invoice Enabled

Accounting Rule

Invoicing Rule Advance Invoice

Output Tax Classification Code

Sales Account 01-510-4110-0000-000

Payment Terms

21. Click the Service tab.
Select the Track in Installed Base check box.
22. Save your work.

Setting Up Service items

Use the Master Item page to set up service items.

1. Set up a new service item with attributes as follows:

Attribute	Value
Item Status	Active
Inventory Item	Disabled
Stockable	Disabled
Reservable	Disabled
Purchased	Selected
Purchasable	Selected
Allow Description Update	Selected

Attribute	Value
Receipt Required	Yes
OSP	Disabled

Master Item - Purchasing (Service Item Setup)

The screenshot displays the 'Master Item - Purchasing (Service Item Setup)' window. The 'Purchasing' tab is selected, showing various configuration options. Key fields include:

- Organization: V1
- Item: AC1000
- Description: Aircraft Service Item
- Display Attributes: Master, Org, All
- Checkboxes: Purchased, Allow Description Update, Purchasable, Use Approved Supplier, Outsourced Assembly
- Dropdowns: Unit Type, RFQ Required (No), Taxable (No), Invoice Matching (Receipt Required: Yes, Inspection Required)
- Text Fields: Default Buyer, UN Number, List Price, Price Tolerance (0%), Encumbrance Account, Expense Account (01-510-7530-0000-000), Asset Category, Unit of Issue, Invoice Close Tolerance, Hazard Class, Market Price, Rounding Factor

2. Save your work.

Setting Up a Subinventory:

1. Select Inventory > Setup > Organizations > Subinventories.

The Subinventories window appears.

2. Define the Stores, MRB, and Consumable subinventories.

Note: Cost group and locators must be set up before defining subinventories.

3. Stores in the Name field to define the Stores subinventory.
4. Select Active from the Status list of values.

5. Select the following check boxes:

- Quantity Tracked
- Asset Subinventory

Note: The Include in ATP, Allow Reservations, and Nettable default values are selected and cannot be changed. These values are defined on the Material status Definition page (Inventory > Setup > Material Status). See the *Oracle Inventory User's Guide* for more information.

Subinventories

The screenshot shows the Oracle Inventory Subinventories (VP1) form. The 'Main' tab is selected. The 'Parameters' section includes a 'Status Attributes' group with the following checked options: 'Include in ATP', 'Allow Reservation', 'Nettable', 'Quantity Tracked', and 'Asset Subinventory'. Other options like 'Depreciable', 'Enable PAR Level Planning', 'Enable Locator Alias', and 'Enforce Alias Uniqueness' are unchecked. The 'Lead Times' section has input fields for 'Pre-Processing', 'Processing', and 'Post-Processing'. The 'Sourcing' section has a 'Type' dropdown set to 'Supplier' and input fields for 'Organization' and 'Subinventory'. The central area contains fields for 'Locator Control' (dropdown set to 'Item level'), 'Default Locator Status' (dropdown set to 'Active'), 'Picking Order' (input field with '2'), 'Dropping Order', 'Inactive On', 'Notify', 'Location' (input field with 'VP1 Copied from M1 org.'), 'Picking UOM', and 'Default Replenishment Count Type' (dropdown set to 'Order Quantity'). At the top, there are fields for 'Name' (Stores), 'Description' (Stores Subinventory), 'Status' (Active), 'Default Cost Group' (CG-86522), and 'Type' (Storage). At the bottom, there are buttons for 'Item / Subinventory' and 'Locators'.

6. Click the Accounts tab and enter the appropriate accounting values.

Subinventories - Accounts

The screenshot shows the 'Subinventories (VP1)' window with the 'Accounts' tab selected. The form contains the following fields and values:

Name	Stores	Description	Stores Subinventory
Status	Active	Default Cost Group	CG-86522
		Type	Storage

Material	01-000-1410-0000-000
Outside Processing	01-000-1450-0000-000
Material Overhead	01-000-1410-0000-000
Overhead	01-000-1420-0000-000
Resource	01-000-1440-0000-000
Expense	01-520-7530-0000-000
Encumbrance	

7. Save your work.
8. Click the New icon to create a new subinventory.
 1. Enter MRB in the Name field.

Note: The status must be set to MRB Review. You must install Oracle Warehouse Management (WMS) to use this status. You can set the status to Active initially, install Warehouse Management, create additional Transaction Types in WMS and then change subinventory status to 'MRB Review'.

2. Select Active from the Status list of values.
9. Select the following check boxes:
 - Quantity Tracked
 - Asset Subinventory
10. Click the Accounts tab and enter the appropriate values.
11. Save your work.
12. Click the New icon to create a new subinventory.
 1. Enter Consumable in the Name field.
 2. Select Active from the Status list of values.

13. Select the Quantity Tracked check box.
14. Clear all other attributes.
15. Click the Accounts tab and enter the appropriate accounting values.
16. Save your work.
17. Click the New button to define a new subinventory.
 1. Enter Scrap in the Name field.
 2. Select the Unserviceable option from the Status list of values.
 3. Select the Quantity Tracked check box.
 4. Clear all other attributes.
18. Click the Accounts tab and enter the appropriate accounting values.
19. Save your work.

For more information regarding subinventories, see *Oracle Inventory User's Guide*.

Setting Up Oracle Bills of Material (BOM)

Oracle CMRO uses the resources and departments that are set up in Oracle Bills of Material as the basis for the production job resource requirements.

Before setting up Oracle Bills of Material, you must ensure that:

- Calendars and Exception templates are set up.
- Employees have been set up.

Setting up Oracle Bills of Material includes setting up departments and resources.

To set up departments and resources:

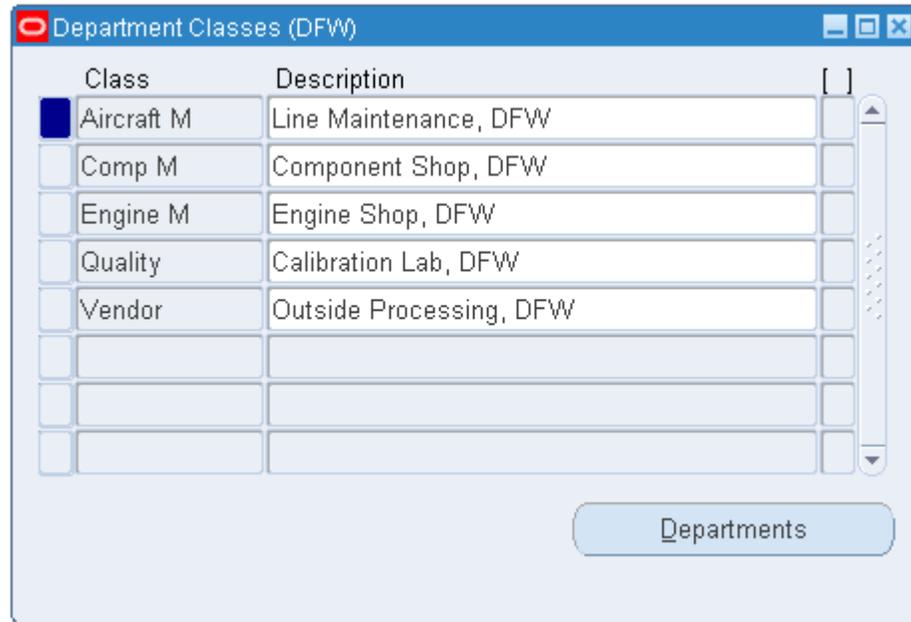
1. Select the Manufacturing and Distribution Manager responsibility.

From the Navigator, select Bills of Material > Setup > Department Classes.

2. Set up department classes.

For Outside Processing purposes, you must set up at least one department class called Vendor.

Department Classes



3. To set up a department, navigate to Bills of Material > Routings > Department, and the Departments window appears.
4. Set up at least one department that will be associated with the department class Vendor (case sensitive). It is recommended that you set up a department that the users can easily identify as an outside department, for example, Outside Service (OSV).

Departments

The screenshot shows a web form titled "Departments (DFW)". The form fields are as follows:

Department	OSP-DFW	
Description	Outside Processing DFW	
Cost Category	Maintenance	
Class	Vendor	Outside Processing, DFW
Location	DFW - Dallas/F	DFW Maintenance Center
Project Expenditure Org	Vision Project Manufact	
Inactive On		[]

At the bottom right of the form, there are two buttons: "Rates" and "Resources".

5. Associate all the departments with a location.
6. Set up Resources and associate with Employees. To set up resources navigate to Routings > Resources.
7. Define a resource type of Machine.

Resources

The screenshot shows the 'Resources (DFW)' form with the following details:

- Resource: M-Mill
- Description: Milling machine
- Type: Machine
- Charge Type: WIP Move
- Expenditure Type: Machine Usage
- Basis: Item
- UOM: HR
- Supply Subinventory: (empty)
- Supply Locator: (empty)
- Costed:
- Absorption Account: 101.0000.000.111000.0000.000.0000.00
- Variance Account: (empty)
- Buttons: Overheads, Rates
- Batchable:
- Minimum Batch Capacity: (empty)
- Maximum Batch Capacity: (empty)
- Batch Capacity UOM: (empty)
- Batching Window: (empty)
- UOM: (empty)
- Buttons: Machine Down Codes, Employees, Equipment, Setups

Note: In the item master, you must select the Equipment option (Physical attributes) to see valid values.

8. Set up standard operations.
9. Save your work.

Note: You must set up departments and resources at the operating unit, as well as at the Inventory Organization level. Routes are set up at the operating unit level. Visits (Visit Work Package - CMRO) are set at the Inventory Organization level.

See Also:

Oracle Bills of Material User's Guide

Setting Up Oracle Warehouse Management

Oracle Warehouse Management provides maintenance organizations the functionality to control their inventory by status or condition and associate subinventories with a department. Before setting up Oracle Warehouse Management, you must ensure that:

- Oracle Inventory setup is complete.
- Supply subinventories are setup.
- Departments have been set up in Oracle BOM.

Setting up Oracle Warehouse Management includes:

- Associating departments with subinventories.
- Defining material status.
- Associating material status with subinventories.
- Setting up profile options.

To associate departments with subinventories:

1. Change the responsibility to Warehouse Management Super User.
From the Navigator, select Setup > Warehouse Configuration > Resources > Associate Departments & Subinventories. The Department Subinventories window appears.
2. Select a value from the Department list of values and associate it with a subinventory.
3. Save your work.

Department Subinventories Window

Subinventories	Description
MRB	Material Review Board

To set up Material Status:

1. Navigate to Setup > Transaction Setup > Inventory Transactions > Material Status. The Material Status Definition window appears.
2. Set up the following statuses:
 - MRB
 - Unserviceable
 - Serviceable

Material Status Definition Window

Material Status Definition

Name: MRB Enabled

Description: MRB Transaction

Allgw Reservations Include in ATP Nettable

Usage

Subinventory Locator Lot (G) Serial (J) On-hand

Allowed Transactions

- COGS Recognition
- Deduct Sample Qty
- Move Order Putaway
- Perform miscellaneous issue of material
- Perform miscellaneous receipt of material
- Planning Transfer
- Receive Purchase Order
- Receive material against account
- Receive material against account alias
- Record cycle count adjustments
- Ship Confirm external Sales Order
- Staging transfer on a Sales order
- Staging transfer on an Internal order
- Transfer material between subinventories
- Transfer to Consigned

Disallowed Transactions

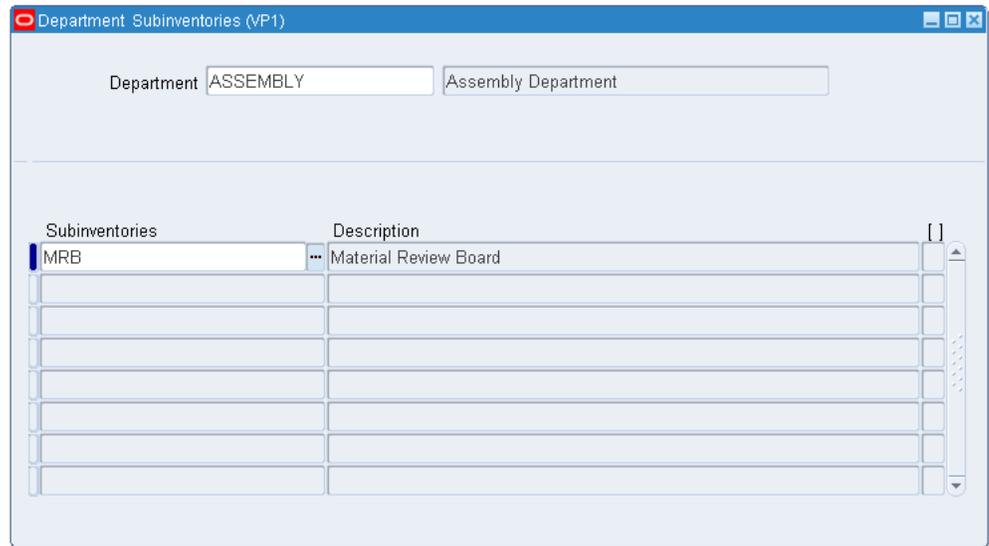
>>(S) >(A) <(R) <<(D)

3. Save your work.

To associate Material Status with Subinventories:

1. Navigate to Setup > Warehouse Configuration > Warehouses > Subinventories. The Subinventories Summary window appears.
2. Select a subinventory and associate a material status with it.

Subinventories Summary Window



To set up Profile Options:

1. Change the responsibility to Application Developer. Navigate to Other > Profile. The Personal Profile Values window appears.
2. Set up profile options as indicated in the table below.

Profile Name	User Value
AHL: Material Status - Serviceable	Serviceable
AHL: Material Status - Unserviceable	Un-Serviceable
AHL: Material Status - MRB	MRB

Personal Profile Values Window

Profile Name	Default Value	User Value
AHL: Material Status - MRB		MRB

3. Save your work.

See Also:

Oracle Warehouse Management User's Guide

Setting Up Oracle Purchasing

Before setting up Oracle Purchasing, you must ensure that:

- Oracle Inventory setup is complete.
- Supply subinventories have been set up.
- Oracle Human Resources setup is complete.

To set up Oracle Purchasing:

1. Change the responsibility to Manufacturing and Distribution Manager. From the Navigator, select Purchasing.
2. Set up the following in Oracle Purchasing:
 - Approvals
 - Buyers

- Purchasing Options
- Receiving Options
- Financial Options
- Open Accounting Periods

Approval Groups

Operating Unit: Vision Operations

Name: Buyer Materials Enabled

Description: Buyer for materials up to \$50,000

Approval Rules

Object	Type	Amount Limit	Low Value	High Value
Document Total	Include	50,000.00		
Account Range	Exclude		01-000-1570-0000-000	02-999-1570-9999-999
Account Range	Include	50,000.00	01-000-0000-0000-000	02-999-9999-9999-999

Open and Close Periods

Status	Period	Year		Period Dates		Close Date
		Num		From	To	
Future	May-13	5	2013	01-MAY-2013	31-MAY-2013	
Future	Apr-13	4	2013	01-APR-2013	30-APR-2013	
Future	Mar-13	3	2013	01-MAR-2013	31-MAR-2013	
Future	Feb-13	2	2013	01-FEB-2013	28-FEB-2013	
Future	Jan-13	1	2013	01-JAN-2013	31-JAN-2013	
Future	Dec-12	12	2012	01-DEC-2012	31-DEC-2012	
Future	Nov-12	11	2012	01-NOV-2012	30-NOV-2012	
Future	Oct-12	10	2012	01-OCT-2012	31-OCT-2012	
Future	Sep-12	9	2012	01-SEP-2012	30-SEP-2012	
Open	Aug-12	8	2012	01-AUG-2012	31-AUG-2012	

3. Save your work.

See also *Oracle Purchasing User's Guide*

Setting Up Oracle Advanced Planning and Scheduling

Oracle CMRO integrates with Oracle's Advanced Planning and Scheduling (APS) applications for supply chain management. Advanced Supply Chain Planning (ASCP) is used to schedule required materials from maintenance visits. Available to Promise (ATP) is used for material availability inquiries and scheduling through ASCP. Oracle Demantra Demand Planning is used for creating material demand from three sources: global demand from forecasted requirements in Unit Maintenance Plan, scheduled demand from requirements scheduled to maintenance visits, and historical non-routine (and routine) demand from maintenance accomplished at specific facilities. Additionally, Oracle APS's Inventory Optimization (IO) application is required for complete supply chain planning.

The following sections discuss the required setup.

Advanced Supply Chain Planning

- The APS applications employ a component architecture in which transaction processing and planning can occur in separate database instances. The correct instances to collect and query from must be defined. Collections from ASCP, DP, and ATP queries from the CMRO instance must be directed to the correct instance. For information, refer to the *Oracle Advanced Planning Implementation and User's Guide*.

- The user must create an ASCP plan to process the collected material requirements. The applicable organizations, demand and supply schedules must be defined. Additionally, the Include Sales Orders check box must be selected in the Plan Options window. For information on defining plans, refer to the *Oracle Advanced Planning Implementation and User's Guide*.

Plan Options

The screenshot shows the 'Plan Options' window for a 'Manufacturing Plan' named 'CMRO1'. The 'Organizations' tab is active, showing a table with the following data:

Org	Description	Net WIP	Net Reservations	Net Purchases	Plan Safety Stock	Include Sales Order
TST:M1	TST:Seattle Manufactur	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Other sections in the window include:

- Global Demand Schedules:** A table with columns for Name, Description, Type, Ship To, and Consumption Level.
- Demand Schedules:** A table with columns for Name, Description, Type, Ship To Consumption Level, and Inter Plant. It contains one entry: 'MDS.M1-PRI' with description 'M1 Master De' and type 'MDS'.
- Supply Schedules:** A table with columns for Name, Description, and Type. It contains one entry: 'MPS.M1-PRO' with description 'Master Production' and type 'MPS'.
- Subinventory Netting:** A button located at the bottom right of the window.

Oracle Demantra Demand Planning

- Oracle Demantra Demand Planning collections must be set up. For information on setting up data collections, refer to the *Oracle Demantra Demand Planning Implementation and User Guide*.
- The correct application instance must be defined and the applicable organizations for that instance must be enabled. All organizations that have CMRO material requirements must be checked.
- Users must define a demand plan.

To capture the data collected from CMRO, the plan must include the following input parameters:

Material Requirements - Scheduled Visits (collections for all requirements in a maintenance visit)

Material Requirements - Planned Maintenance (collections for all forecasted requirements in the Unit Maintenance Plan)

Material Usage History - Unplanned Maintenance (collections for all non-routine requirements created during the production process, per organization)

Material Usage History - Planned Maintenance (an optional stream for all historical planned requirements, essentially collections for the Unit Maintenance Plan's history)

For information on creating demand plans, refer to the *Oracle Demantra Demand Planning Implementation and User Guide*.

Available to Promise

The source and destination instance must be defined. For information, refer to the *Oracle Global Order Promising Implementation and User's Guide*.

Setting Up Oracle Order Management

Before setting up Oracle Order Management (OM), you must ensure that:

- Oracle Inventory setup is complete.
- Supply subinventories have been set up.
- Oracle Purchasing setup is complete.

Setting up Oracle Order management includes:

- Setting up processing constraints.
- Creating customers.

To set up processing constraints:

1. From the Manufacturing and Distribution Manager responsibility, navigate to Order Management > Set Up > Rules > Security > Processing Constraints. The Processing Constraints window appears.
2. Click the Find button to search for the Order Sales Credit entity.
3. In the Constraints field, clear the Create, Update, Delete, and Cancel Operations options.
4. Click the Applicable To tab. Select the Authorized Responsibilities Radio Button and provide a list of Responsibilities that can perform the above listed actions.
5. Save your work.

6. Query for the Order Line entity.
7. Select the Create, Update, Delete, and Cancel operations for the same.
8. Click the Applicable To tab. Click the Authorized Responsibilities radio button and provide a list of responsibilities that can perform the selected actions. Save your work.

