Oracle® Complex Maintenance, Repair, and Overhaul

Implementation Guide

Release 12.1

Part No. E13686-04

August 2010



Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide, Release 12.1

Part No. E13686-04

Copyright © 2009, 2010, Oracle and/or its affiliates. All rights reserved.

Primary Author: Debani Banerjee

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

This software and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products or services.

Contents

Send Us Your Comments

Preface

1	Oracle Complex Maintenance, Repair, and Overhaul Overview		
	Overview	1-1	
	Overview of Oracle Complex Maintenance Repair and Overhaul	1-1	
	Maintaining Complex Configurations	1-2	
	Effectively Planning Enterprise-Wide Operations	1-2	
	Optimizing Maintenance Execution	1-2	
	Centrally Managing All Engineering Data	1-3	
	Oracle CMRO Module Overview	1-3	
	Route Management	1-3	
	Document Index	1-3	
	Enigma Integration	1-4	
	Fleet Maintenance Program	1-4	
	Master Configuration	1-4	
	Unit Configuration	1-4	
	Product Classification	1-5	
	Unit Maintenance Plan	1-	
	Visit Work Package	1-5	
	Long Term Planning	1-	
	Production	1-6	
	Production Planning	1-6	
	Outside Processing for Work Orders	1-6	
	Outside Processing for Inventory Service Orders		

2 Setting Up

Overview	2-1
Getting Started	2-1
Oracle CMRO Implementation Checklist	2-2
Setting Up Oracle CMRO	2-7
Setting Up Other Related Oracle Applications	2-7
Setting Up an Organization	2-8
Setting Up an Operating Unit	2-8
Creating an Organization	2-9
Setting Up an Inventory Organization	2-11
Setting Up Oracle Inventory	2-30
Setting Up Oracle Bills of Material (BOM)	2-49
Setting Up Oracle Warehouse Management	2-53
Setting Up Oracle Purchasing	2-57
Setting Up Oracle Advanced Planning and Scheduling	2-61
Setting Up Oracle Order Management	2-63
Setting Up Oracle Project	2-65
Verifying and Updating the Project Created in the Visit Work Package (CMRO)	2-66
Setting Up Oracle Enterprise Asset Management	2-67
Setting Up Oracle Service	2-70
Setting Up Oracle Contracts	2-77
Setting Up Oracle Install Base	2-80
Setting Up Oracle Counters	2-82
Setting Up Oracle Quality	2-83
Setting Up Route and Operation Quality Plans	2-84
Setting Up Job Deferral, MRB Disposition Quality, Non-Routine Job Inspection a	ınd
Non-Routine Operation Inspection Plans	2-88
Setting Up Counter Readings Quality Plans	2-90
CMRO Specific Setups	2-90
Oracle Complex Maintenance, Repair, and Overhaul Standard Setup	2-92
Oracle CMRO Approval Workflow Setup	2-97
Setting Up Profile Options	2-97
Creating Approval Users and Roles	2-98
Oracle CMRO Module Setup	2-108
Setting Up Document Index	2-109
Setting Up Route Management	2-111
Setting Up Master Configuration	2-118
Setting Up Unit Configuration	2-120
Overview of Minimum Equipment Lists (MEL) and Configuration Deviation List	
(CDL)	2-121

	Setting Up a MEL/CDL	2-123
	Setting Up Configuration Access Control	2-124
	Using Configuration Access Control	2-124
	Transactions That Are Allowed on a Quarantined Unit Configuration	2-125
	Deactivating the Quarantine Status	2-126
	Setting Up Fleet Maintenance Program	2-126
	Setting Up Unit Maintenance Plan	2-128
	Setting Up Visit Work Package	2-131
	Setting Up Long Term Planning	2-134
	Setting Up Production	2-136
	Setting Up Inventory Service Order Outside Processing	2-140
	Administrative Setup	2-144
	Setting Up Enigma Integration	2-147
Α	Windows and Navigation Paths	
	Windows and Navigation Paths	A-1
	Default Navigation Paths for Standard Application Windows	A-1

Index

Send Us Your Comments

Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide, Release 12.1 Part No. E13686-04

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document. Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- 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?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

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.