Note: Setting up processing constraints ensures that Order Management users are not able to update any sales orders created within CMRO.

To define Customers:

1. Navigate to Customers > Standard. The Find/Enter Customers window opens.
2. Define your customers.

Note: For outside order processing, you must set up customers in Order Management identical to the suppliers that you created in Oracle Purchasing. You must do this step for only those suppliers to whom you will be shipping out the parts for service. Oracle recommends that you create customer names to be exactly the same as your supplier name.

See Also:

Oracle Order Management User's Guide

Setting Up Oracle Projects

CMRO uses Oracle Projects as part of its maintenance planning and production flows. A project is created for each visit work package and project tasks are created for each visit work package. The project tasks are used in the maintenance planning flow to allow the required materials to be pegged to the corresponding visit tasks through Oracle's MRP application. A visit's corresponding project is used in the maintenance execution flow to collect costs associated to resource and material transactions performed in CMRO's Production module. Use the standard billing functionality in Oracle Project Manufacturing to generate the required reports for the corresponding visit work packages.

Setting up Oracle Projects includes the following steps:

- Defining service types.
- Creating a project template.

- Assigning the project template name to a user profile.

To define service types:

1. Navigate to the Service Type Lookups page (Projects > Setup > Service Types).
2. Define the service types to be used in Oracle CMRO.
3. Save your work.

For more information about defining service types, refer to the *Oracle Projects Implementation Guide*.

To create a project template:

1. Navigate to the Projects Super User responsibility. From the Navigator, select Setup > Projects > Project Templates.
2. Click the Create Template button.
3. Enter the required information.

Note: You must enter values in all required fields or the project template cannot be approved.

4. Save the project template.

Note: This template should be created for the applicable inventory master organization. All projects created for the maintenance visits use this project template.

5. The project status changes to Submitted. For more information about the creation of project templates and the manner in which you use them to create projects and submit for approval, refer to the *Oracle Projects User's Guide*.

To assign the project template name to a user profile:

1. Navigate to the System Administrator responsibility. From the Navigator, select Profile > System. The Find System Profile Values window appears.
2. In the Profile field, search for the AHL: Default Project Template ID value. Click the Find button.
3. Select the project template that you created from the Site LOV.

4. Save your work.

Note: You can change most of your user profile options; values that you enter in the User Value field override the values preset by the System Administrator. Some profile options cannot be changed, but are displayed for informational purposes only. To change the user profile options, access the Application Developer responsibility and navigate to Other > Profiles. Enter the required values in the Personal Profile Values window.

For more information on System profile options and the procedures for setting them up, refer to the *Oracle E-Business Suite Setup Guide*.

To assign visit pricing to a user profile:

1. Navigate to the Find System Profile Values window (System Administrator > Profile > System).
2. In the Profile field, search for the AHL: Visit Pricing Flag value, and click the Find button.
3. Select Yes in the User Value field.

Profile Option Name	Site	Application	Responsibility	User
AHL: Visit Pricing Flag	Yes			TSMITH

4. Save your work.

Verifying and Updating the Project Created in the CMRO Visit Work Package

The maintenance planner must manually define the project parameters for the project created in the CMRO Visit Work Package.

To verify and update the project created in the CMRO Visit Work Package:

1. Navigate to the Manufacturing and Distribution Manager responsibility. Select Bills of Material > Project > Project Definitions > Project Parameters. The Project

Parameters window appears.

2. Enter the Visit Number in the Project Number field to search for the project created in Visit Work Package.
3. Verify the Organization name. It should be the same as the Visit Work Package organization.
4. Optionally, change the Cost Group.
5. Optionally, change the Default WIP class.
6. Click the Invoice Transfer tab. Optionally, change the IPV.
7. Make other changes if required.

Related Topics

Oracle Projects User Guide

Setting Up Oracle Enterprise Asset Management

Oracle CMRO uses the same work order system as Oracle Enterprise Asset Management (eAM). It also uses the Oracle eAM functionality to complete operations. Oracle CMRO benefits from Oracle eAM's enhanced integration with Oracle Costing.

Before setting up Oracle eAM, you must ensure that the following setups are complete:

- Oracle Inventory
- Oracle WIP
- Oracle Bills of Material
- Oracle Purchasing

To set up Oracle Enterprise Asset Management:

1. Navigate to Enterprise Asset Management > Setup > WIP > WIP Accounting Classes.
2. Set up the following WIP accounting classes:
 - Standard
 - Expense
 - Maintenance

- Asset Non-Standard

WIP Accounting Classes Window

The screenshot shows the 'WIP Accounting Classes (VP1)' window. The 'Class' is set to 'Discrete', the 'Description' is 'Discrete Job Class', and the 'Type' is 'Standard Discrete'. The 'Accounts' section contains a table with columns for 'Valuation' and 'Variance'.

	Valuation	Variance
Material	01-000-1410-0000-000	01-520-5310-0000-000
Material Overhead	01-000-1420-0000-000	
Resource	01-000-1440-0000-000	01-520-5312-0000-000
Outside Processing	01-000-1450-0000-000	01-520-5370-0000-000
Overhead	01-000-1430-0000-000	01-520-5330-0000-000
Standard Cost		01-520-5390-0000-000
Bridging		
Expense		
Estimated Scrap		
Encumbrance		

3. Set up the eAM parameters.

Enterprise Asset Management Parameters Window

Enterprise Asset Management Parameters (EM1)

Asset Number Defaults
 Asset Serial Number Auto Generation Event Log Controls

Cost Defaults
Cost Element: Material 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
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

Account Defaults
Maintenance Offset: 01-520-7530-0000-000

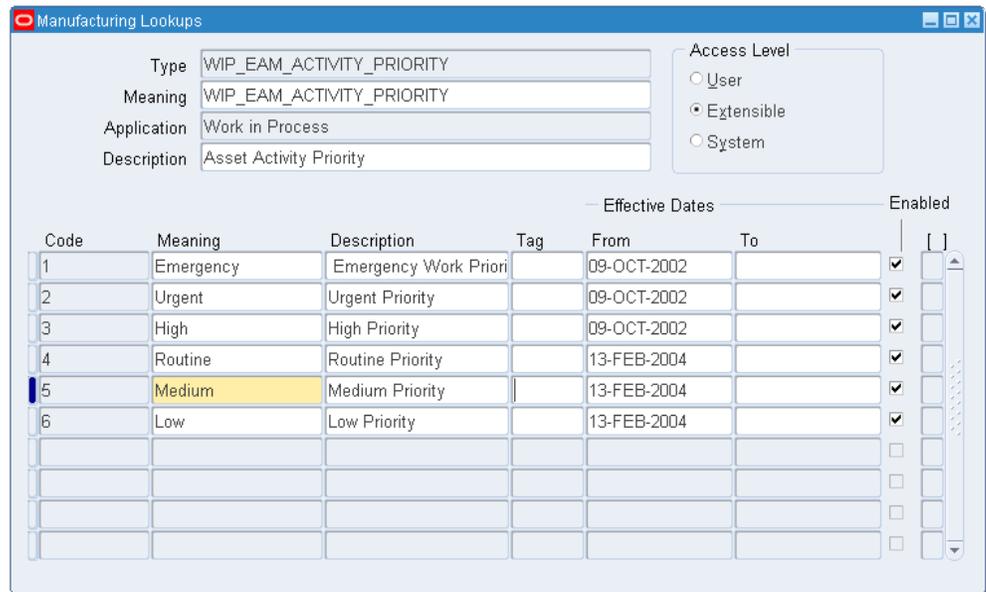
Asset Move Defaults
Intermediate Subinventory: Intermediate Locator:

4. Set up a category code for the Asset Management structure. Navigate to Setup > Category > Category Codes. Search for the Asset Management structure name. For more information on setting up category codes, see the Oracle Enterprise Asset Management User's Guide.
5. Define the default asset category. Navigate to Setup > Category > Category Sets. The Category Sets page appears.
6. Query for Enterprise Asset Management in the Name field. Select the category code that you created from the Default Category list of values.

7. Save your work.
8. Navigate to Setup > Lookup. The Oracle Manufacturing Lookups window appears. Query for WIP_EAM_ACTIVITY_PRIORITY lookup in the Type field. Verify that the following values are set up:

Code	Meaning
1	High
2	Medium
3	Low

Oracle Manufacturing Lookups Window



See Also:

Oracle Enterprise Asset Management User's Guide

Setting Up Oracle Service

Oracle Service provides Oracle CMRO with the functionality to create and update service requirements in a maintenance organization. The association of a service request to a visit task and production job enables the maintenance organization to track the service difficulty (non-routine) to the associated progress or resolution performed by

the maintenance personnel.

Setting up Oracle Service includes:

- Verifying and defining service request types, statuses, and their severity.
- Setting up the profile options.

To verify and define Service Request Type, Status, and Severities:

1. Navigate to the Service Request Statuses page (Customer Support > Setup > Definitions > Service Request Statuses). The Service Request Statuses window appears.
2. You can define the following statuses:
 - New
 - Open
 - Working
 - Assigned
 - Closed

Service Request Statuses

Status	Resolved	Final	Initial	On hold	Duplicate	Checking Start Date	End Date	Pre-Defined	Text Color	Sort Order	Intermediate Status	Rejection Action	Approval Action
Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	Blue				
Closed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>	Red				
Completed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>					
Engineer On-Site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	Blue				
Escalated	<input type="checkbox"/>	26-SEP-2004		<input type="checkbox"/>	Red								
Estimate Approved	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>					
Implemented	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>					
In Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>					

Description:

Classification:

Service Request Status Restrictions

Disallow Request Update Disallow Owner Update Ending Approval

Disallow Task Update Disallow Product update

Disallow Charge Update Disallow Charge

3. Navigate to the Service Request Types page (Customer Support > Setup > Definitions > Service Request Types). The Service Request Type page appears.

Note: You define service request types to categorize your service requests. For each service request type, you can set up related service request statuses that correspond with each service request type.

4. You can define the following request types:
 - Pilot Log
 - Cabin Log
 - Mechanic Log
 - Inspection Log
 - Technical Problem

Service Request Types

Type	Business Process	Status Group Name	Start Date	End Date	Asset Maintenance	Complex Maintenance	Image File Name
Aircraft Defect	Customer Support		05-MAY-2005		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Billing Problem	Customer Support	Billing Problem	17-JUN-2003		<input type="checkbox"/>	<input type="checkbox"/>	CS_Billing_Prob.gif
Break/Fix Repair	Field Service	Field Service	21-OCT-2005		<input type="checkbox"/>	<input type="checkbox"/>	
Bulk Item Pickup	Customer Support		04-JUL-2003	21-SEP-2004	<input type="checkbox"/>	<input type="checkbox"/>	
Business Licensing	Customer Support		04-JUL-2003	21-SEP-2004	<input type="checkbox"/>	<input type="checkbox"/>	
Call Sales Rep	Customer Support				<input type="checkbox"/>	<input type="checkbox"/>	
Chargeable Service	Auto Chargeable	Automotive	25-APR-2005		<input type="checkbox"/>	<input type="checkbox"/>	
Component Defect	Customer Support		05-MAY-2005		<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Description

Workflow

Auto Launch Workflow Abort Workflow on Final Status without Warning Web Entry Detail ERES Record

5. Navigate to the Service Request Severities page (Customer Support > Setup > Definitions > Service Request Severities). The Service Request Severities page appears.
6. Select the Complex Maintenance check box.
7. Verify that the following request severities are defined:
 - High
 - Low
 - Medium

Service Request Severities

Severity	Importance Level	Description	Priority Code	Start Date	End Date	Text Color	Defect Severity
High	1	Immediate Response F	CRITICAL			Red	
KBHigh	1	Immediate	CRITICAL			Blue	
Medium	2	1 to 3 Day response re	HIGH			Green	
Low	3	Response in one week	MEDIUM			Green	

Select values in the Type, Status, and Severity fields, if they are different than the default values. Default values in these fields come from the profiles setup. For more information on profiles, see *Setting Up Oracle Support Profiles* in the *Oracle Support Implementation Guide*.

You can override these defaults if necessary by changing the appropriate profile options. For more information, see *Setting Up Support Related Profile Options* in the *Oracle Support Implementation Guide*.

To set up the profile options:

1. Navigate to the System Administrator responsibility, and then select Profile > System. The Find System Profile Values window appears.
2. Search for the AHL: Default SR Customer Name value in the Customer Name field. Click the Find button.
3. Save your work.
4. Find System profile value - AHL: Default SR Severity. Select the default Severity Value from the Site LOV.
5. Find System profile value - AHL: Default SR Status. Select a default Status Value.
6. Find System profile value - AHL: Default SR Type. Select the default SR Type.
7. Save your work.

System Profile Values

Profile Option Name	Site	Application	Responsibility	User
AHL : Consider Department Conflicts				
AHL : Default Estimate Duration				
AHL : Default Service Request Severity	High			
AHL : Default Service Request Status	Open			
AHL : Default Service Request Type				
AHL : Workcard Output Type				
AHL : Workcard Template Code				
AHL : Application Usage Mode	Complex Maintenance Repair			
AHL : BPEL IPC Process (AhlProcessIP)				
AHL : BPEL User responsibility				

Note: You can change most of your user profile options; values you enter in the User Value field override values preset by the System Administrator. A few profile options are set for informational purposes only, and cannot be changed.

See *Oracle Customer Support Implementation Guide* for additional information.

Setting Up Objects for Disposition

Maintenance or inspection personnel use the disposition details defined in the Route Management module to transact the material (serviceable/non-serviceable) and initiate overhaul, repair or scrap requirements accordingly. The JTF object for disposition is seeded as belonging to the Oracle Service application. After installation, you must create a relationship between a disposition and an object type of Service Request.

To create a relationship between a Disposition and the Service Request object type:

1. Navigate to the Relationships and Valid Objects page (Customer Support > Setup > Definitions > Relationships and Valid Objects).
Click the Update button for the Refers to relationship. The Valid Objects: Refers to Relationships page appears.
2. Click Add Another Row. Add a new relationship as Service Request (Object Type) – Refers to (Relationship) - Production Disposition (Related Object Type).
3. Save the record.

Valid Objects: Refers to Relationships

Relationships and Valid Objects >

Valid objects: Refers to relationships,

TIP If the related object type you want does not exist you can create one under JTF objects setup.

Object Type ^	Relationship ^	Related Object Type ^	Start Date ^	End Date ^
Defect	Refers to	Service Request	<input type="text"/>	<input type="text"/>
Enhancement	Refers to	Service Request	<input type="text"/>	<input type="text"/>
Service Request	Refers to	Service Request	<input type="text"/>	<input type="text"/>
Service Request	Refers to	Unit Maintenance Plan	<input type="text"/>	<input type="text"/>
Service Request	Refers to	Production Disposition	<input type="text"/>	<input type="text"/>
Service Request	Refers to	Production Disposition	<input type="text"/>	<input type="text"/>

TIP When you create a new valid object, the application automatically creates the valid object for the reciprocal relationships.

TIP When you update the start or end dates for an object, the application automatically synchronizes the dates in the reciprocal object.

Setting Up Oracle Contracts

The Outside Processing module uses the functionality supporting the Loan and Borrow Transaction in Oracle Contracts.

Before you set up Oracle Contracts, you must ensure that:

- Oracle Inventory setup is complete.
- Oracle Receivables setup is complete.
- Oracle Order Management setup is complete.
- Oracle Purchasing setup is complete.

Setting up Oracle Contracts includes:

- Setting up buyers.
- Setting up suppliers.
- Other setups.

To set up buyers:

1. From the Navigator, select Contract Manager > Setup > Others > Buyer > Buyer. The Find Buyer window appears.
2. Click the New Buyer button.

3. Select a Buyer Name from the list of values.
4. Enter other required data.
5. Save your work.

Note: The buyers set up in Oracle Contracts will be displayed in the CMRO Select Buyer Name list for the user to select as the OSP Buyer.

To set up suppliers:

1. Navigate to Contract Manager > Setup > Others > Supplier > Entry, and the Suppliers page appears.
2. Click the Purchasing link.
3. Enter required purchasing information.

Suppliers

Update Advantage Corp - 1010: Purchasing Cancel Save

Purchase Order Hold All New Orders
 Create Debit Memo from RTS Transaction

Supplier Sites

Site Status: Active Site Name: Advantage - US Operating Unit: Vision Operations

Purchasing | Self Billing | Freight

Create | ***

Site Name	Operating Unit	Ship-To Location	Bill-To Location	Ship Via	Acknowledgment Lead Time (Days)
ADVANTAGE - US	Vision Operations	M1- Seattle Mfg <input type="button" value="v"/>	V1- New York City <input type="button" value="v"/>	UPS <input type="button" value="v"/>	

Note: These setup suppliers will be available in CMRO OSP Vendor Name list.

Other setups:

1. Navigate to Contract Manager > Setup > Contract. Verify the contract setup.
2. Set up the standard articles, categories, and sources.
3. Optionally, set up the customers.
4. Set up the contract groups and contract events.

Note: To find the approver of the contracts, you must review the profile value: OKC: Contract Approver.

See Also:

Oracle Contracts Core Concepts and Procedure Guide

Setting Up Oracle Installed Base

After you define the master configuration, a framework exists that describes the general characteristics of the system, including the engineering rules for assembly. The user can then create a unit configuration. Oracle CMRO uses the methods in Oracle Installed Base to populate the database with transactions representing the as operated configuration of the system.

Before you set up Oracle Installed Base, ensure that these setups are complete:

- Oracle Inventory.
- Oracle Counters.
- Supplier and supplier sites (Purchasing).
- Customer and customer sites (Receivables).

To set up Oracle Installed Base:

1. Navigate to Installed Base Administrator > Setups > Install Parameters.
2. Set up the Installed Base parameters.

Install Parameters

Install Parameters

Party Name: Vision Corporation

Full Dump Frequency: 6

Category Set Name: Inv.Items

Create Unique Asset For: Each serialized instance

All Parties

Allocate at WIP

SFM Bypass

Override Ownership

Freeze

Force Cascade Ownership to Components

3. Set up the instance statuses.

Instance Statuses

Status	Terminated	Status Change Allowed	Service Allowed	Requests Allowed	Updatable	Pr[]
Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Billing Failed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Billing Requested	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Billing Succeeded	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
CREATED	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Complete	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Status Description: Billing requested

4. Optionally, set up the Maintain Locations values.
5. Set up the asset locations.

See *Oracle Installed Base Implementation Guide* for additional information.

Setting Up Oracle Counters

This section contains the following topics:

- Overview of Counter Setups for CMRO Items, page 2-65

- Setting Up Oracle Counters for CMRO Items, page 2-66
- Resetting Counters, page 2-67

Overview of Counter Setups for CMRO Items

Counters are used to track the usage of an item or service. Counters are set up in different ways dependent upon their intended use.

Counter templates are set up as guidelines to create counters at the Master Item level. An item can have counters based on one or more templates.

However, the item and counter group relationship is one-to-one, so an item can be associated to one active counter group only.

When setting up counter templates for an item in CMRO, it is important to review the following main attributes:

Counter Type

Used to differentiate between a counter that is manually entered and those that are system (automatically) generated:

- **Standard Regular Counter:** The only type of counters that a customer takes and then records readings. These are typically entered manually, through an integration using Oracle Installed Base APIs, or by using the Counter Update page.
- **Time-based Regular Counter:** Measures time units that are calculated when the Time Based Counters Engine concurrent program is run. Examples are minutes, hours, days.
- **Formula Counter:** Derived from one or more standard regular counters for an associated item by a formula that can use SQL functions. For example, a formula such as 1:3 to calculate the counter value based on a regular counter.

Reading Type

Used to indicate if a reading is the latest (total) value or an incremental (delta) value since the last recording:

- **Absolute (meter):** Used to capture the present or as-recorded value. Typically used to capture a reading as recorded by a service meter such as an odometer (miles, kilometers) or the total operating hours.
- **Change (usage):** Used to capture the incremental value between the last recorded value and the current value. For example, number of cycles, landings, starts, and so on since the last recorded event.

Important: Only counters with the Reading Type of Change can be corrected.

Direction

Used to indicate if a reading can increase, decrease, or increase and decrease the counter's **net** reading value:

- **Ascending:** Value will only increase over time. Examples are odometers and hour meters. New counter readings can only be positive values.
- **Descending:** Value will only decrease over time, such as a countdown of the life of a component. New counter readings can only be positive values.
- **Fluctuating:** Value may increase or decrease over time. New counter readings can be positive or negative values. The net value will increase up and down depending on the nature of the reading.

See Setting Up Counters in the *Oracle Installed Base User's Guide* for more information regarding counter setup.

Recommended Counters to be Set Up

The following prime and secondary counters are recommended at the implementation of CMRO:

- **Prime:** These counters are typically updated on defined intervals:
 - TSN - Time since new
 - CSN - Cycles since new
 - DSN - Days since new
- **Secondary:** These counters are typically manually updated at key milestones in the life of an asset:
 - TSO - Time since overhaul
 - CSO - Cycles since overhaul
 - DSO - Days since overhaul

Setting Up Oracle Counters for CMRO Items

1. From the Navigator, select Field Service Manager > Field Service Set Up > Counters > Define Counters.
2. Click the **New** button to define counters.
3. Set up the counter groups.
4. Associate the counter groups with the Oracle Installed Base items.

5. Optionally, associate the counter groups with maintain locations.

See Also:

Oracle Installed Base User's Guide

Resetting Counters

Counters can be reset through work accomplishment or manually. This section outlines considerations related to resetting counters.

Work Accomplishment Resets

- Evaluate counter setups for those counters which will be reset through the accomplishment of an MR or after a maintenance event. Examples are overhaul counters which are reset after a major rebuild.
- Typically set up with a different UOM from the top node to prevent the Cascade API program from updating them.
- Only Change - Ascending and Change - Fluctuating counters can be reset through work accomplishment.

Manual Resets

It should be noted that when a counter is manually set using Oracle Installed Base, the reset should be performed in context of the age and maintenance history of an item instance.

In this scenario, there is the potential to disconnect or disassociate the accomplishment or recording of maintenance history for a CMRO item instance if the manual reset was done in Oracle Installed Base.

Oracle recommends that counter resets be performed by the accomplishment of a CMRO maintenance requirement.

Setting Up Oracle Quality

Oracle CMRO uses the setup from Route Management and the system profile options in Oracle Quality to enable maintenance organizations to capture quality elements for operations, jobs, deferrals, scrap management, and counter value snapshots. This gives maintenance facility the flexible integration required to maintain reliable products.

Oracle CMRO provides seeded plan templates for routes, operations, job deferrals, MRB dispositions and counter reading capturing. These templates can be used as-is or adjusted with additional quality elements. However, the counter reading template is used by CMRO in the background, and cannot be changed.

Setting up Oracle Quality includes:

- Setting up route and operation quality plans.

- Setting up Job Deferral, MRB Disposition Quality, Non-Routine Job Inspection and Non-Routine Operation Inspection Plans.
- Setting up Counter Readings Quality Plans.

Setting Up Route and Operation Quality Plans

Creating Inspection Types

You can create the different inspection types for route and operation quality recording. The inspection types are maintained in a seeded collection element known as an Inspection Type. Creating collection elements, collection element types and collection plan types have no specific CMRO setup requirements.

To create Inspection Types:

1. Change responsibility to Manufacturing and Distribution Manager. From the Navigator, select Quality > Setup > Collection Elements.
2. Select the organization for which you want to create a quality plan. The Collection Elements page appears.
3. Click the Inspection Type field and search for the Collection Element value.
4. Click the **Values** button.
5. Define the inspection types.

Collection Elements

Collection Element: Inspection Type Enabled

Element Type: Attribute

Label

Values (US1) - Inspection Type

Short Code	Description	
CP	Corrosion Prevention	
CTR_SNAP	Counter Reading	
CUST_REQ	Customer Approval Required	
DEFER	Deferral Approval	
INSP_N/A	Inspection Not Required	
INSP_REQ	Inspection Required	
MRB_REQ	MRB Approval Required	
MX_DEFINED	Maintenance Defined	
PIREP	Pilot Report	

Mandatory

[]

a_char_value_lookups v

Actions

Note: The defined inspection types are the values that appear in the list of values for the quality inspection type attribute in routes and operations.

Creating Quality Plans

CMRO provides plan templates with seeded quality elements. Oracle recommends that you use these templates and adjust them for the specific needs rather than creating a new plan, because the template contains collection elements that are automatically populated by CMRO when quality is recorded in production. Should these elements be missing, the procedure would still work, but these attributes would not be recorded. The background attributes contain information about the job, maintenance requirement, item and item instance and so on, which provides convenient quality reporting and analysis. The templates also contain seeded displayed items that are either mandatory or optional, and those properties can be changed. This approach enables the user to take full advantage of CMRO's out-of-the-box quality functionality together with the flexibility to create completely customized quality plans. Creating and using plan types have no specific CMRO setup requirements.

To create Quality Plans:

1. Navigate to Quality > Setup > Collection Plans. The Collection Plans window opens.
2. Select the plan type.

3. Click the **Copy Elements** button. The Copy From Plan window appears.
4. Select the Plan template from which you want to copy. Select one of these options:
 - Advanced Service Online Operation Completion Plan
 - Advanced Service Online Route Completion Plan

Collection Plans

Collection Plan: OPERATION COMPLETION PLAN

Description:

Effective: 11-JAN-2013 -

Plan Type: Corrective Action Requests Corrective Action Request Plan []

Display Multiple Rows in Workbench

Copy Elements... Transactions Specifications...

Quality Collection Elements

Name	Seq	Prompt	Mandatory	Enabled	Read-Only	Displayed
EGT	10	Engine Gas Temperatu	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
EPR	20	Engine Pressure ratio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N1	30	N1 Shaft Vibration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N2	40	N2 Shaft Vibration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Flow	50	Fuel Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Values Actions

5. Click the **Transactions** button. The Collection Transaction window appears.
6. Select the seeded transaction for route or operation. Select one of these options:
 - Maintenance Route Completion (Advanced Service Online)
 - Maintenance Operation Completion (Advanced Service Online)
7. Define the trigger. Select Inspection Type from the Trigger name list of values. The trigger value is selected from the setup in the Inspection Type collection element.
8. Save your work.

Collection Transactions

Transaction Description	Workbench Layout	Mandatory	Background	Enabled
Maintenance Route Completion (Advanced Service Online)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance Operation Completion (Advanced Service Online)		<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
Inspection Type	equals (=)	MX_DEFINED	

Note: The Inspection Types created can be associated with a route or operation in route management. When the route or operation is going to be instantiated in production, the user will have the derived quality plan available for collecting the quality results.

Setting Up Job Deferral, MRB Disposition Quality, Non-Routine Job Inspection and Non-Routine Operation Inspection Plans

Creating Inspection types

An inspection type for a deferral, MRP, non-routine job, and non-routine operation is defined in a system profile option. The inspection type will derive the existing plan in the organization where a job is deferred and an MRB disposition is initiated and a non-routine job or operation is created. You can create the different inspection types for job deferral, MRB disposition, and non-routine quality recording.

To create Inspection Types:

1. Navigate to the Collection Elements window. Click in the Collection Element field, and select the Inspection Type value.
2. Click the Values button. Define the inspection types for job deferral, MRB disposition, and non-routine quality recording.

Note: The defined inspection types appear in the list of values for the system profile option for job deferral and MRB disposition.

To create Quality Plans:

1. Navigate to the Collection Plans window.
2. Define collection plans for job deferral, MRB disposition and non-routine job or operation using the following plan templates:
 - Advanced Service Online MRB Disposition Plan
 - Advanced Service Online Route Completion Plan
 - Advanced Service Online Operation Completion Plan
 - Advanced Service Online Job Deferral Plan
3. Add or change quality elements if necessary.
4. Click the Transactions button. Select the following seeded transaction descriptions for job deferral, MRB disposition and non-routine job or operation:
 - Maintenance Job Deferral (Advanced Service Online)
 - MRB Disposition (Advanced Service Online)
 - Maintenance Route Completion (Advanced Service Online)
 - Maintenance Operation Completion (Advanced Service Online)
5. Define the trigger. Select Inspection Type from the Trigger drop-down list. The trigger value is selected from the setup in the Inspection Type collection element.
6. Save your work.

System Profile Options Setup

Set up the following options for a job deferral, MRB disposition and non-routine job or operation quality definition:

- AHL: Job Deferral Inspection Type
- AHL: MRB Disposition Inspection Type
- AHL: Non-routine Job Inspection Type
- AHL: Non-routine Operation Inspection Type

Setting Up Counter Readings Quality Plans

Whenever a maintenance requirement is completed in production, CMRO stores the

current counter values of the maintained item instance in a Counter Reading Quality Plan. The plan will adjust itself based on the counters defined on the item instance. This procedure is completely transparent to the user. The user must create a Counter Reading Quality Plan in Quality and set up the system profile option to enable counter reading capturing.

Creating Quality Plans

The Counter Readings Quality Plan is created using the template and cannot be adjusted, because the user has no influence over the recording of the counter values.

Note: You need to create only one counter reading plan because the same counter reading plan is used across all organizations.

To create Quality Plans:

1. Navigate to the Collection Plans window.
2. Select a value in the Plan Type field.
3. Click the Copy Elements button. Select the Advanced Service Online Counter Readings Plan template.

Note: Do not adjust collection elements.

4. Do not define any transactions.

System Profile Options Setup

For the Counter Reading Quality Plan definition, set up the System Profile Option - AHL: Counter Reading Plan.

See *Oracle Quality User's Guide*.

CMRO Specific Setups

Oracle CMRO is an integrated, web-enabled software application suite designed to empower complex equipment maintenance organizations. Oracle CMRO supports maintenance processes such as scheduled and unscheduled maintenance visits, component monitoring, job scheduling and routing, labor time collection, cost collection, inventory management, and maintenance document management. CMRO provides models for electromechanical systems and defines rules for assembling units. CMRO also records unit-specific information, enabling quick access to the maintenance history of a product component.

Oracle CMRO is organized as follows:

1. Engineering
 - Fleet Maintenance Program (maintenance requirements)
 - Route Management (work card authoring)
 - Document Index (technical document management)
2. Configuration Management
 - Master Configuration (allowable installations)
 - Unit Configuration (as installed maintenance tracking)
 - Product Classification (logical grouping)
3. Planning
 - Unit Maintenance Plan (active maintenance requirements)
 - Visit Work Package (work scope and resource)
 - Long Term Plan (hangar and visit plan)
4. Execution
 - Production
 - Production Planning
 - Outside Processing

This section includes the following topics:

- Oracle Complex Maintenance, Repair, and Overhaul Standard Setup, page 2-74
- Oracle CMRO Approval Workflow Setup, page 2-78
- Oracle CMRO Module Setup, page 2-86

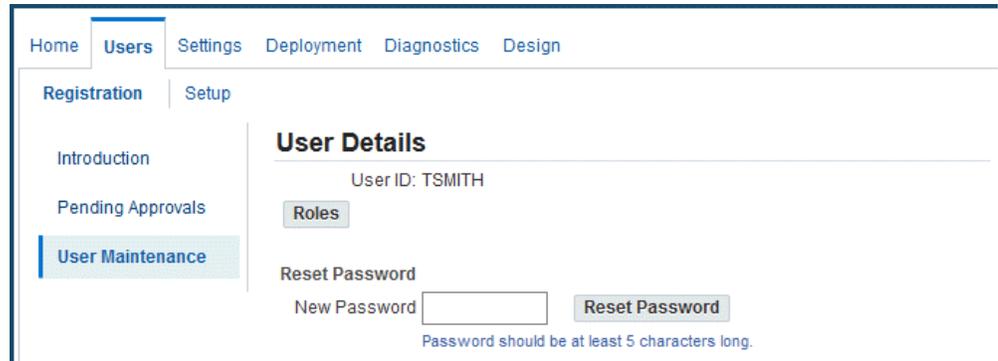
Oracle Complex Maintenance, Repair, and Overhaul Standard Setup

The CMRO standard setup involves assigning roles to AHL Super User, and setting up advanced properties and system profile options.

To assign roles and set up advanced properties:

1. Login to the Administration Console (CRM HTML Administration > Home).

2. Click the Users link on the Home page.
3. Click the User Maintenance link.
4. In the Users page, query for the user that has the AHL Super User responsibility.
5. Click the Go button.
6. Click the user name to navigate to the User Details page.



7. Optionally enter a New Password, and then click the Reset Password button.
8. Click the Roles button.
The User-Role Mapping page appears.
9. From the Available Roles column, select the following roles and move them to the Assigned Roles column:
 - AHL_ADMIN_ROLE
 - AHL_OSP_ROLE
 - AHL_USER_ROLE
 - CSI_ADMIN_USER
 - CSI_NORMAL_USER

User-Role Mapping

The screenshot shows the 'User-Role Mapping' page in the Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide. The page is titled 'User-Role Mapping' and is part of the 'Users' section. The navigation menu includes 'Home', 'Users', 'Settings', 'Deployment', 'Diagnostics', and 'Design'. The 'Users' section is further divided into 'Registration' and 'Setup'. The 'Setup' section includes 'Introduction', 'Pending Approvals', and 'User Maintenance'. The 'User Maintenance' section is currently selected.

The main content area is titled 'User-Role Mapping' and shows the 'Roles for the User : TSMITH'. It is divided into two columns: 'Available Roles' and 'Assigned Roles'. The 'Available Roles' list includes:

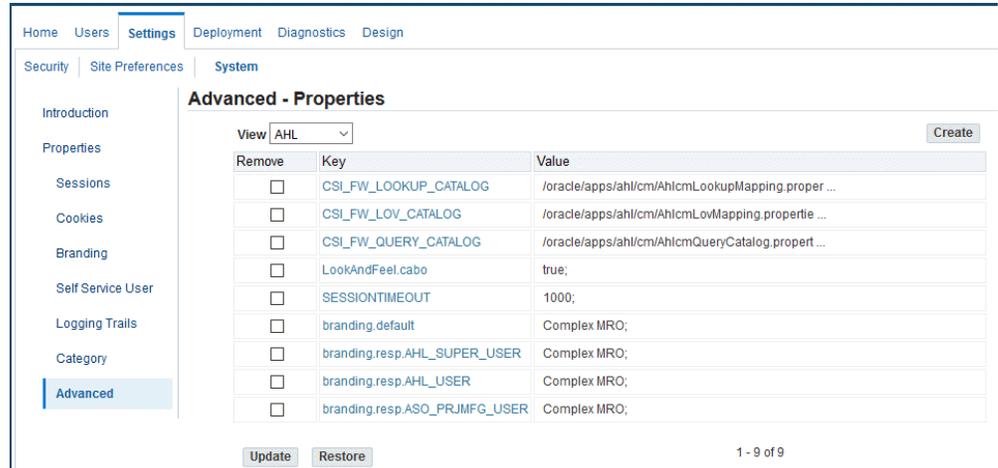
- AAAAATESTDUMMYROLE
- ADS ADMIN
- AHL_UC_QUARANTINE_ROLE
- ALAM_TEST_1
- CSE_NORMAL_USER
- CSI_CUSTOMR_USER
- CSI_CUSTOMER_USER
- CSI_DATA_MERGE_ROLE
- CSI_EIB_USER
- CSI_END_USER
- CSI_READ_ONLY_USER
- CSI_SALES_SUPER_USER
- CSI_SALES_USER
- CSS_DEF_ADMIN
- CSS_DEF_DEFECT_CUSTOMER_READ_ONLY
- CSS_DEF_DEFECT_INTERNAL_READ_ONLY
- CSS_DEF_DEFECT_KB_SUBMIT
- CSS_DEF_DEFECT_MASS_UPDATE_ADMIN
- CSS_DEF_DEFECT_MASS_UPDATE_REG
- CSS_DEF_DEFECT_MODIFY_USER

The 'Assigned Roles' list includes:

- AHL_ADMIN_ROLE
- AHL_FMP_SUPER_USER_ROLE
- AHL_MR_INIT
- AHL_OSP_ROLE
- AHL_PRD_UPDATE_DISP_ROLE
- AHL_USER_ROLE
- CSI_ADMIN_USER
- CSI_NORMAL_USER

There are four buttons between the lists: '>', '>>', '<', and '<<'. At the bottom of the page, there are two buttons: 'Update' and 'Restore'.

10. Click the Settings tab to set up the advanced properties.
11. Select the Properties folder, and then click the Advanced link.
The Advanced - Properties page appears.
12. Select AHL from the View list.
13. Click the *branding.default* value, and verify that the value is Oracle Complex MRO.



To set up the system profile options:

1. Navigate to the System Profile Values window (System Administrator > System Profiles).
2. Set up the system profile options as indicated in the table below.

System Profiles

Profile	Site (Value)	Descriptions
AHL: Application Usage Mode	Complex Maintenance Repair and Overhaul, Depot Repair, Preventive Maintenance	Set up the application usage mode.
AHL: Turn On Development Debug	Yes/No	Enable/disable debug session.
AHL: Turn on File Debug	Yes/No	

Additional Information: The Fleet Maintenance Program and Route Management modules enable users to define maintenance requirements and routes for both CMRO and Preventive Maintenance applications. Setting up the profile option AHL: Application Usage Mode determines the user responsibility. Users can view only the routes, maintenance requirements, or unit effectivities associated with the selected application usage mode.

Users can also define routes having the same number or maintenance requirements having the same title across different application usage modes.

Oracle CMRO Approval Workflow Setup

You can set up an Approval Workflow to approve maintenance programs, activities and routes. You can use the built-in Approval Workflow or you can create your own workflow, define a specific approval rule and create a list of approvers for each CMRO object. After setting up the profile options, if you do not specify an approval rule, the application uses the default approval rule.

The CMRO Approval Workflow setup includes:

- Setting up profile options.
- Creating approval users and roles.

Setting Up Profile Options

When you click the Advanced button, the maintenance programs, activities, and routes are automatically approved at creation. To set up an approval process, you must set up the system profile options as indicated in this table.

Profile Options

Profile	Value	Description
AHL: Enable approval workflow for Routes	Yes	This enables the approval workflow for the routes.
AHL: Enable approval workflow for Maintenance Requirement	Yes	This enables the approval workflow for maintenance programs and activities.
AHL: Workflow Loop Counter	Requires a numeric value that defines how many times the notification will be re-sent if the user does not respond.	-
AHL: Workflow Timeout Minutes	Requires a numeric value that defines the period after which a workflow times out when its progress is halted.	-

Creating Approval Users and Roles

To activate the enabled workflow, you must set up employees in Oracle Human Resources, create application users and define approval roles for these employees, and create approval rules for the different CMRO objects.

The following setup steps are dependent upon the use of the seeded approval workflow. If you decide to create your own workflow, you must adjust these steps to the functionality of this workflow.

Define Approval Employees in Oracle Human Resources

All approval users must be defined as employees in Oracle Human Resources.

Note: If you want to notify the approval user using email, then in addition to the application work list notification, you must also set up the email address for the employee in the Office Details window.

For more information on how to set up employees, refer to the *Oracle Human Resources Implementation guide*.

Create Application User for Approval Employees

All approval employees must have an Oracle Applications login. When defining an application users you must associate the approval employee, employee (set up in Oracle HR) to that application user.

Create Approval Roles

Associating the approval employees to a role is an optional step. If you have set up the employees in Oracle HR and created application users for them, you can associate the employees directly with an approval rule. You can set up the following two types of approval roles:

Create Default Approval Role

CMRO provides a seeded default approval rule that is used when no object specific approval rule is set up. The default approval rule should be used when the same people in the same hierarchy will approve all CMRO objects. In this case, you only have to set up one rule with one approval sequence. The default approval rule has also one approval hierarchy with a seeded role defined.

To set up the role for the default approval rule:

1. Navigate to the CRM Resource Manager responsibility, and then select Setup > Roles.
2. Click the Role Type field, and search for the JTF_RS_ROLE_TYPE value.
3. Create a role type code for the default approval role.