Send your comments to us using the electronic mail address: appsdoc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Intended Audience

Welcome to Release 12.1 of the *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*.

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

Deaf/Hard of Hearing Access to Oracle Support Services

To reach Oracle Support Services, use a telecommunications relay service (TRS) to call Oracle Support at 1.800.223.1711. An Oracle Support Services engineer will handle technical issues and provide customer support according to the Oracle service request process. Information about TRS is available at

http://www.fcc.gov/cgb/consumerfacts/trs.html, and a list of phone numbers is available at http://www.fcc.gov/cgb/dro/trsphonebk.html.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at http://www.oracle.com/accessibility/.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Structure

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

Related Information Sources

Oracle Complex Maintenance, Repair, and Overhaul shares business and setup information with other Oracle Applications products.

Oracle E-Business Suite User's Guide

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI). This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent processes. You can access this user's guide online by choosing "Getting Started with Oracle Applications" from any Oracle Applications help file.

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/or 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 manual to see how to create Project information in Projects which you can then record for an invoice or invoice distribution.

Oracle Install Base Concepts and Procedures 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 manual 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 Install 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 Install 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 manual 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 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 Business Intelligence (BIS), 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, or as part of an upgrade from Release 11i to Release 12. 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 12.1.1

Refer to this guide if you are upgrading your Oracle E-Business Suite Release 10.7 or Release 11.0 products to Release 12.1.1. 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 12.1.1.

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 System Administrator's 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 explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

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 manual 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.

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 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 need to 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 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 as and 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 Complex Maintenance, Repair, and Overhaul enables organizations to streamline maintenance operations, meet the demands for transport and service, and improve profitability. Oracle CMRO comprises the following modules:

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 Document Index, 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 an unique solution for maintenance service providers to enable 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 flexible and easy to use 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 CMRO's Fleet Maintenance Program 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 Master Configuration, 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 Unit Configuration 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 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.

Long Term Planning

The Long Term 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.

The Serial Number Reservation feature enables the maintenance and material planners to reserve specific items for scheduled maintenance. Items may be selected based on defined material requirements and the condition and utilization history of the items.

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 Outside Processing 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 have 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 2-90

Getting Started

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

You must use the System Administrator responsibility to create the required Oracle Applications user(s). 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 System Administrator's Guide.

Oracle CMRO Implementation Checklist

The following tables comprise a checklist of all the steps you need to follow to implement Oracle Complex Maintenance, Repair & Overhaul. 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	Oracle Human Resources User's Guide
Step 2 - Create an Organization	
Step 3 - Set Up an Inventory Organization	

Setting Up Oracle Inventory, page 2-30

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

Setting Up Oracle Bills of Material (BOM), page 2-49

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

Setting Up Oracle Warehouse Management, page 2-53

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

Setting Up Oracle Purchasing, page 2-57

Description	Reference
Step 1 - Set Up Buyers	Oracle Purchasing User's Guide
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 2-61

Description	Reference
Step 1 - Setting up Oracle Advanced Supply Chain Planning	Oracle Advanced Planning Implementation and User's Guide
Step 2 - Setting up Oracle Demand Planning	Oracle Demand Planning Implementation and
Step 3 - Setting up Available to Promise	User's Guide
	Oracle Global Order Promising Implementation and User's Guide

Setting Up Oracle Order Management, page 2-63

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

Setting Up Oracle Project, page 2-65

Description	Reference
Step 1 - Create Project Template	Oracle Projects User's Guide
Step 2 - Assign Project Template Name to User Profile	

Setting Up Oracle Enterprise Asset Management, page 2-67

Description	Reference
Step 1 - Set Up WIP Accounting Classes	Oracle Enterprise Asset Management User's
Step 2 - Set Up EAM Parameters	Guide
Step 3 - Set Up Asset Category Code	
Step 4 - Verify WIP_EAM_Activity_Priority Lookup	