Application Object Library

Application Object Library: Resource Role Type Lookups

Type: JTF_RS_ROLE_TYPE
Meaning: Resource Role Type
Application: CRM Foundation
Description: This is used to define all the roles which can be assigned to

Access Level:
 User
 Extensible
 System

Code	Meaning	Description	Tag	Effective Dates		Enabled	[]
				From	To		
AHL GAPP	cMRO GAPP	cMRO Approver		22-OCT-2002		<input checked="" type="checkbox"/>	
AHLAPPR	cMRO Approver	Default cMRO Approver		22-OCT-2002		<input checked="" type="checkbox"/>	
AHLGAPPR	ASO Approver	ASO Approver		01-JAN-1951		<input checked="" type="checkbox"/>	
AMSAPPR	Default Marketing App	Default Marketing Appro		09-JAN-2001		<input checked="" type="checkbox"/>	
AMS_PEOPLI	AMS People	AMS People		01-JAN-1951		<input checked="" type="checkbox"/>	
AMS_VENUE	AMS Venues	AMS Venues		01-JAN-1951		<input checked="" type="checkbox"/>	
CALLCENTER	Callcenter	Callcenter		01-JAN-1951		<input checked="" type="checkbox"/>	
COLLECTION	Collections	Collections		01-JAN-1951		<input checked="" type="checkbox"/>	
CONTRACTS	Contracts	Contracts		01-JAN-1951		<input checked="" type="checkbox"/>	
CREDIT_MGM	Credit	Credit		01-JAN-1951		<input checked="" type="checkbox"/>	

4. Navigate to Setup > Roles.
5. Create a role with the code AHL_DEFAULT_APPROVER.

Note: The code must be defined as described or the default rule will not recognize this role. The role name can be user defined.
6. Associate the default approval role type code to this role.

Roles

Roles

Code AHL_DEFAULT_APPROVER

Name Complex MRO Default Approver

Type cMRO Approver

Member

Lead

Active

Admin

Manager

Seeded

Description Advanced Service Online Default Approver []

Jobs

Name

7. Create additional roles if you need more than one level of approval. The role codes can be user defined for the additional roles used for the default approval rule.

Note: For CMRO approval, only one user can be associated with a role, otherwise the approval workflow will fail. Therefore, you must create as many roles as you have approvers. The sequence of notification will be defined in the approval rule setup.

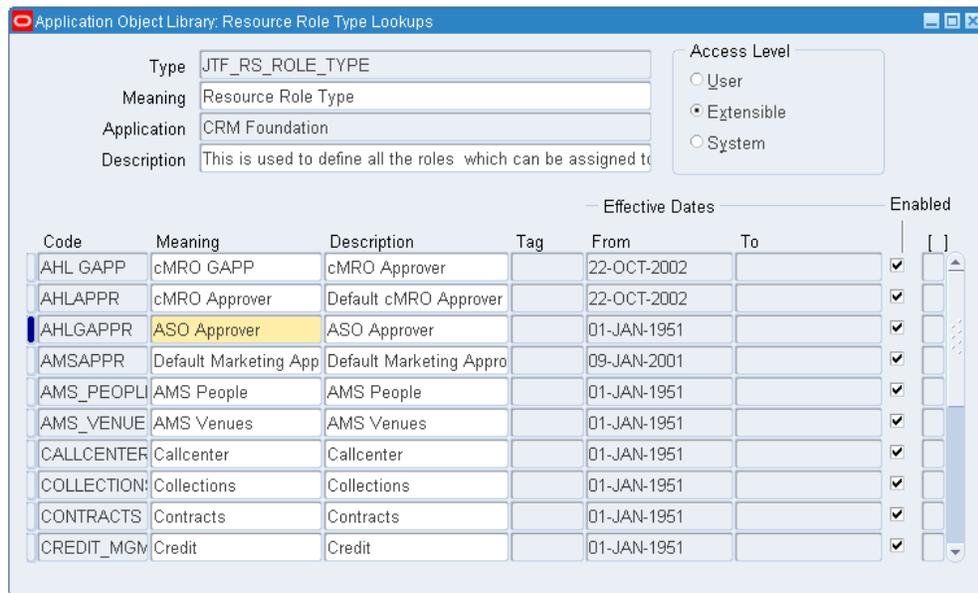
Create General Approval Role

Perform the following setup steps if you have specific approval rules for the different CMRO objects:

1. Navigate to the CRM Resource Manager responsibility, and then select Setup > Roles.
2. Query for the JTF_RS_ROLE_TYPE value.
3. Create role type codes for the General Approval roles.

Note: You can create multiple role type codes for grouping the roles together, but you must create at least one role type code.

4. Navigate to Setup > Roles. Create a role for every possible approver.
5. Associate the appropriate approval role type code to the roles.



Import Resources

After you have created the employees and the roles, you must map the two together.

Note: As previously mentioned, only one employee can be assigned as a workflow approver. However, the same employee can be the designated approver for multiple roles.

To import resources:

1. From the CRM Resource Manager responsibility, navigate to Maintain Resources > Import Resources.
2. Select the approval employee. Click the Search button.
3. Click Create Resource. Select the appropriate role.
4. Click OK. Click Save Resource.

Selection Criterion

The image shows two overlapping software windows. The top window, titled 'Select Resources to Import', has a 'Selection Criteria' section with a 'Resource Category' dropdown set to 'Employee'. It contains several input fields: 'Number' (169), 'Name' (Smith, Mr. Terry), 'Organization', 'Competencies', 'Scale', 'Job Title', 'Level: Max', 'Min', and 'Scale Level'. There are 'Search' and 'Clear' buttons. Below this is a 'Search Results' section with 'Select All' and 'Select None' buttons. The bottom window, titled 'Set Resource Attributes', has a 'Default Values' section with fields for 'Start Date' (04-JUN-2013), 'End Date', 'Managing Employee', 'Role' (Advanced Service Online Approver), 'Role Type' (cMRO GAPP), 'Role Start Date' (04-JUN-2013), and 'Role End Date'. It also has a 'Salesperson' section with a checkbox for 'Create Sales People', 'Operating Unit', and 'Sales Credit Type'. Both windows have 'Ok' and 'Cancel' buttons at the bottom.

5. Click the Details button to associate this employee with an additional role.
6. Repeat these steps for all approval employees.

Create Approval Rules in CMRO

You can use the seeded default approval rule, or specify an object-specific approval rule for the different CMRO objects. In the approval details, you can pick a role that you have set up, or a user that has been created as an employee in HR and associated with an application login. The sequence in the approval details defines the approval hierarchy.

To adjust the default approval rules:

1. Login to the JTF environment of CMRO.
2. Click the Administration link.
3. Click the Go button.
4. Click the Default AHL Rule link.

5. Add any additional roles or users to the approval details in sequence that you want the objects to be approved.

Note: The first role is seeded. You can change the hierarchy or delete the seeded role if necessary.

6. Click the Apply button.

Note: Do not add any values to the operating unit attribute. Custom values are currently not supported by CMRO and would cause the workflow to fail. Also, you cannot change the status of the default rule once it is set to Obsolete.

To define object specific approval rules:

1. Login to CMRO.
2. Click the Administration link.
3. Click the Workflow tab.
4. Click the Approval Rules link.
5. Click the Create button, and the Create Approval Rule page appears.

Create Approval Rule

The screenshot shows the 'Create Approval Rule' page. At the top, there are navigation tabs: 'Workflow', 'Planning Setup', 'OSP', 'Analytics Setup', and 'Reports'. Below these are 'Process Mapping' and 'Approval Rules' links. The main heading is 'Create Approval Rule'. There are 'Cancel' and 'Apply' buttons at the top right. A note says '* Indicates required field'. The 'Approval Rule Info' section includes: 'Approval Rule Name' (text input), 'Application Usage' (dropdown menu with 'Complex Maintenance Repair and Overhaul' selected), 'Approval Rule For' (dropdown menu with 'AOG Flag' selected), 'Operating Unit' (text input with a search icon), 'Start Date' (calendar icon), and 'End Date' (calendar icon). There is also a 'Description' text area. 'Cancel' and 'Apply' buttons are at the bottom right.

6. Enter the Approval Rule Name (required).
7. Select Complex Maintenance, Repair, and Overhaul in the Application Usage field (required).
8. Select the required value from the Approval Rule For drop-down list.

9. (Optional) Select an Operating Unit.
10. Enter the Start Date (required).
11. (Optional) Enter a Description.
12. Click the Apply button.
13. Add roles or users to the approval details in the sequence in which you want your objects to be approved.
14. Select Active from the Status drop-down list.
15. Click the Apply button.

Map Workflow Process

The final step in the approval workflow setup is to map the object with a workflow. Oracle recommends that you use seeded workflow that is delivered with CMRO. If you invoke a customized workflow, it may interfere with the CMRO Deferral workflow. The CMRO Deferral may be performing several background processes or integration required for the standard functionality. If you try to replace this workflow with a customized one, the deferral functionality is affected.

To map the workflow with the CMRO object:

1. Login to CMRO Super User.
2. Click the Administration link.
3. Click the Workflow tab.
4. Click the Process Mapping link.
5. If you want to use the same workflow for all of your objects, leave the object field empty; otherwise, select the object that you want to add from the drop-down list.
6. Define the desired workflow in the Process Name field.
The CMRO default workflow is called ASO Generic Approval Process.
7. Select Complex Maintenance, Repair, and Overhaul from the Application Usage drop-down list box.
8. Select Yes or No from the Active list box.

The screenshot displays the 'Workflow Process Mapping' screen in Oracle. At the top, there are navigation tabs for 'Workflow', 'Planning Setup', 'OSP', 'Analytics Setup', and 'Reports'. Below these are 'Process Mapping' and 'Approval Rules'. The main title is 'Workflow Process Mapping'. There are 'Cancel' and 'Apply' buttons in the top right. Below the title, there's a section for 'Select any Workflow Mapping for removing' with a 'Remove' button and pagination for '1-10 of 15' items. The main table has the following structure:

Select	Process Name	Application Usage	Object	Active
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Product Classification Workflow	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Operations	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Unit Configuration	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Maintenance Requirement	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Master Configuration	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Routes	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Master Configuration - Item Composition	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Master Configuration- Item Groups	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Unit Configuration-Active Status	Yes
<input type="checkbox"/>	ASO Generic Approval Process	Complex Maintenance Repair and Overhaul	Unit Configuration- Access Control List	Yes

At the bottom, there is an 'Add More Rows' button and another 'Select any Workflow Mapping for removing' section with 'Remove' button and pagination for '1-10 of 15' items. 'Cancel' and 'Apply' buttons are also present at the bottom right.

9. Click the Apply button.

Create the Approval Workflow

When a maintenance program, activity or route is sent for approval, the user defined in the approval role is notified by email, if it has been set up at employee creation, or with an entry in the Worklist in Oracle Applications.

From the notification, the user can navigate to the notification details and approve the program, activity or route. The workflow moves sequentially through all of the roles defined in the approval rules details until the last user has sent his approval. After the last approval has been sent, the status of the approved object will be changed from Approval Pending to Complete.

Oracle CMRO Module Setup

Oracle Complex Maintenance, Repair, and Overhaul enables maintenance organizations to meet customer expectations, and draw maximum benefit by improving the operational readiness of equipment.

Oracle CMRO Module setup includes:

- Setting Up Auto Visit Scheduling and Auto-Packaging, page 2-87
- Setting Up Complex Assembly Maintenance, page 2-96
- Setting Up Document Index, page 2-99
- Setting Up Route Management, page 2-101

- Setting Up Master Configuration, page 2-107
- Setting Up Unit Configuration, page 2-109
- Setting Up Fleet Maintenance Program, page 2-115
- Setting Up Unit Maintenance Plan, page 2-117
- Setting Up Visit Work Package, page 2-120
- Setting Up Planning, page 2-125
- Setting Up Production, page 2-127
- Administrative Setup, page 2-135

Setting Up Automatic Visit Scheduling and Auto-Packaging

The automated visit forecasting process is a tool for the maintenance planners to group maintenance requirements together to support both a rough-cut visit plan as well as an operational maintenance plan (Primary Plan), based on a maintenance organization. This enables the planner to approach the plan and focus on the exceptions for both short and long term planning. This feature is used primarily for heavy maintenance such as letter checks and modifications. It is typically used to forecast 12-18 months into the future.

There are two components to the Auto Visit Planning process:

- Process Flight Visit Schedules API (Short Term Planning)
- Create Primary Visits (Long Term Planning)

Important: Only visits with a status of Planning can be used with this feature.

This functionality will improve the creation and scheduling of visits for both line and base maintenance.

For base maintenance, there is a new Autovisit Planning Workbench where users can define a processing hierarchy by master configuration, program type, subtype and a date range. The user can then launch and monitor concurrent programs which will:

- Create new visits based on Primary Visit MRs.
- Cancel existing visits.
- Add UMP MRs to existing visits.

For line maintenance, users can define parameters for creating operational visits based off the flight schedule and maintenance capability of arriving and departing stations. The user can define both generic and specific parameters for flights which will:

- Create pre and post-flight visits.
- Create transit checks which will span an aircraft's downtime duration.
- Adjust visits based on flight changes.
- Cancel visits based on flight cancellations and re-routes.
- Notify users of changes to specific visits and flight associations.

This section includes the following topics:

- Defining Service Categories, page 2-88
- Defining Flight Categories, page 2-89
- Defining Visit Type Lookups, page 2-90
- Defining Visit Type Profiles, page 2-91
- Defining Primary Maintenance Requirements, page 2-92

Defining Service Categories

You must define service categories that will be used with the Autovisit creation and fleet forecasting processes. The service category is the highest level of service that the department can perform. Therefore, the department can accomplish this level of service as well as any lower valued service. The service category lookups must use a numerical value: 1 is the highest.

Note: If the service category is not defined for the maintenance requirement, then the system will assume that the MR can be accomplished at any department.

There are 6 seeded values that are extensible which can be edited for your use:

- 1: Category 1
- 2: Category 2
- 3: Category 3
- 4: Category 4

- 5: Category 5
- 6: Category 6

Relationship of Department Service Categories and Maintenance Requirements

If a Department is assigned 2: Category 2, then it will have a ranking of 2. This means that a department can provide service for category 2 and *below*.

However, there is an *inverse* relationship with the department's service category and the department's capability to perform maintenance.

For example, an MR has been defined with a Service Category of 2. This MR requires that the department must have a service category of **at least** 2 to perform this level of work. Therefore, any department that has a category of 2 or 1 can accomplish this MR.

Examples

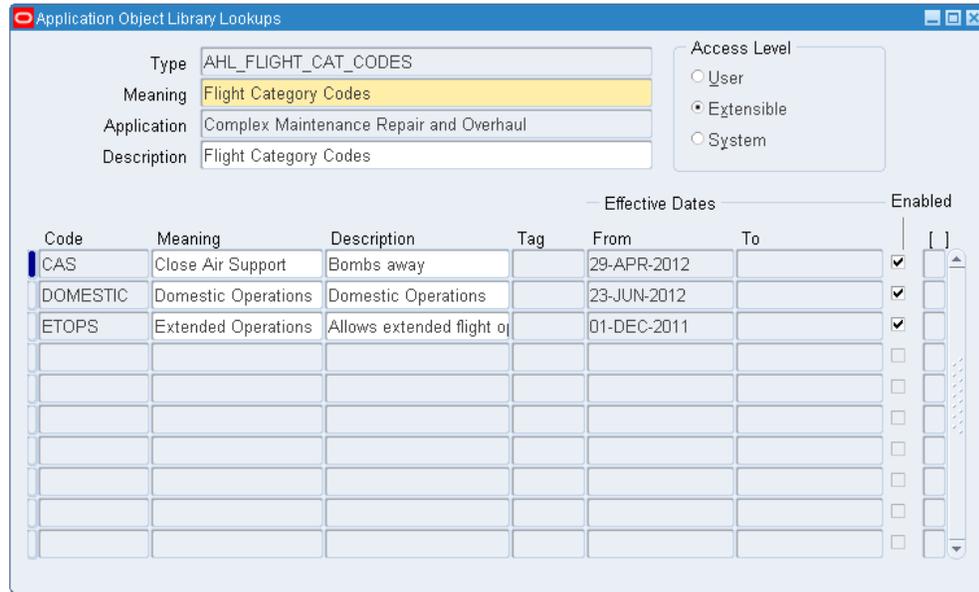
- Category 3 MR: Can be accomplished in departments with a service category of 3, 2, or 1.
- Category 1 MR: Can be accomplished in departments with a service category of 1 only (highest value).
- Category 6 MR: Can be accomplished in departments with a service category of 6, 5, 4, 3, 2, or 1.

Defining Flight Categories

You must set up the Flight Category attribute that is used in the Flight API. This attribute will be used in the Create Operational Visits page.

1. Navigate to the Application Object Library Lookups page (Application Developer > Application > Application Object Library).
2. Search for the AHL_FLIGHT_CAT_CODES value in the Type field.

Verify that the seeded ETOPS code exists. This flight category code is used with the AutoVisit Planning feature.



3. If the ETOPS code does not exist, add it using the following values:
 - Code: ETOPS
 - Meaning: Extended Operations
 - Description: Allows extended flight operations of 120 minutes or greater
4. Save your work.

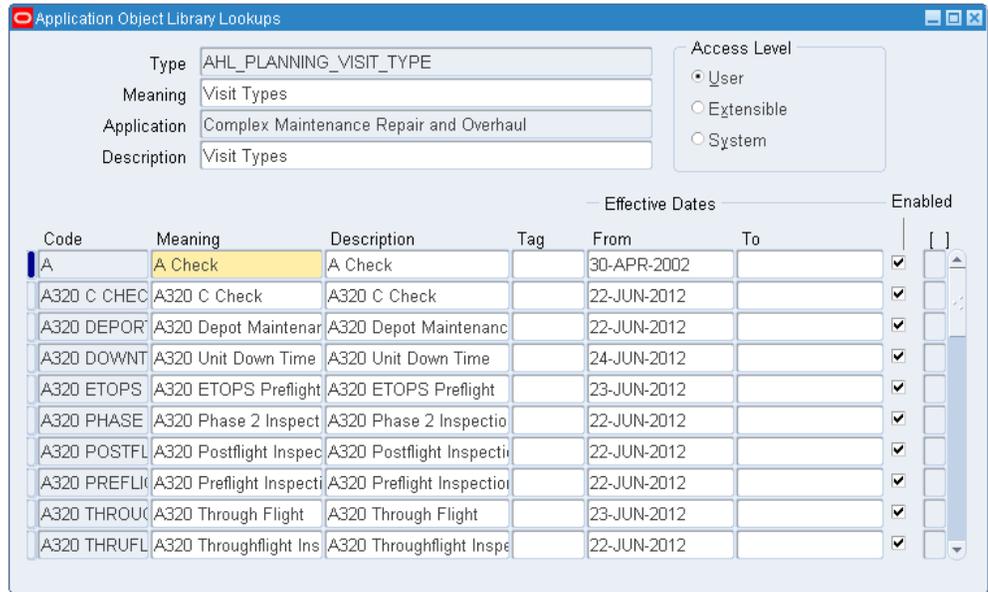
Defining Visit Type Lookups

Visit type lookups can be created for specific master configurations and should be created in such a way that the defined stage and unplanned estimates apply to all relevant maintenance requirements.

Visit types are often created for the primary heavy maintenance requirements, which determine the basic duration and structure of the visit, and are used as scheduling opportunities for many other smaller requirements. Visit types may also be created to represent other maintenance events such as transit visits or overnight repairs.

To define visit type lookups:

1. Navigate to the Application Object Library Lookups page (Application Developer > Application > Application Object Library).
2. Search for the AHL_PLANNING_VISIT_TYPE type.



3. Click the **Add** button to add new visit types.

Define each visit type to include:

- Code
 - Meaning
 - Description
 - From Effective Date (required)
 - To Effective Date (optional)
4. Save your work.