Setting Up Oracle Service, page 2-70

Description	Reference
Step 1 - Define Service Request Status	Oracle Customer Support Implementation Guide
Step 2 - Define Service Request Type	
Step 3 - Define Service Request Severities	
Step 4 - Set Up Profile Options	

Setting Up Oracle Contracts, page 2-77

Description	Reference
Step 1 - Set Up Buyer	Oracle Contracts Core Concepts and Procedures
Step 2 - Set Up Supplier	Guide
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 Install Base, page 2-80

Description	Reference
Step 1 - Set Up Install Parameters	Oracle Install Base Implementation Guide
Step 2 - Set Up Instance Statuses	
Step 3 - Set Up Asset Locations	

Setting Up Oracle Counters, page 2-82

Description	Reference
Step 1 - Define Counter Groups	Oracle Service Implementation Guide

Setting Up Oracle Quality, page 2-83

Description	Reference
Step 1 - Set Up Route and Operation Quality Plans	Oracle Quality User's Guide
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 2-92

Description	Reference
Step 1 - Set Up Profile Options	-

Oracle CMRO Approval Workflow Setup, page 2-97

Description	Reference
Step 1 - Set Up Profile Options	-
Step 2 - Create Approval User(s) and Role	

Oracle CMRO Module Setup, page 2-108

Description	Reference
Step 1 - Set Up Document Index	
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 Long Term Planning	
Step 9 - Set Up Production	
Step 10 - Administrative Setup	

Setting Up Oracle CMRO

Setting Up Oracle CMRO includes the following sections:

- Setting Up Other Related Oracle Applications, page 2-7
- CMRO Specific Setups, page 2-90

Setting Up Other Related Oracle Applications

Oracle CMRO is integrated with other applications that are part of the Oracle eBusiness suite. This integration lends additional functionality to Oracle CMRO and enables it to fully support the maintenance, repair and overhaul needs of Operators, Third Party Maintainers, 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 2-30
- Setting Up Oracle Bills of Material (BOM), page 2-49

- Setting Up Oracle Warehouse Management, page 2-53
- Setting Up Oracle Purchasing, page 2-57
- Setting Up Oracle Advanced Planning and Scheduling, page 2-61
- Setting Up Oracle Order Management, page 2-63
- Setting Up Oracle Project, page 2-65
- Setting Up Oracle Enterprise Asset Management, page 2-67
- Setting Up Oracle Service, page 2-70
- Setting Up Oracle Contracts, page 2-77
- Setting Up Oracle Install Base, page 2-80
- Setting Up Oracle Counters, page 2-82
- Setting Up Oracle Quality, page 2-83

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. Organization Setup includes the following steps:

- Setting Up an Operating Unit, page 2-8
- Creating an Organization, page 2-9
- Setting Up an Inventory Organization, page 2-11

Setting Up an Operating Unit

An Operating Unit is the organization unit, through which you create, process, report on, 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).

- Associate responsibilities with Business Group (optional).
- Define Organizations.
- Define Organization Relationships.
- Define Responsibilities.
- Set MO: Operating Unit profile option.
- 10. Convert to Multiorg Architecture (required only if current set up is not multiorg enabled).
- 11. Verify Order Management System parameters.
- **12**. Set Profile Options specific to Operating Unit.
- Define Inventory Organization security (optional).
- **14**. Implement the application products.

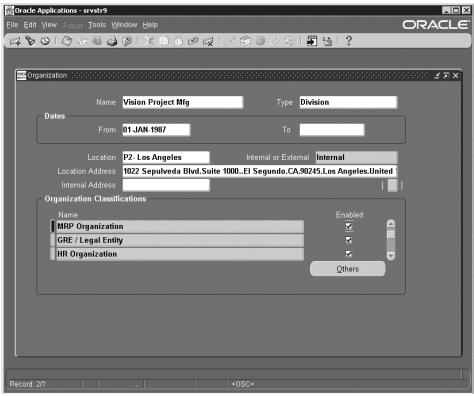
Creating an Organization

To create an organization:

- Select the Manufacturing and Distribution Manager responsibility. From the Navigator, select Inventory > Setup > Organizations > Organizations. The Find Organization window appears.
- Select New (A).
- Enter an organization Name.
- 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



- Select the Enable check box for all the above parameters.
- 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 Financial products. The GRE represents the real-world legal entity that pays employees, withholds their taxes, and provides reports on various matters concerning them to government agencies.

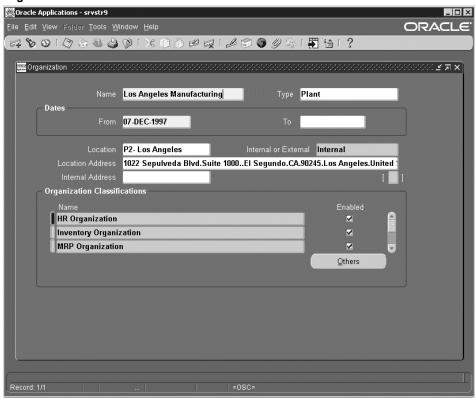
Setting Up an Inventory Organization

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. Select New(A). 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

Organization Window

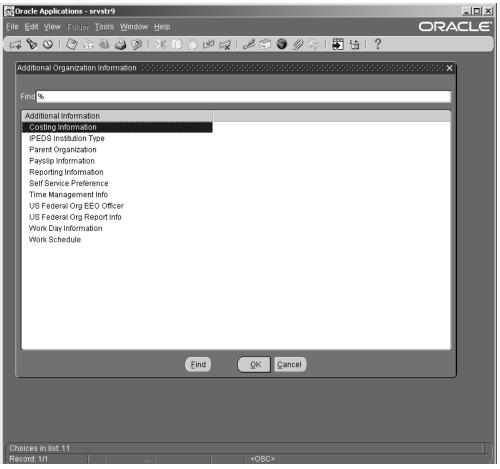


- Select the Enable check box for each of the above mentioned classification.
- Save your work.
- As indicated below, set up the parameters for each of the above mentioned Organization Classifications.

To set up HR Organization parameters:

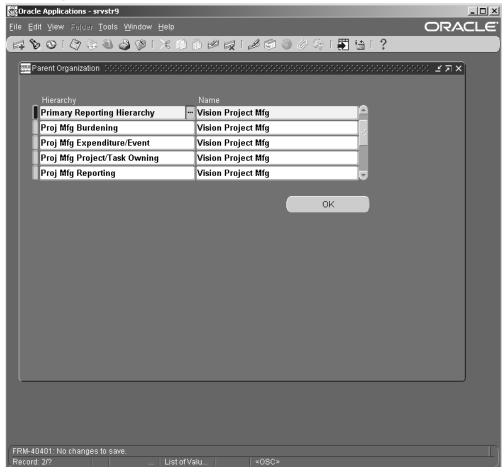
1. In the Organizations window, select HR Organization. Click the Others button. The Additional Organization Information window appears.

Additional Organization Information Window



- **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 choose Parent Organization from the list of values. 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.