Defining Visit Type Profiles

Visit types profiles are used to build maintenance visit templates during the planning process and identify default the visit duration, the stages in which the maintenance will be accomplished, and any unplanned requirement estimates.

Visit types are created for specific master configurations, representing a known type of maintenance event with a rough idea about expected work scope, visit duration and visit structure. Use the Create Visit Types page to define visit type profiles; use the Edit Visit Types page to edit existing visit type profiles.

1. Navigate to the Create Visit Types page (Administration > Visit Types > Visit Types).

2. Click the **Create** button, and the Create Visit Types page appears.
3. Select or enter values for these fields:
 - Visit Type (required)
 - Description (optional)
 - Transit Type - select if the visit type is for transit (optional)

Important: Do not select the Component Type check box for the Auto Visit Planning process.

- Master Configuration (required for non transit and component types)
4. (Optional) Enter a stage number.
 5. Enter a stage name.
 6. (Optional) Enter the duration of each stage (in hours).

The total hours for the stages will be reflected in the Duration field on the page.

Visit Type: _____ Documentation: _____ Master Configuration: MBMC1
 Description: _____ Documentation purposes: _____ Duration: 3 Hours
 Transit Type Status: Draft
 Component Type

Details	Stage Number	Stage Name	Duration (Hours)	Stage Type	Remove
Show	1	Receipt	0.5		
Show	2	Removal of part	1		
Show	3	Replacement of part	3		

Add a Stage

7. Save your work.

See Visit Work Packages for more information regarding stages.

Defining Primary Maintenance Requirements

Define the primary maintenance requirements.

1. Use the Create Maintenance Requirements page (Engineering > Fleet Maintenance Program > Overview > Create) to create primary MRs that will be used by the Autocreate Visit process to automatically create maintenance visits.

2. Enter or select values for the following required fields:

- Title
- Category
- Program Type: This field will be used by the Autovisit process to create primary visits.
- Implement Status: Select Mandatory. Only MRs with an Implement Status of Mandatory are used during the Autovisit create process.
- Repetitive
- Whichever comes
- Effective from
- Program Subtype: This field will be used by the Autovisit process.
- On Wing
- Service Category: This field is used by the Autovisit UE assignment process to evaluate if a visit department is capable of performing the MR.

Defining Maintenance Organizations Used in Auto Visit Planning

The Create Primary Visits process will create new visits based on Unit Effectivity records that originate from Primary MRs. The maintenance organizations where an MR

can be accomplished are defined in the MR definition. These definitions will be used in the Auto Visit creation process to set the maintenance organization and department in the visit header.

Important: The maintenance organization must be defined to create a visit using the Auto Visit process.

Use the Update Maintenance Requirement page (Engineering > Fleet Maintenance Program > Overview) to define the maintenance organization for the MR that will be used during the Autovisit create process.

The maintenance organizations in an MR can be defined in one of these two ways:

- Based on the Operating Organization: The appropriate maintenance organization and maintenance department can be defined during fleet creation.

Note: There can be only **one** maintenance organization and maintenance department defined per operating organization.

- Not Based on the Operating Organization: The maintenance organization and maintenance department are defined regardless of the operating organization.

Defining a maintenance organization:

1. Navigate to the Update Maintenance Requirement page (Engineering > Fleet Maintenance Program > Overview) to define the maintenance organization for the MR that will be used during the Auto Visit create process.
2. Select or enter values in one of these fields:
 - Organization
 - Master Configuration
 - Visit Type
3. You can also optionally select a Flight Category to further narrow your search.
4. Click the Go button to retrieve the MRs that meet the search criteria.

The following conditions apply to maintenance organization definitions:

- There can only be one maintenance organization and department defined per operating organization. However, multiple operating organizations can be set up for different regions of operations.
- There can be a single row created that defines a maintenance organization and department, regardless of the Operating Organization for the UE.

Important: Only one maintenance organization row will display.

Defining Maintenance Departments

The Department capabilities can be defined for a maintenance department and will be applied to a visit as the Service Category attribute. These capabilities can then be used by the Auto Visit process to evaluate if an MR can be scheduled to an existing visit.

1. Navigate to the Search Department Locations page (Administration > Planning Setup > Department Location > Search for the department).

The Search Department Location page appears.

2. Click the Edit button for the department that you want to update, and the Update Department Location page appears.

The screenshot shows the 'Update Department Location' form. The form is titled 'Update Department Location' and has 'Cancel' and 'Apply' buttons. It contains several fields: Organization (DFW Maintenance Center US), Department (Base Maintenance, DFW), Calendar (Vision 01), Shift Number (5), Start Time (00:00), End Time (11:59), Work Days (7 Days), Days On (7), Days Off (0), Max Service Category (dropdown), Latitude, and Longitude. There are also fields for Sub Inventory and Physical Locator, and a Description text area. A note at the bottom right states: 'Geocode attributes Latitude and Longitude must be in specified format (example: 44.756530 -91.473097)'.

3. (Optional) Select or enter new values for these fields:

- Calendar
- Sub Inventory and Physical Locator
- Shift Number
- Work Days (pattern - associated to the Shift Number)

4. (Optional) Select a value in the Max Service Category field.

The Max Service Category is the highest level of service that the department can perform. Therefore, the department can accomplish this level of service as well as any lower valued service. The service category lookups must use a numerical value: 1 is the highest.

The seeded values are:

- 1: Category 1

- 2: Category 2
- 3: Category 3
- 4: Category 4
- 5: Category 5
- 6: Category 6

Note: If a Max Service Category is not defined for a department, then the department will be able to accomplish all levels of maintenance, and will be assigned to MRs of any service category.

See *Defining Service Categories, Oracle Complex Maintenance, Repair, and Overhaul Process Guide* to select the correct user-defined value.

5. If you do not select a Max Service Category, the system will deem that the department can accomplish all levels of maintenance, and will assign MRs with any service category.
6. Click the Apply button to save your work.

Setting Up Complex Assembly Maintenance

This section contains the setup tasks required to use the complex assembly maintenance feature.

Prerequisites for Complex Assembly Maintenance

Perform the following setup tasks to use the complex assembly maintenance feature.

Prerequisite Setup Task	Role Performing Task	Navigation
1. Define AHL lookups for: <ul style="list-style-type: none"> • Visit Types • Service Category • Program Type • Program Subtype 	Engineering	Application Developer > Application > Lookups > Application Object Library

Prerequisite Setup Task	Role Performing Task	Navigation
<p>2. Define Visit Type profiles.</p> <ul style="list-style-type: none"> Define the duration for the visit. 	Engineering	Administration > Planning Setup > Visit Types
<p>3. Define the maintenance organization.</p>	Engineering	Engineering > Fleet Maintenance Program > Overview > Update Maintenance Requirement > Maintenance Organizations
<p>4. Define maintenance department and space capabilities.</p> <ul style="list-style-type: none"> Define the Max Service Category values. Define department spaces. <p>Define space capabilities by adding master configurations and visit types.</p>	Engineering	<p>Administration > Planning Setup > Department Location > Create (B)</p> <p>Administration > Planning Setup > Department Location > Edit Department Location</p> <p>Administration > Planning Setup > Spaces</p>
<p>5. Create master configurations, unit configurations, and product classifications.</p>	Engineering	<p>Configuration > Master Configuration > Overview > Search Master Configuration > Create (B)</p> <p>Configuration > Unit Configuration > Search Unit > Search Unit Configuration > Create (B)</p> <p>Configuration > Product Classification > Overview > Search Product Classification > Create (B)</p>
<p>6. Define primary fleets, unit composition and utilization.</p>	Engineering	Planning > Fleet Forecasting

Prerequisite Setup Task	Role Performing Task	Navigation
<p>7. Define department spaces.</p> <ul style="list-style-type: none"> Add the Master Configuration item and Visit Type. 	Engineering	Administration > Planning Setup > Spaces > Search Spaces > Create (B)
<p>8. Create the fleet maintenance program and define maintenance requirements.</p> <ul style="list-style-type: none"> Define tolerance before and after thresholds. Define Min Service Category. Setup Primary visit MRs and define: <ul style="list-style-type: none"> Single visit type for mandatory MRs. Operating organization or maintenance organization and department. Program Type and Program Subtype 	Engineering	Engineering > Fleet Maintenance Program > Overview > Search Maintenance Requirement > Create (B)
<p>9. Create the maintenance forecast.</p> <ul style="list-style-type: none"> Initialize MRs. Run the Build Unit Effectivities (BUE) program. 	Engineering	-

Prerequisite Setup Task	Role Performing Task	Navigation
10. Analyze the maintenance history using Demantra to generate non-routine estimates.	Reliability Engineer	-
11. Update MR NR Profile using the latest non-routine estimates.	Reliability Engineer	Planning > Unit Maintenance Plan > Non-routines > Search Non-routine > Update (icon) Update Non-Routine
12. Update the BOM calculations in ASCP to include the latest non-routine estimates.	Reliability Engineer	-
13. Generate non-routine removal rates (Mean Time Between Unscheduled Removal [MTBUR]) for complex assemblies.	Reliability Engineer	-
14. Consider customer non-routine removal analysis and planned removal forecast as input.	Customer	Planning > Unit Maintenance Plan > Non-routines > Search Non-routine > Update (icon) Update Non-Routine

Setting Up Document Index

The Document Index module in Oracle Complex Maintenance, Repair, and Overhaul is the central repository for managing all maintenance documents.

Maintenance personnel can:

- Access an online catalog of documents used in maintenance, repair, and overhaul operations.
- Receive, distribute, and control revisions in technical documentation.
- Search the database to quickly refer to a document.
- Create new documents or document revisions.
- Associate subtypes to document types for easy identification.

- Upload electronic documents.

Maintenance document management involves tracking documents and their revisions, validating document references from multiple levels of maintenance operations, and making them easily accessible to the maintenance personnel.

Setting up Document Index includes defining the lookup values as indicated.

Note: Lookup codes fall within three categories: extensible, user defined, and system defined. If a lookup code is extensible, the existing lookup codes cannot be modified, but new codes can be added to the table. If lookup codes are user defined, all codes can be modified. If lookup codes are system defined, the existing codes cannot be modified, and new codes cannot be added to the table.

To define lookups for Document Index:

1. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
2. Define the lookups as outlined in this table.

Attribute	Lookup	Suggested Values	Access Level
Operator	AHL_OPERATOR_TYPE	Operator, Owner (User defined)	User
Document Type	AHL_DOC_TYPE	Aircraft, Engine (User defined)	Extensible
Media Type	AHL_MEDIA_TYPE	E-File, CD-ROM, On-line, Paper	Extensible
Status	AHL_SUBSCRIBE_STATU S_TYPE	Active, Not available	User
Sub-Type	AHL_DOC_SUB_TY PE	Airworthiness Directives, Service Bulletin	User
Revision Type	AHL_REVISION_TY PE	Temporary Revision, Full Revision	User

Attribute	Lookup	Suggested Values	Access Level
Frequency Type	AHL_FREQUENCY _TYPE	Quarterly, Weekly, Yearly	User

Application Object Library Lookups Window

Code	Meaning	Description	Tag	From	To	Enabled
AIRCRAFT	Aircraft	Aircraft		24-JAN-2002		<input checked="" type="checkbox"/>
COMPONENT	Component	Component		24-JAN-2002		<input checked="" type="checkbox"/>
ENGINE	Engine	Engine		24-JAN-2002		<input checked="" type="checkbox"/>
GROUND SUP	Ground Support Equip	Ground Support Equipm		24-JAN-2002		<input checked="" type="checkbox"/>
LOCOMOTIVE	Locomotive	Locomotive		04-FEB-2002		<input checked="" type="checkbox"/>
MATERIAL CA	Material Catalog	Material Catalog		24-JAN-2002		<input checked="" type="checkbox"/>
QUALITY ASS	Quality Assurance	Quality Assurance		04-FEB-2002		<input checked="" type="checkbox"/>
TANK	Ground Combat Vehic	Ground Combat Vehicle		04-FEB-2002		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

Setting Up Route Management

The Route Management module in Oracle CMRO provides a single interface to manage all maintenance tasks.

Maintenance personnel can:

- Prepare and maintain work instructions.
- Search the database for a specific operation to view or edit.
- Search for tasks to be performed based on the Maintenance Technician role of Heavy Maintenance and Engine-Shop Technician, Line and Transit Maintenance Technician, and Data Clerk.

For more information regarding the Maintenance Technician role, *Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.

- Create an operation or define instructions to perform a maintenance task.

- Search for maintenance routes to view or edit routing information.
- Create a maintenance route.
- Associate major and sub zones in a system to a product type to facilitate tracking of maintenance operations on complex electromechanical systems.

The intuitive user interface of Oracle CMRO is designed to enable maintenance personnel to handle operational needs as effortlessly and quickly as possible.

Before setting up route management, you must ensure that:

- ASO Resource is set up.
- BOM Resource is set up.

Setting up route management includes:

- Defining lookup values.
- Setting up key flexfields.
- Setting up descriptive flexfields.

To define lookups for route management

1. Access the Application Developer responsibility.
2. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
3. Define the lookups as outlined in this table.

Attribute	Lookup	Suggested Values	Access Level
Operation Type	AHL_ROUTE_TYPE	Aircraft, Engine, Ground support	User
Major Zone	AHL_ZONE	Cargo Compartment, Cockpit	User
Sub Zone	AHL_SUB_ZONE	AFT Fuselage, Cabin	User
Status Type	AHL_SUBSCRIBE_S TATUS_TYPE	Active, Available	User

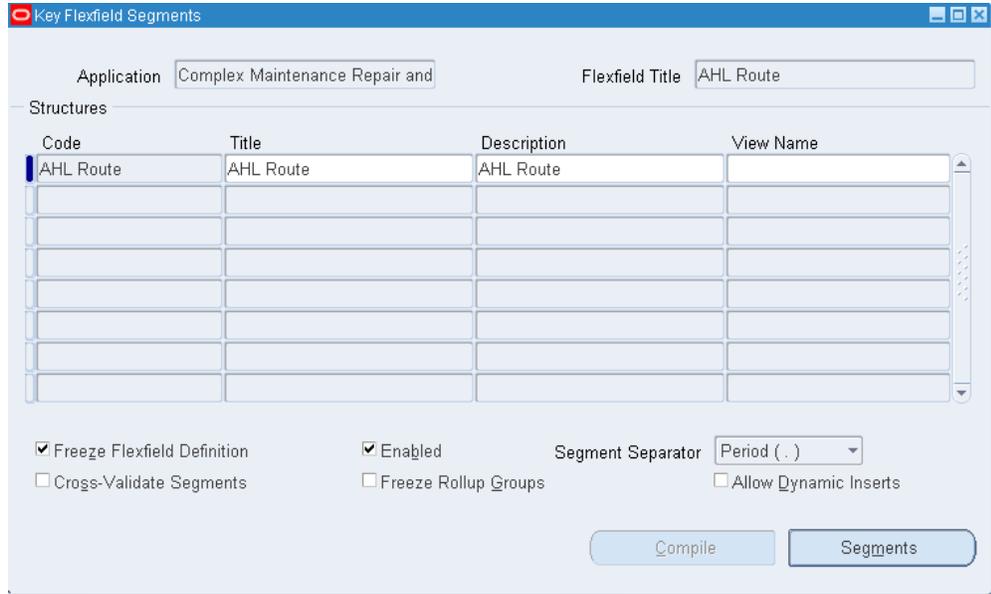
Attribute	Lookup	Suggested Values	Access Level
Sub-Type	AHL_DOC_SUB_TY PE	AD, SB	User
Revision Type	AHL_REVISION_TY PE	Temporary, Full Version	User
Process	AHL_PROCESS_CO DE	Access, Cleaning, Close	User

To set up key flexfields

To enable route management, you must set up a key flexfield to define the System attribute.

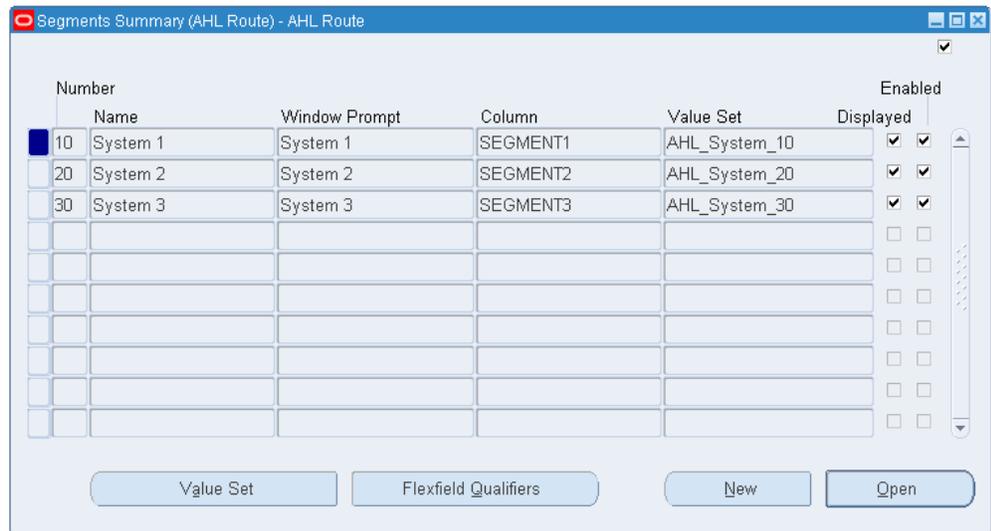
Validate Existence of Route Flexfield

1. Access the Application Developer responsibility.
2. Navigate to Flexfield > Key > Segments.
3. Query for the AHL Route in the Flexfield Title field.



Add segments to this flexfield

1. Click the **Segments** button to add segments to this flexfield.
2. Enter information for the System flexfield segment.



Create Value Sets to be used by Flexfield Segments

1. Click the **Value Set** button.
2. Define a value set name.
3. Select List of values from the List Type drop-down list.

4. Select No Security in the Security Type drop-down list.
5. Select Char in the Format Type drop-down list.
6. Select Independent in the Validation Type drop-down list.

The screenshot shows the 'Value Sets' configuration window. The 'Value Set Name' is 'AHL_System_10' and the 'Description' is 'AHL_System_10'. The 'List Type' is 'List of Values' and the 'Security Type' is 'No Security'. Under 'Format Validation', the 'Format Type' is 'Char', 'Maximum Size' is '30', and 'Precision' is empty. There are three checkboxes: 'Numbers Only (0-9)', 'Uppercase Only (A-Z)', and 'Right-justify and Zero-fill Numbers (0001)'. 'Min Value' and 'Max Value' are empty text boxes. Under 'Value Validation', the 'Validation Type' is 'Independent'. There are 'Usages' and 'Edit Information' buttons.

7. Update the flexfield segments with the value sets.

Create values for Value Sets

1. Navigate to Flexfield > Key > Values.
2. Find the value sets for the system flexfield.

Segment Values

Value	Translated Value	Description	Enabled	From	To	[]
Air Conditioning	Air Conditioning	Air Conditioning	<input checked="" type="checkbox"/>			.
Communication	Communication	Communication	<input checked="" type="checkbox"/>			.
Flight Control	Flight Control	Flight Control	<input checked="" type="checkbox"/>			.
Hydraulic	Hydraulic	Hydraulic	<input checked="" type="checkbox"/>			.
Navigation	Navigation	Navigation	<input checked="" type="checkbox"/>			.
			<input type="checkbox"/>			.
			<input type="checkbox"/>			.

3. Add the desired values to the value set.

To set up descriptive flexfields

Validate existence of Route Flexfield

1. Access the Application Developer responsibility.
2. Navigate to Flexfield > Descriptive > Segments.
3. Query for Flexfield Title AHL_ROUTES_B. Query should return the record.

Add segments to this flexfield

1. Click the **Segments** button.
2. Enter the records for the System flexfield segment.
3. Select the Enable check box.

Perform the following steps only if a relevant value set is not defined.

Create Value Sets to be used by Flexfield Segments

1. Click the **Value Set** button.
2. Enter the value set name.

3. Select List of Values as the list type.
4. Select No Security as the security type.
5. Select one of these options in the Format Type field:
 - Char
 - Number
 - Date
6. Select Independent in the Validation Type drop-down list.
7. Update the flexfield sets with the value sets.

Create values for Value Sets

1. Navigate to Flexfield > Descriptive > Values.
2. Find the value sets for the system flexfield.
3. Add the desired values to the value set.

Compile the Flexfields

1. Click the **Compile** button to compile the flexfields.
2. Select the Freeze check box, if it is not checked. (This check box is also used for editing flexfields. To edit, clear this check box and then proceed.)

Setting Up Master Configurations

The Master Configuration module in Oracle CMRO provides models of electromechanical system assemblies. A master configuration model will form the basis of a unit in combination with business rules that specify the systems and subsystems that may be included in the assembled unit.

Maintenance personnel can:

- Search the database for master configurations of electromechanical system assemblies.
- Create system assembly master configurations.
- Create a Minimum Equipment List (MEL) and a Configuration Deviation List (CDL) for equipment.
- Search for alternate parts that may be used in place of specified components in an assembly.

Before setting up the Master Configuration module, you must ensure that:

- Inventory (Item Master) setup is complete.
- Approval Workflow is set up (This step is optional if the user selects the default approval workflow).

Setting up the Master Configuration includes defining the lookup values.

To define lookups for the master configuration module:

1. Access the Application Developer responsibility.
2. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
3. Define the following lookups.

Attribute	Lookup	Suggested Values	Access Level
Rule code (Position ratio list)	AHL_COUNTER_RULE_TYPE	Bird Strike, Heavy Landing	User
Alternate Part Interchangeability Type	AHL_INTERCHANGE_ITEM_TYPE	1-Way, 2-Way, No Interchange, Superseded By	Extensible
Position reference	AHL_POSITION_REFERENCE	Forward, Inboard, Left, Lower, Outboard, Position 1, Position 2, Position 3, Right, and Upper	User

Application Object Library Lookups

Code	Meaning	Description	Tag	From	To	Enabled
AFT BURN	After burner	After burner		04-FEB-2002		<input checked="" type="checkbox"/>
BIRD STRIKE	Bird strike	Bird strike		04-FEB-2002		<input checked="" type="checkbox"/>
HEAVY LAND	Heavy Landing	Heavy Landing		04-FEB-2002		<input checked="" type="checkbox"/>
HIGH ALTITUDE	High Altitude Takeoff	High Altitude Takeoff		04-FEB-2002		<input checked="" type="checkbox"/>
STANDARD	Standard	Standard Counter Rule		20-JUN-2001		<input checked="" type="checkbox"/>
STANDARD C	Standard Counter Rule	Standard Counter Rule		04-FEB-2002		<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

Setting Up Unit Configurations

The Unit Configuration module in Oracle CMRO enables organizations to describe the structure of an assembled electromechanical system. The as-constructed configuration of an assembly will determine the specific maintenance program required to ensure the operational readiness of that unit.

This module also enables CMRO personnel with super user security to quarantine a unit configuration after an aircraft accident.

Maintenance personnel can:

- Initiate proper maintenance activities to resolve issues.
- Create unit configurations from existing master configurations.
- Create an MEL or CDL for affected unit configurations.
- Search for unit configuration records that exist in the database.
- Add new part information to the database.
- View and update existing part information.

The Unit Configuration module in Oracle CMRO is a key feature that enables maintenance organizations to determine services required. Even if two units have the same part number, or belong to the same product family, their configurations are

normally different due to the operation and maintenance history of each unit. The Unit Configuration provides models of individual tracked parts to support unit-specific information.

Before setting up the Unit Configuration module, you must ensure that the Master Configuration module is set up and products are available for association at the unit level.

Setting up the Unit Configuration includes setting up attributes as indicated below.

To set up attributes

1. Change responsibility to Oracle Install Base Administrator.
2. Click Setups > Extended Attribute Template. The Extended Attributes window appears.
3. Set up the attributes as indicated in the table below.

Extended Attributes Window

Attribute Code	Attribute Name	Description
AHL_MFG_DATE	AHL_MFG_DATE	AHL_MFG_DATE
AHL_TEMP_SERIAL_NUM	AHL_TEMP_SERIAL_NUM	AHL_TEMP_SERIAL_NUM

4. Save your work.

Overview of Minimum Equipment Lists (MEL) and Configuration Deviation Lists (CDL)

The MEL and CDL functionality identifies equipment, as opposed to structural items, that can be inoperative or missing on aircraft—but still enable the aircraft to maintain airworthiness. This includes items such as radios, seats, lights, air conditioning, heaters, and indicators—but not structural items such as engines or controls. These items are called provisos, and under certain conditions, can be inoperative. Limitations may be required as to how the aircraft is operated regarding ice conditions, night flights, or altitude limits. MEL addresses defective equipment, and CDL addresses missing parts in an aircraft.

The MEL is based on the Master Minimum Equipment List (MMEL) which is a list of equipment that the National Airworthiness Authority (such as the FAA or CASA) has determined that may be inoperative under certain operation conditions, but still provides an acceptable level of safety. The MMEL contains the conditions, limitations, and procedures required to operate the aircraft with these items inoperative.

The CDL is developed by the aircraft manufacturer, and identifies secondary airframe

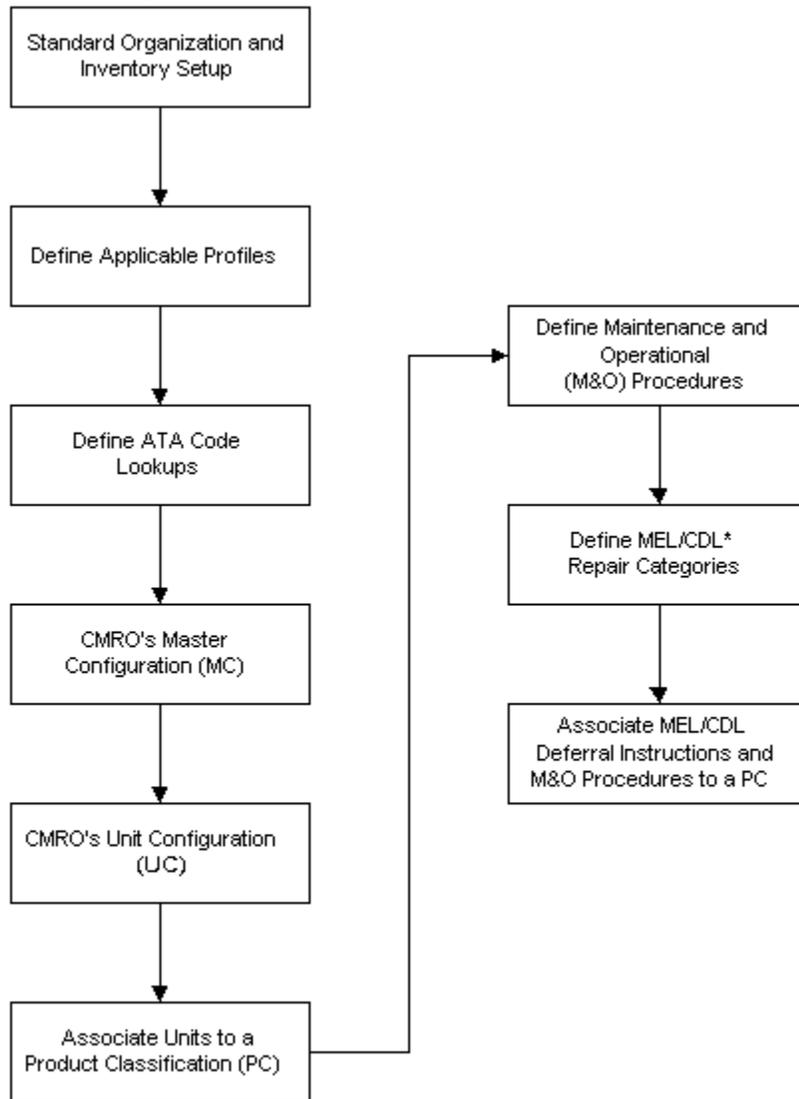
and engine parts on an aircraft that may, under certain conditions, be missing from the aircraft and still allows the aircraft to maintain its airworthiness with certain limitations. The aircraft manufacturer submits the CDL to the Aircraft Certification Office for approval.

MEL and CDL instructions can be added to the CMRO planning process to enable you to defer non-routine maintenance. Maintenance and Operation (M and O) procedures are created to ensure that the correct steps and restrictions are followed when a requirement is deferred.

Important: MELs are maintained at the unit configuration level.

The following diagram outlines the setup required to use the MEL and CDL feature:

MEL/CDL Setup Process



*Minimum Equipment List and Configuration Deviation List

Setting Up a MEL/CDL

To set up a MEL and CDL, follow these prerequisite steps:

1. Define the profile option of AHL:Service Request Type. This profile is used to create the Maintenance and Operation (M and O) procedures.
2. Define the required ATA codes for relevant configuration positions. These lookups can be found in the Application Object Library for type AHL_ATA_CODE.

3. Define applicable ATA codes for each position when creating a master configuration.
4. Navigate to M and O Procedures. These procedures contain the non-routine maintenance requirements to be deferred per the MEL and CDL guidelines affecting the production process.

Setting Up Configuration Access Control

In case of an aircraft accident, a user with super user security can quarantine a unit configuration. This quarantine enables the freezing of the unit configuration and will not allow changes to be made to the configuration which could impact the investigation.

There are some prerequisites that must exist before this feature can be used:

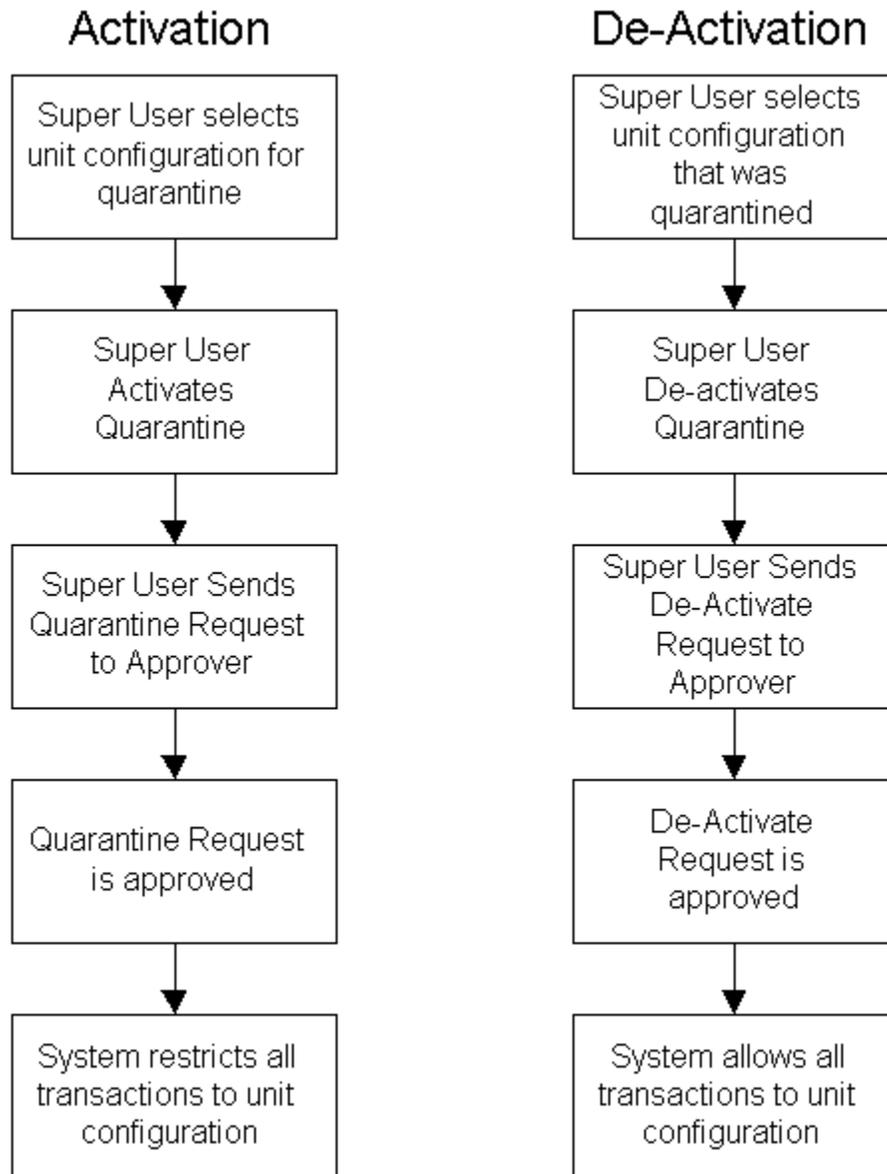
- The CMRO system administrator edits the configuration access control workflow using the Approvals page.
- The CMRO system administrator creates a super user role to be used for configuration access control.

The system administrator assigns the AHL_UC_QUARANTINE_ROLE to the appropriate super user.

- The CMRO system administrator creates the super user role using the User Maintenance page.

Using Configuration Access Control

This diagram illustrates the process flow for the activation and deactivation steps for quarantining a unit configuration:



Once the quarantine request has been approved, the status changes to Quarantine.

Transactions That Are Allowed on a Quarantined Unit Configuration

The following lists the types of transactions that are allowed when a unit configuration has been quarantined:

- Unit Maintenance Visit Association
- Issue material transaction from production
- Return material transaction from production

Important: All other transactions are denied while the unit configuration is quarantined.

Deactivating the Quarantine Status

Once the super user has deactivated the quarantine for the unit configuration, all restrictions are removed and all transactions are allowed. The status of the unit configuration returns to the status prior to the quarantine.

Setting Up Fleet Maintenance Program

The Fleet Maintenance Program module in Oracle CMRO enables maintenance organizations to record, organize, and plan maintenance requirements. Maintenance planners can create maintenance requirement records and attach attributes to these records. The attributes attached to the record enables maintenance planning and increased operational efficiency while accomplishing a requirement.

Maintenance planners can:

- Search the database for a specific maintenance requirement for reference, or for editing purposes.
- Create a maintenance requirement record in the database.
- Attach documents, maintenance routes, actions, effectivities, and maintenance requirement relationships to the record.
- Create revisions for maintenance requirements that are complete.
- View items that are affected by a maintenance requirement.

The Oracle CMRO Fleet Maintenance Program module serves as a repository for scheduled maintenance and associated information.

Before setting up the Fleet Maintenance Program, you must ensure that the following has been set up:

- Lookup values.
- System profile options in Oracle Application: Profile system value.
- Route Management.
- Product Classification.
- Master Configuration.
- Unit Configuration.

- ASO Visit Work Package.

Setting up the Fleet Maintenance Program includes defining the lookup values.

To define lookups for the Fleet Maintenance Program:

1. Access the Application Developer responsibility.
2. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
3. Define the lookups as outlined in this table. Optionally, you can add values to these lookups as required.

Attribute	Lookup	Suggested Values	Access Level
Program Type	AHL_FMP_MR_PR OGRAM_TYPE	Corrosion Prevention, Progressive Maintenance, Company Test, Phase Check, and so on.	Extensible
Category	AHL_FMP_MR_CA TEGORY	Power plant, airframe, component, ground equipment, and so on.	Extensible
Program Subtype	AHL_FMP_MR_PR OGRAM_SUBTYPE	A, B, C	Extensible
Action	AHL_FMP_MR_AC TION	Email Test Results, Reset Overhaul Counter, Test	Extensible
Service Location	AHL_FMP_SERVIC E_LOCATION	Line, Base	Extensible

Application Object Library Lookups

Application Object Library Lookups

Type: AHL_FMP_MR_CATEGORY
 Meaning: Maintenance Requirement Category
 Application: Complex Maintenance Repair and Overhaul
 Description: Maintenance Requirement Category

Access Level:
 User
 Extensible
 System

Effective Dates: From To Enabled

Code	Meaning	Description	Tag	From	To	Enabled	[]
AIRFRAME	Airframe	Airframe		15-OCT-2002		<input checked="" type="checkbox"/>	
COMPONENT	Component	Component		15-OCT-2002		<input checked="" type="checkbox"/>	
GROUND SEF	Ground Service Equipr	Ground Service Equipme		15-OCT-2002		<input checked="" type="checkbox"/>	
OFFICE EQUI	Office Equipment	Office Equipment		13-JUN-2003		<input checked="" type="checkbox"/>	
POWERPLAN	Powerplant	Powerplant		15-OCT-2002		<input checked="" type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	

Service Locations

Application Object Library Lookups

Type: AHL_FMP_SERVICE_LOCATION
 Meaning: Maintenance Requirement Service Location
 Application: Complex Maintenance Repair and Overhaul
 Description: Maintenance Requirement Service Location

Access Level:
 User
 Extensible
 System

Effective Dates: From To Enabled

Code	Meaning	Description	Tag	From	To	Enabled	[]
LINE	Line Maintenance	Line Maintenance		02-JUL-2020		<input checked="" type="checkbox"/>	
BASE	Base Maintenance	Base Maintenance		02-JUL-2020		<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"/>	

Setting Up the Unit Maintenance Plan

The Unit Maintenance Plan module in Oracle CMRO ensures that all maintenance requirements are met on or prior to their due date. It also provides demand estimates

over a planning time window by forecasting the due date of maintenance requirements associated with a unit. It searches and displays maintenance requirements that are due for an equipment unit and provides maintenance personnel instant access to maintenance requirements, due date estimation, accomplishment history, and planning information for a unit configuration.

Maintenance personnel can:

- Maintain utilization forecasts.
- View the serviceable time remaining of a unit.
- Model repetitive maintenance requirements over a specified time period.
- Calculate the due dates of maintenance requirements.
- Associate maintenance requirements to a visit.

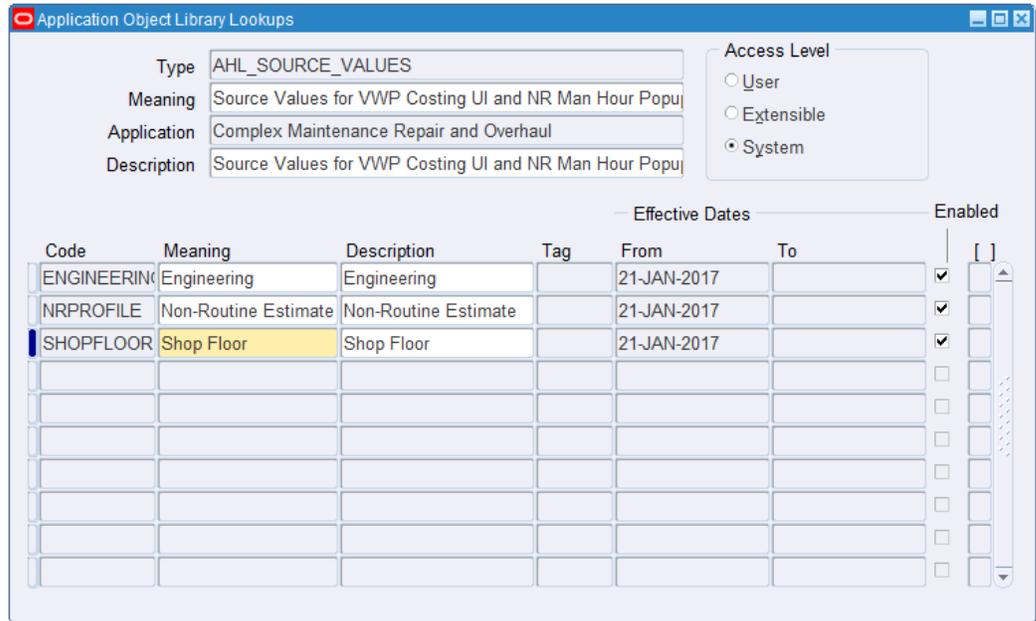
The Unit Maintenance Plan serves as a repository of the maintenance requirements related to units and any related subassemblies or components. It also enables the forecasting of usage to determine due dates for fleet maintenance activities.

Before setting up the Unit Maintenance Plan, you must ensure that the following have been set up:

- Lookup values in Oracle Application, including source types for non-routines
- System profiles in Oracle Application: Profile system value
- Product Classification
- Master Configuration
- Unit Configuration
- ARO Visit Work Package

Viewing Source Types Used for Non-Routine Maintenance Requirements

CMRO tracks the total man hours for Person type resources for non-routine MRs. The following displays the seeded (system access) Source type lookups, and these values cannot be changed.



The Man-Hours (person) source type used for the non-routine is as follows:

- **Engineering:** Used for non-routines with a status of Open: MRs that have not been associated with an NR or have not been associated to a visit.
- **Non-Routine Estimate:** Used for non-routine estimates which have been defined for an MR.
- **Shop Floor:** Used for non-routines that have been associated to Partially Implemented or Implemented visits with Released work orders.

To set up the system profile options:

1. Navigate to System Administrator > System Profile Values. The System Profile Values page appears.
2. Set up the following system profiles:
 - AHL: Maximum Planning Window (Number)
 - AHL: Maximum Planning Window (UOM)
 - AHL: Minimum maintenance opportunity duration in minutes required for scheduling a visit
 - AHL: Consider Department Conflicts

These profile options determine the period that is taken into account when calculating

the due date and repetitive MR in the Unit Maintenance Plan (UMP). For example, the user may set the following values for the profile options:

AHL: Maximum Planning Window (Number) = 2

AHL: Maximum Planning Window (UOM) = Years

This means that the rolling planning windows in the UMP is two years. The concurrent program used to calculate the due date and repetitive MR will calculate all due dates within two years starting from the calculation date (current date).

Status Groups and Transitions for Handling Non Routine Transactions

You can define a status group and attach to it all the Service Request statuses that you plan to use in the CMRO Application. The application setup allows you to define status transitions, but these can be left empty. Transitions define the permitted changes from one service request status to another.

Only filtered statuses should display in the drop-down menu in the Non-routine Details region of the Update Non-routine page. Only those statuses which belong to a particular status group which is attached to a particular SR type display. Otherwise, all the statuses should be shown.

For more information on status groups, transitions and setups, see Basic Service Request Setups in the *Oracle TeleService Implementation and User Guide*.

Concurrent Program Setup

Program: Building Unit Effectivities

Short Name: AHLUEFF

Application: Oracle Complex MRO

Description: Building Unit Effectivities

Setting Up Visit Work Package

The Visit Work Package (VWP) module provides planning capabilities including creation, organization, and scheduling of maintenance visits based on maintenance requirements. It enables the creation and management of visit templates based on equipment types enabling efficient visit package creation for equipment units of a type. The Visit Work Package permits the association of tasks with visits and visit templates, and the definition of the task hierarchy and cost structure.

Maintenance planners can:

- Manually create maintenance visit records or create from a template.
- View and update existing visit records.
- Associate tasks with visits: planned tasks, tasks that are required but not scheduled,

and ad hoc tasks that are not associated with maintenance routes.

- View and update tasks associated with a visit.
- Create visit templates or create from an existing visit record.
- View and update existing visit templates.
- View and update visit template tasks.
- Create shift schedules for department workers based on planned visits.
- View existing department shifts.

The Visit Work Package enables maintenance planners to organize and execute a maintenance visit for an equipment unit.

Before setting up the VWP, you must:

- Verify that Oracle Projects has been set up. VWP exports objects such as visit pricing to Oracle Projects.
- Verify that Oracle HRMS has been set up. VWP uses the organization information contained in Oracle HRMS.
- Verify that Oracle Installed Base has been set up. VWP uses the item instance information maintained by Installed Base.
- Verify that Oracle Inventory has been set up. VWP uses the inventory information to describe maintainable asset types.
- Verify that Oracle Customer Support has been set up. VWP associates service requests with maintenance visit tasks.
- Verify that the Unit Maintenance Plan module has been set up. VWP associates a unit maintenance plan maintenance request to VWP.
- Verify that the Fleet Maintenance Program module has been set up.
- Create project templates.

Setting up the VWP includes:

- Setting up system profile options.
- Defining lookups.

To set up System profile options:

1. Navigate to System Administrator > Profile > System > System Profile Values. The System Profile Values page appears.
2. Set up the following system profile options:
 - AHL: Default Project Template ID (AHL_DEFAULT_PA_TEMPLATE_ID): The name of the project template that will be used as the default template.
 - AHL: Visit Stage Number (AHL_NUMBER_OF_STAGES): To store the maximum number of stages for a visit.

This value is used in both engineering and planning related to the visits and the routes in a maintenance requirement.
 - AHL: Visit Pricing Flag (AHL_VST_PRICE_DEF_E_FLG): To control the visibility of the Visit Pricing feature in the Create Visit and Update Visit UIs.

Can be controlled at the User level. Set site level at Yes.
 - AHL: Default Overwrite Workorder Completion Dates (AHL_DEFAULT_OVERWRITE_WO_COMPLETION_DATES): To control the default value of the Overwrite Workorder Completion Dates check box in the Visit and MR Signoff UIs. The default value is No.

Can be controlled at the User level. Set site level at Yes.

 - Yes: The Overwrite Workorder Completion Date check box appears as selected in the MR signoff and Close Visit UIs.

This enables users to sign off and overwrite the completion dates for the maintenance requirement.
 - No (default value): The Overwrite Workorder Completion Date check box appears as cleared in the MR signoff and Close Visit UIs.

However, the option can be selected and the user can sign off and overwrite the completion dates for the maintenance requirement.
 - AHL: Enable Visit Creation Automation (AHL_VISIT_CREATE_AUTO): To control if unplanned maintenance requirements for child or dependent components are added during automatic or manual visit creation.

Create visits through automatic and manual flows including Auto Visit, Transit Visit, Operational Autovisit, and Manually Created with the profile set to one of these values:

 - If Yes, then the system will turn on the auto association function for the child and dependent components during visit creation, and maintenance

requirements can be added during visit creation.

- If No, then the system will turn off the auto association function for the child and dependent components during visit creation, and maintenance requirements will not be added during visit creation. The default is No.

Can be controlled at the User level. Set site level at Yes.

- AHL: Visit Close Warning for Open POs
(AHL_VALIDATE_OPEN_PO_FOR_VISIT): To indicate that there are any purchase orders with an unfulfilled quantity related to a visit task.

A warning will be shown on the Visit Close UI. Can be controlled at the User level. Set site level at Yes.

- AHL: Allow Unit Configuration Edit in Production
(AHL_ALLOW_UNIT_EDIT_IN_PROD): To control general edits to unit configurations which are concurrently in an open production visit.

If the option is set to Yes, then updates are allowed. When set to No, then the update is not allowed for the same UC associated to a visit with an Open status.

Can be controlled at the User level. Set site level at Yes.

- AHL: Allow Unit Configuration Migration in Production
(AHL_ALLOW_UNIT_MIG_IN_PROD): To control the migration of unit configurations in an open production visit.

If the option is set to Yes, then all updates and UC part changes are allowed. When set to No, then an update is not allowed for the same UC associated to a visit with an Open status. Part changes through a work order are still permitted.

Can be controlled at the User level. Set site level at Yes.

- AHL: Override Counter Correction Updates during Parts Change
(AHL_OVERRIDE_PART_CHG_CC): To control the normally required sequential part change check and related errors when the counter correction logic finds two installations or two removals in a row in a unit's history.

If the option is set to Yes, the system ignores non-sequential part installs and removals when running counter correction logic. If set to No, the system displays a hard error when a non-sequential condition is found.

Can be controlled at the User level. Set site level at Yes.

- AHL: Completion restricted to logged in Work Order or Operation.

If set to No (default), then users can continue to work across work orders.

If set to Yes, then a user can only complete operations, work orders, and sign off

an MR in the same work order in which they are "logged-in" on an operation.

- **AHL:** Enforce bottom up completions for maintenance requirement sign off.
If set to No (default), then users can continue to work across work orders.
If set to Yes, then a user may not be able to sign off an MR until all work orders and operations have been explicitly completed.

To define lookups for Visit Work Package:

1. Access the Application Developer responsibility.
2. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
3. Define the lookups as outlined in this table.

Attribute	Lookup	Suggested Values	Access Level
Visit Type	AHL_PLANNING_VISIT_TYPE	A-Check, B-Check, C-Check	User
Category	AHL_LTP_SPACE_CATEGORY	Category 1, Category 2...	Extensible
Hour List	AHL_VWP_HOURS	00, 01...	User
Visit Priority	AHL_VWP_VISIT_PRIORITY	1,2,3,4...	User

Application Object Library Lookups

Code	Meaning	Description	Tag	Effective Dates		Enabled	[]
				From	To		
1	Category 1	Category 1		12-APR-2002		<input checked="" type="checkbox"/>	
2	Category 2	Category 2		12-APR-2002		<input checked="" type="checkbox"/>	
3	Category 3	Category 3		12-APR-2002		<input checked="" type="checkbox"/>	
4	Category 4	Category 4		12-APR-2002		<input checked="" type="checkbox"/>	
5	Category 5	Category 5		12-APR-2002		<input checked="" type="checkbox"/>	
6	Category 6	Category 6		12-APR-2002		<input checked="" type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	

Setting Up Planning Module

The Planning module is used by the maintenance planner to schedule maintenance requirements in maintenance visits, based on the optimal use of resources and facility capabilities and capacities, and to schedule required materials.

Maintenance personnel can:

- Assess the maintenance workload capacity by analyzing the available labor based on skill, level and certification, available tools, materials, and location capabilities balanced against known workloads.
- Create a visit to group events together for long and short term capacity planning, and to facilitate scheduling to a maintenance base.
- Select serialized items and reserve them for a specific task in a visit.
- Define the visit resource requirements to enable accurate scheduling and capacity planning.
- Analyze capacity versus workload requirements.
- Run simulations to evaluate different scheduling scenarios before implementing actual plan changes.

Planning maximizes maintenance scheduling by balancing the maintenance requirements with available maintenance capacity. The maintenance planner can

balance the forecasted maintenance requirement information from the unit maintenance plan against projected maintenance capacity.

By using serial number reservations, the maintenance planner can provide a global view of material requirements that identifies material availability at the required location and date for items associated on counter values. This reduces aircraft down times and increase the life expectancy of subcomponents. Serial number reservations are set up in Oracle Inventory.

For more information regarding the Planning module, refer to the *Oracle Complex Maintenance, Repair and Overhaul User's Guide* and *Oracle Planning*.

Setting up the Planning module includes defining the lookup values as indicated below.

To define lookups for Planning

1. Access the Application Developer responsibility.
2. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
3. Define the lookups as outlined in this table.

Attribute	Lookup	Suggested Values	Access Level
Category	AHL_LTP_SPACE_CATEGORY	Category 1, Category 2...	Extensible
Display Only	AHL_LTP_VISITS_DISPLAY_ONLY	Scheduled, Unscheduled	Extensible
Status	AHL_LTP_SPACE_STATUS	Inactive, Active	Extensible
Visit Type	AHL_PLANNING_VISIT_TYPE	A-Check, B-Check, C-Check	User

Maintenance scheduler can create jobs, initiate service for material and parts change transactions, and perform job operation maintenance.

Setting up the Production module includes:

- Setting up system profile options.
- Defining lookups.

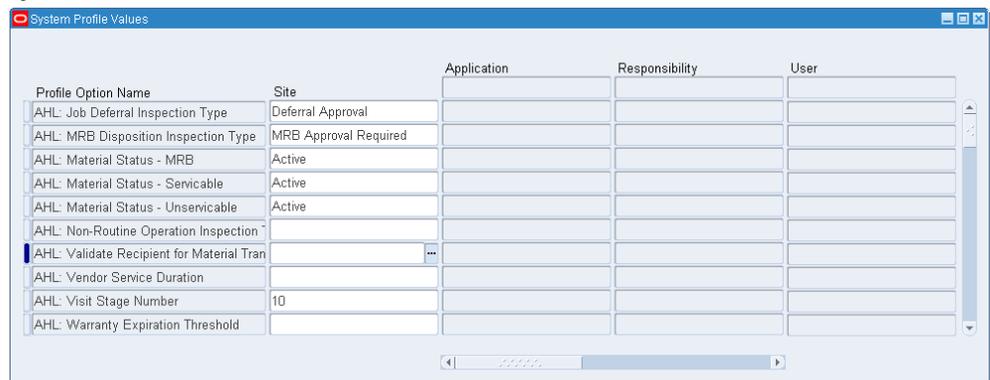
To set up System Profile Options:

1. Navigate to the System Profile Values page (System Administrator > Profile > System > System Profile Values).
2. Set up the system profile options as described in this table.

Profile	Site (Value)	Description
AHL: Job Deferral Inspection Type	Deferral Approval	The Quality plan inspection type used for Production Job deferrals.
AHL: MRB Disposition Inspection	MRB Approval Required	The Quality plan inspection type used when a tracked item is returned an MRB subinventory.
AHL: Material Status - MRB	Active/Non-Active	The status that triggers the Quality inspection requirement for MRB and a service request creation, when an tracked item is being returned in the condition associated with this status to a subinventory with the status associated.
AHL: Material Status - Serviceable	Active	The status indicating a serviceable item. This status is used to ensure that installed items meet the condition associated with this status and are issued from a subinventory with this status associated.

Profile	Site (Value)	Description
AHL: Material Status - Unserviceable	Active	The status that triggers the Service Request creation, when a tracked item is being returned in the condition associated with this status to a subinventory with the status associated.
AHL: Non-Routine Operation Inspection	-	Used to determine if non-routine operation required inspection.
AHL: OE Mixed Order Type ID	P -Mixed	Order type to create a OSP order.
AHL: OE Return Line ID	P- Return	Line type to create a OSP order.
AHL: OE Ship Only Line Type ID	P- Standard	Line type to create a OSP standard only ship line.
AHL: Validate Alternate Items	Yes/No	Enabled/disable organization validation on alternate items for UC.

System Profile Values



To define lookups for Production:

1. Access the Application Developer responsibility.

2. Select Application > Lookups > Application Object Library. The Application Object Library Lookups page appears.
3. Define the lookups as outlined in this table.

Attribute	Lookup	Suggested Values	Access Level
Display Only	AHL_LTP_VISITS_DISPLAY_ONLY	Scheduled, Unscheduled	Extensible
Status	AHL_LTP_SPACE_STATUS	Inactive, Active	Extensible
Visit Type	AHL_PLANNING_VISIT_TYPE	A-Check, B-Check, C-Check	User

Application Object Library Lookups

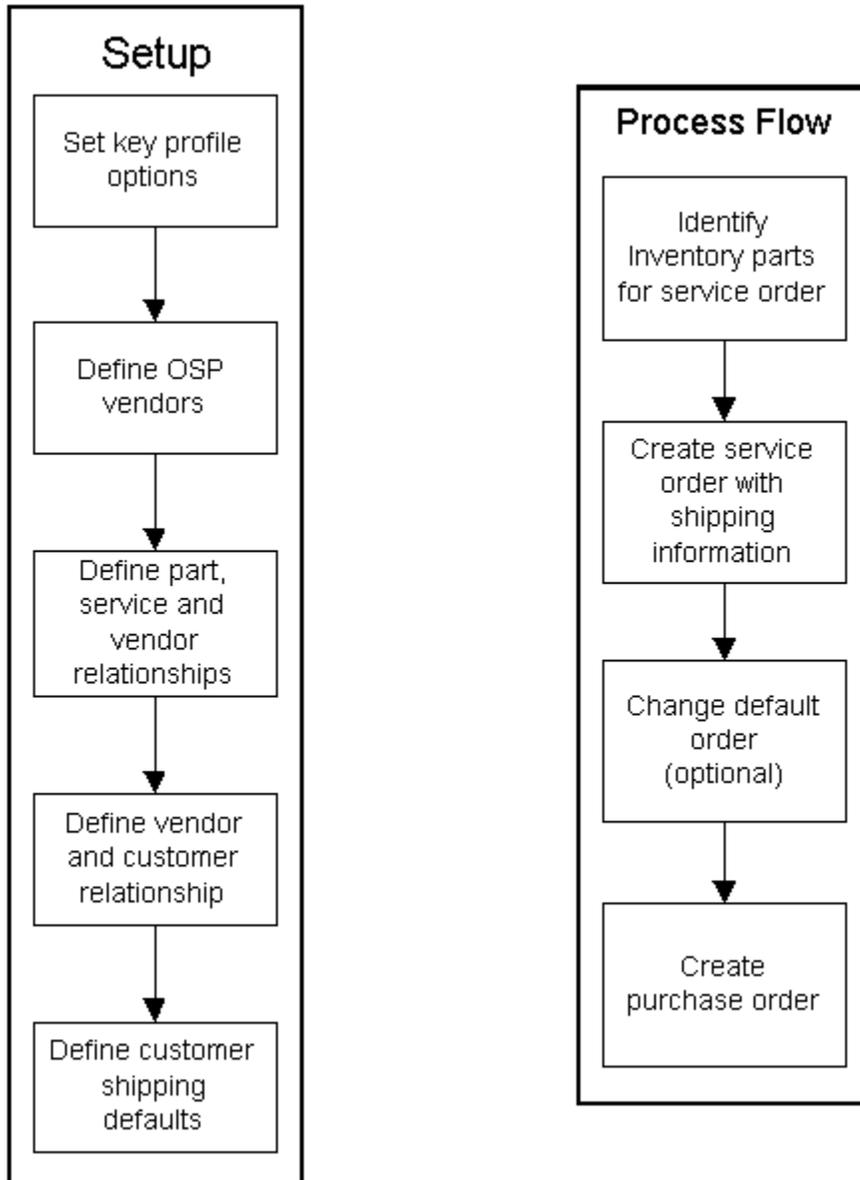
Setting Up Inventory Service Order Outside Processing

In the airline industry, defective parts are often removed, and put in an unserviceable inventory location, before the work order is created. Oracle Inventory service orders enable you to create orders for items directly from an inventory location, without creating a visit and a work order. This process is automated using default data. The features of inventory service orders for outside processing:

- Automatic service orders are created with shipping information for selected items.
- Vendor and service sourcing rules are defined based on the item and item location.
- Relationship between the vendor information and the customer information is defined.
- Vendors can be identified as providing warranty service.
- Service orders can include warranty contracts, terms and conditions.
- Both serialized and non-serialized items in inventory can be selected for the creation of a service order.
- Create and maintain attachments.
- Ability to convert service order into an exchange order.

Setup and Process Flow for Inventory Service Order Outside Processing

This diagram illustrates the setup steps and process flow for the Inventory Service Order Outside Processing feature:



Prerequisites

These are the prerequisites required in order to use the Inventory service order outside processing functionality:

- Set up profile options to create default information to automate the creation of service orders.
- Define outside processing service (OSP) vendors.
- Define part, service and vendor relationships.

- Define vendors and customer relationships.
- Define customer shipping defaults.

Profile Options Setup

The profile options setup includes:

Profile	Description
AHL:Service Order Default Shipment Priority	The default shipment priority used to create the shipping information for a service order in outside processing. The value is selected from available shipment priorities defined. If this profile option is not set, the value must be selected manually.
AHL:OM Tax Exempt Reason	The tax exempt reason used to create a tax exempt sales order and is used for shipping purposes. This value is required for creating shipping information.
AHL:Vendor Service Duration	The service duration used to calculate the turnaround time for a part sent out for a service. This profile option defines a default service duration used in the calculation if no specific duration has been defined. The unit of measure is days .
AHL:OM Shipment Priority	The default value for the shipment priority used to create an inventory service order with shipping information.
AHL:OM Line Return Reason	The default value for the return reason of a shipment return line used to create an inventory service order with shipping information.
AHL:OM Mixed Order Type ID	The Order Management order type for the shipping information. Used to automatically create the order in the background.
AHL:OM Ship Only Line Type ID	The Order Management line type for the shipment line. It is used to automatically create the order in the background.

Profile	Description
AHL:OM Return Line Type ID	The Order Management line type for the return line. It is used to automatically create the order in the background.
AHL:Service Order Ship IB Transaction SubType	The type used by Oracle Installed Base customers providing the ability to define customer specific transaction subtypes for shipping transactions.
AHL:Service Order Return IB Transaction SubType	The transaction subtype used by Oracle Installed Base customers providing the ability to define customer specific transaction subtypes for return transactions.
AHL:Exchange Order Ship IB Transaction SubType	The transaction subtype used by Oracle Installed Base customers providing the ability to define customer specific transaction subtypes for exchange orders.
AHL:Exchange Order Return IB Transaction SubType	The transaction subtype used by Oracle Installed Base customers providing the ability to define customer specific transaction subtypes for exchange order returns.
AHL:Overwrite PO line description with Item/Serial Number	The part number and serial number of the service item on the purchase order.
AHL:PO line description Item number prefix	The item number in the description of the service item on the purchase order.
AHL:PO line description Serial number prefix	The serial number in the description of the service item on the purchase order.
AHL:PO Line Type ID	The default PO Line Type created when a purchase order is created.
AHL:OSP Default PO Distribution Creation	Indicates whether the PO creation process creates the default accounting distribution when submitting a purchase order from OSP.

Related Topics

Managing Outside Processing, *Oracle Complex Maintenance, Repair and Overhaul User's*

Administrative Setup

Using the Administration link, you can manage administrative functions related to the Visit Work Package and Planning modules.

Users can:

- Create department shifts.
- Define maintenance spaces and determine space unavailability.
- Use the Reliability Planning feature to reduce inventory levels at maintenance facilities and transient stations.

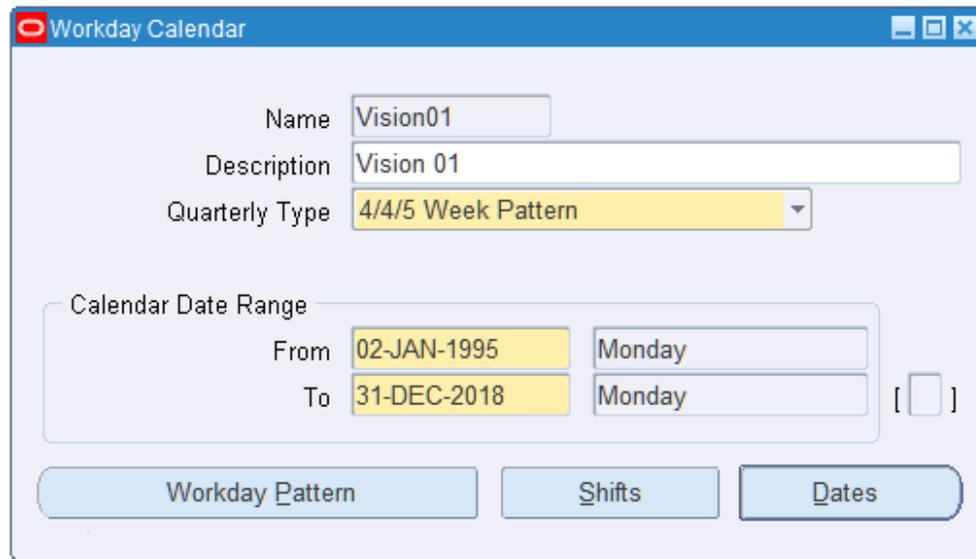
The Reliability Planning functionality is set up in Oracle Inventory and Oracle Planning.

Department shifts are created to define the working hours of a maintenance department. These shifts are used to calculate the start time of the tasks in a scheduled visit.

To set up department shifts:

1. From the Manufacturing and Distribution Manager responsibility, navigate to Oracle Bills of Material >Setup > Calendars. The Workday Calendar window appears. Define a BOM calendar.

Workday Calendar



The screenshot shows a window titled "Workday Calendar" with the following fields and controls:

- Name:** Vision01
- Description:** Vision 01
- Quarterly Type:** 4/4/5 Week Pattern (dropdown menu)
- Calendar Date Range:**
 - From:** 02-JAN-1995 (date field) Monday (day dropdown)
 - To:** 31-DEC-2018 (date field) Monday (day dropdown) [] (checkbox)
- Buttons:** Workday Pattern, Shifts, Dates

2. Click the Shifts button to define shifts for the calendar.

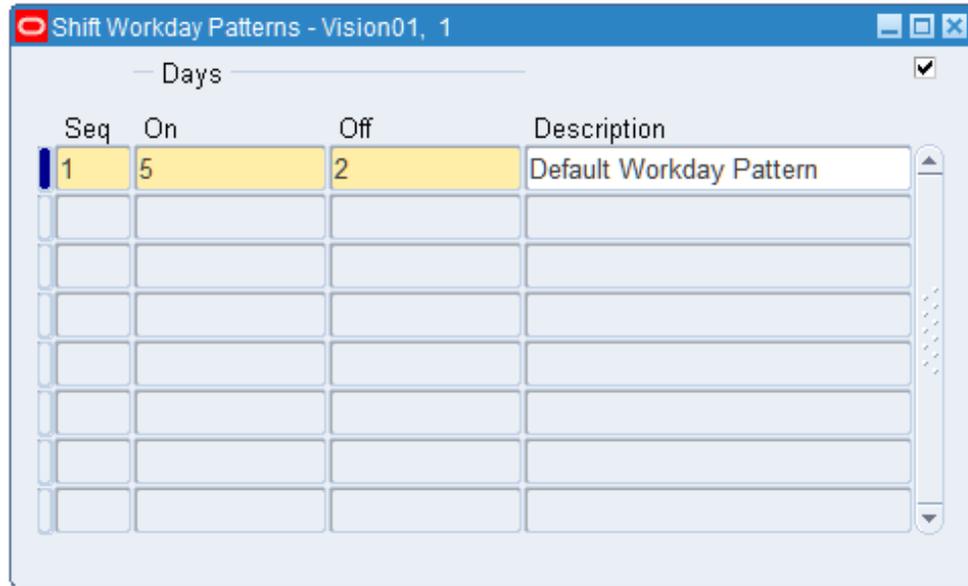
Shifts

The screenshot shows a software window titled "Shifts - Vision01". It contains a table with three columns: "Shift Num", "Description", and a column of checkboxes. The table lists shifts 1 through 9. Shift 1 is "Normal daily shift", shift 2 is "Normal night shift", shift 3 is "Normal late night shift", shift 4 is "16 hour shift", shift 5 is "24 hour shift", shift 7 is "7", shift 8 is "8", and shift 9 is "9". At the bottom of the window are three buttons: "Workday Pattern", "Times", and "Dates".

Shift Num	Description	
1	Normal daily shift	<input type="checkbox"/>
2	Normal night shift	<input type="checkbox"/>
3	Normal late night shift	<input type="checkbox"/>
4	16 hour shift	<input type="checkbox"/>
5	24 hour shift	<input type="checkbox"/>
7	7	<input type="checkbox"/>
8	8	<input type="checkbox"/>
9	9	<input type="checkbox"/>

3. Click Workday Pattern to navigate to the Shift Workday Patterns window. Enter the workdays for the shift.

Defining Workday Patterns



The Calendar, Shift Number and Workdays values defined will be available in the corresponding list of values when creating department shifts in the Oracle CMRO application. For information on creating department shift records, refer to the *Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.

Setting Up Enigma Integration

Oracle CMRO delivers the total functionality for maintenance organizations to successfully manage all the maintenance operations from configuration management and engineering to maintenance planning and execution.

Enigma 3C ® delivers a dynamic service index of maintenance, parts and diagnostic information that captures operational expertise and connects to vital corporate systems to manage and optimize the service and support workflow.

The integration between Oracle CMRO and Enigma 3C provides maintenance service providers with a set of tools that connects the configuration management, engineering and maintenance planning functionality contained in CMRO with the Enigma documentation centric maintenance execution system in a wireless environment.

The Enigma integration performs the following:

- Associate Aircraft Maintenance Manual (AMM) Tasks to Route Management
- Associate Enigma Configuration Information to Master Configuration
- Associate Enigma Configuration Information to Unit Configuration

- View and Print Enigma Content in CMRO Execution Module

Profile Options Setup

The setup profiles include:

Profile	Description
AHL: Enigma AMM Documents associated	The AMM (Aircraft Maintenance Manual) task cards are associated with a route in CMRO. If the profile is set to No, you cannot associate documents from Enigma.
AHL: Enigma WDM Documents associated	A maintenance technician can view associated Enigma documents related to a maintenance work order. If this profile is set to No, the associated Enigma documents cannot be viewed.
AHL: Enigma IPC Documents associated	A maintenance technician can view associated Enigma documents related to a maintenance work order. If this profile is set to No, the associated Enigma documents cannot be viewed.
AHL: Enigma EM Documents associated	A maintenance technician can view associated Enigma documents related to a maintenance work order. If this profile is set to No, the associated Enigma documents cannot be viewed.
CMRO Enigma Integration URL	A configuration manager can retrieve, view and associate Enigma 3C content at a master configuration header level. If the profile is set to No, the Enigma Documents region will not appear.

Overview of Associating Aircraft Maintenance Manual (AMM) Tasks to Route Management

The AMM (Aircraft Maintenance Manual) task cards are associated with a route in CMRO. These task cards include the content from AMM, IPC, and WDM manuals. CMRO will maintain the revision of the tasks and will also store a PDF file as an attachment to the route. Oracle CMRO performs the following setup steps for this functionality:

- Provides a concurrent program to create draft route templates and associate a PDF

file to route templates based on the Enigma content.

- Provides a concurrent program to create notifications based on the Enigma XML file with revised task content.
- Calls the Enigma URL and passes the AMM key parameters to Enigma.
- Provides a web service to accept the document parameters from Enigma and create a document association within CMRO.
- Builds the functionality to store the Enigma document as a PDF file.
- Builds a user interface to view the Enigma AMM task association and calls the Enigma URL to view document content.

Overview of Associating Enigma Configuration Information to Master and Unit Configurations

You can look up configuration information in the Enigma 3C application and associate it to a CMRO master configuration. Use this association to view the document content in the Unit Configuration and Production modules. Oracle CMRO performs the following setup steps for this functionality:

- Calls Enigma URL and passes the AIPC, EM, or WDM key parameters to Enigma.
- Provides a web service to accept the document parameters.
- Builds the functionality to store the Enigma document association as a PDF file.
- Builds a user interface to view the Enigma AIPC association and calls the URL for document content viewing.
- Provides the user interface to view associated documents in the Unit Configuration module.

Overview of Viewing and Printing Enigma Content in CMRO Execution Module

A maintenance technician can view and print the associated Enigma documentation for a specific work order in CMRO. When detecting a defect, the maintenance technician can view the Fault Identification Manual (FIM) troubleshooting. Oracle CMRO performs the following setup steps for this functionality:

- Provides the user interface to view and print the Enigma documents associated with work orders.

Setting Up Supplier Warranty

Oracle CMRO delivers functionality for maintenance organizations to successfully manage warranty on traceable items throughout their lifecycle through the use of

Warranty Templates and their associated Warranty Contracts.

Setting up Supplier Warranty includes:

- Defining a Warranty Type lookup value. This value is a required value in a Warranty Template and Warranty Contract record and provides a helpful method for filtering Warranty Templates and Contracts in several search pages.
- Identifying Vendors who can provide warranty service. A flag is set on the Vendor record, controlling visibility in the Vendor list of value lookups in several Warranty pages. Vendor is also a required attribute in a Warranty Template and Warranty Contract record.
- Creating contracts for existing traceable inventory items.
- Setting up Notifications. Notifications are used to alert you to changes in warranty status, completion of warranty work, expiring warranty contracts and the automatic creation of new contracts.
- Scheduling concurrent programs. Warranty expirations and auto-creation of warranty contracts must be setup and scheduled in order to assist the Warranty Administration user.

To define lookups for supplier warranty

1. Login using the Application Developer Responsibility.
2. Navigate to the Lookups window and define the lookups as indicated in the following table.

Attribute	Lookup	Suggested Values	Access Level
Warranty Type	AHL_WARRANTY_ TYPE	Aircraft OEM, Engine OEM, Component OEM, Aircraft MRO, Engine MRO, Component MRO, 3rd Party	User

Application Object Library Lookups

Type: AHL_WARRANTY_TYPE
 Meaning: AHL_WARRANTY_TYPE
 Application: Complex Maintenance Repair and Overhaul
 Description: User Defined Warranty Types.

Access Level:
 User
 Extensil
 System

Effective Dates

Code	Meaning	Description	Tag	From	To
AIRCRAFT OE	Aircraft Original Equipm	New A/C Warranty		23-MAY-2011	
ENGINE OEM	Engine Aircraft Origina	New Engine Warranty		23-MAY-2011	
COMPONENT	Componet Aircraft Orig	New Component Warrant		23-MAY-2011	

To define vendors for warranty service

1. Login using the Super User or equivalent responsibility.
2. Navigate to the Administration Module, Vendor Sourcing Tab, and Vendors Sub-Tab.
3. For each Vendor, check the Warranty Flag to indicate they have the ability to provide Warranty Service.
4. Click Apply to save the record.

Overview of Warranty Notifications

Oracle CMRO provides several notifications for managing Supplier Warranty.

- Change to Warranty Entitlement Acceptance/Rejection - When a Technician makes changes to a Warranty Entitlement record on a work order, the Warranty Administrator receives a notification of the changes.

The Administrator can accept or reject the changes using the Warranty Entitlements pages.

- **Warranty Review** - When a Technician requests review of the Warranty Entitlement on a work order, the Warranty Administrator receives a notification.

The Administrator manages the review by using the Warranty Entitlements page.

- **Warranty Expirations** - A scheduled concurrent program generates a report of all warranty contracts that are expiring in a user-defined time period (such as within 60 days from system date).

This report is sent via notification to selected users.

- **Autocreation of Warranty Contracts** - A scheduled concurrent program generates warranty contracts for any applicable item instances that are introduced into CMRO.

An accompanying report is sent via notification to selected users.

Overview of Creating Contracts for Existing Traceable Inventory Items

Existing inventory must be assigned warranty contracts if they are still covered by applicable warranty terms and conditions from a supplier. It is recommended that you setup warranty templates for each supplier, terms and conditions statement and associated item(s). You can either manually define warranty contracts for each item instance or run the autcreate concurrent program to generate contracts in a pending status. Each of these contracts can be manually reviewed and the status updated as applicable.

For warranty contracts to be accurately generated, you must establish the following in the relationships between a warranty template and an item instance:

- Item must match and be correctly enabled in the Warranty Template.
- If counter controlled, the corresponding counter must be added to the Warranty Template.

Overview of Warranty Related Concurrent Programs

Oracle CMRO provides several concurrent programs for assistance:

- **Warranty Expiration:** This program must be run daily or weekly to recalculate the expiration dates of each warranty contracts.

This program also generates a report and corresponding notification of the expiring contracts during the user-defined period, such as 60 days. The program can be manually run for an item instance to provide the most current expiration calculation.

- **Warranty Contract Autocreate:** This program should be run weekly to create new contracts for applicable item instances that are created in Oracle Installed Base.

This process creates new contacts, based on items that have an enabled warranty template, in a pending status. A report of each new contract is viewed via a notification to you, allowing you to be manually reviewed and enabled.

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 the Oracle Complex Maintenance, Repair, and Overhaul (CMRO). The following table provides the default navigation paths. Brackets [] indicate a button.

Default Navigation Paths for Standard Application Windows

Window Name	Navigation Path
Accounting Information	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Inventory Organization > Others > Accounting Information
Additional Organization Information	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Organizations > HR Organization > Others
Application Object Library Lookups	Application Developer: Application > Lookups > Application Object Library
Application Object Library: JTF_RS_ROLE_TYPE Lookups	CRM Resource Manager: Setup > Role Types

Window Name	Navigation Path
Approval Groups	Manufacturing and Distribution Manager: Purchasing > Setup > Approvals > Approval Groups
Buyers	Manufacturing and Distribution Manager: Purchasing > Setup > Personnel > Buyers
Category Sets	Enterprise Asset Management: Set up > Category > Category Sets
Collection Elements	Manufacturing and Distribution Manager: Quality > Setup > Collection Elements
Collection Plans	Manufacturing and Distribution Manager: Quality > Setup > Collection Plans
Department Classes	Manufacturing and Distribution Manager: Bill of Materials > Setup > Department Classes
Department Subinventories	Warehouse Manager Mgmt Super User: Setup > Warehouse Configuration > Resources > Associate Departments & Subinventories
Departments	Manufacturing and Distribution Manager: Bill of Materials > Routings > Department
Enterprise Asset Management Parameters	Enterprise Asset Management: Setup > Parameters
Exp Org Defaults	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Project Expenditure/Event Organization > Others
Find Buyer	Contract Manager: Setup > Others > Buyer > Buyer
Find Categories	Enterprise Asset Management: Set up > Category > Category Codes
Find Organization window	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Organizations

Window Name	Navigation Path
Find System Profile Values	System Administrator > Profile > System
Find/Enter Customers	Manufacturing and Distribution Manager: Order Management: Customers > Standard
Installed Parameters	Oracle Installed Base Admin > Setup > Install Parameters
Instance Statuses	Oracle Installed Base Admin > Setup > Instance Statuses
Inventory Accounting Periods	Manufacturing and Distribution Manager: Inventory > Accounting Close Cycle > Inventory Accounting Periods
Key Flexfields Segments	Application Developer: Flexfield > Key > Segments
Master Item	Manufacturing and Distribution Manager: Inventory > Items > Master Items
Material Status Definition	Warehouse Manager Mgmt Super User: Setup > Transaction Setup > Inventory Transactions > Material Status
M and O Procedures	MRO>Engineering>MEL/CDL>Overview>Cre ate>Update MEL Node>(M) and (O) Procedures
Open and Close Periods	Manufacturing and Distribution Manager: Purchasing > Financial > Accounting > Open and close periods
Oracle Manufacturing Lookups	Enterprise Asset Management: Setup > Lookup
Organization Parameters	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Inventory Organization > Others > Inventory Information

Window Name	Navigation Path
Parent Organization	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Organizations > HR Organization > Others > Parent organization
Personal Profile Values	Application Developer > Other > Profile
Processing Constraints	Manufacturing and Distribution Manager: Order Management > Set Up > Rules > Security > Processing Constraints
Project Manufacturing Parameters	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Project Manufacturing Organization > Others
Project Parameters	Manufacturing and Distribution Manager: Project > Project Definitions > Project Parameters
Project Type Class Information	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > Project Task Owning Organization > Others > Project Type Class Information
Resources	Manufacturing and Distribution Manager: Bill of Materials > Routings > Resources
Roles	CRM Resource Manager: Setup > Roles
Search Approval Rules	Advanced Service Online User: Administration > Approvals
Segment Values	Application Developer: Flexfield > Key > Values
Selection Criterion	CRM Resource Manager: Maintain Resources > Import Resources
Service Request Severities	Customer Support: Setup > Service Request > Request Severities

Window Name	Navigation Path
Service Request Statuses	Customer Support: Setup > Service Request > Request Status
Service Request Types	Customer Support: Setup > Service Request > Request Types
Setup Counters	Field Service Manager : Field Service Set Up > Counters > Define Counters
Subinventories	Manufacturing and Distribution Manager: Inventory > Setup > Organization > Subinventories
Subinventories Summary	Warehouse Manager Mgmt Super User: Setup > Warehouse Configuration > Warehouse > Subinventories
Suppliers	Contract Manager: Setup > Others > Supplier > Entry
WIP Accounting Classes	Enterprise Asset Management: Setup > WIP > WIP Accounting Classes
WIP Accounting Classes	Manufacturing and Distribution Manager: WIP > Setup > WIP Accounting Class
Work in Process Parameters	Manufacturing and Distribution Manager: Inventory > Setup > Organizations > WIP Organization > Others
Workflow Process Mapping	Advanced Service Online User: Administration > Workflow

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