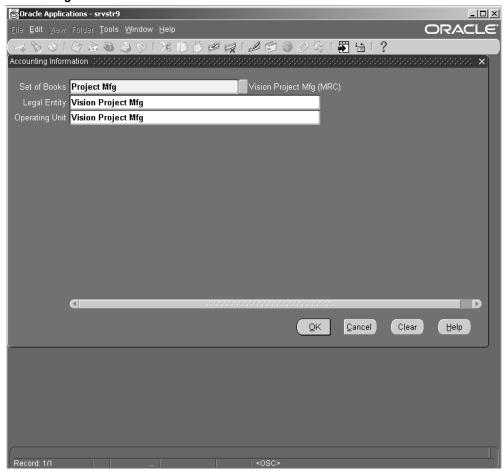
Parent Organization Window



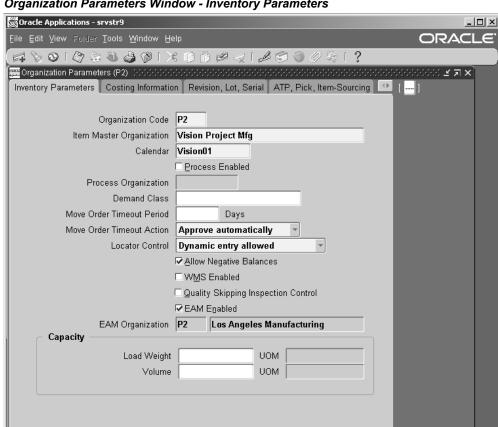
To set up Inventory Organization parameters:

- Select Inventory Organization in the Organizations window. Click the Others button. Choose Accounting Information 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 from their corresponding list of values. Click OK.
- Save your work.

Accounting Information Window



- 5. Navigate to the Additional Organization Information window and select Inventory Information from the list. The Organization Parameters window opens.
- 6. Select the Inventory Parameters tab. Enter an Organization Code.
- 7. Select the Item Master Organization and Calendar from their corresponding list of values.
- 8. Select the EAM Enabled check box.
- 9. Save your work.



Organization Parameters Window - Inventory Parameters

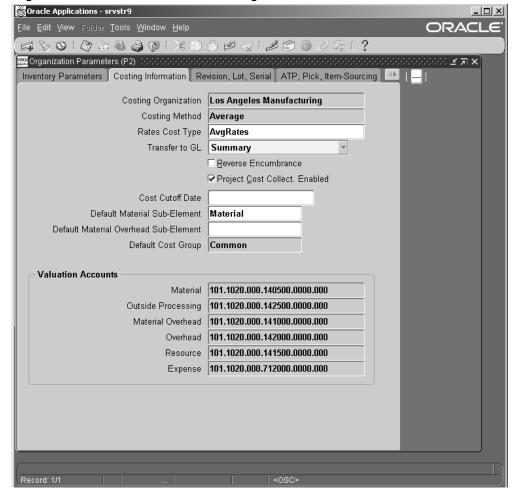
10. Select the Revision, Lot, Serial parameters tab. Enter the following information:

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

Oracle Applications - srystr9 **ORACLE** 四多的日本要多的一米田市四点一年四多月年1? 🕮 Organization Parameters (P2) 🔀 लल्ल ≝ ज्ञ ×े Inventory Parameters | Costing Information | Revision, Lot, Serial | ATP, Pick, Item-Sourcing | 🕛 [....] Starting Revision A Lot Control Uniqueness Across items Generation At organization level ☑ Zero Pad Suffix Prefix Total Length 6 Serial Control Uniqueness Within inventory items Generation At item level Prefix L Starting Serial Number 195671 ☐ Allocate Serial Numbers

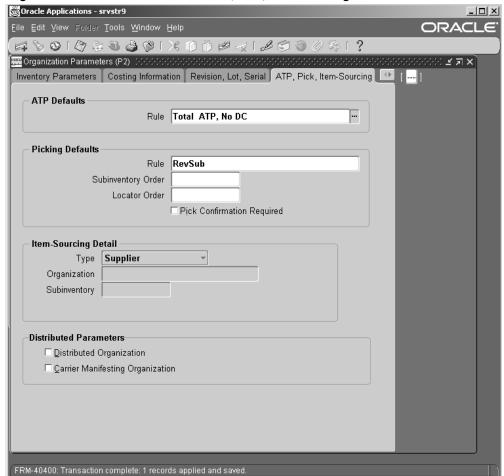
Organization Parameters Window - Revision, Lot, Serial Parameters

- 11. Save your work.
- **12.** Select 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.
- 15. Save your work.



Organization Parameters Window - Costing Parameters

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



Organization Parameters Window - ATP, Pick, Item-Sourcing Parameters

To set up MRP Organization parameters:

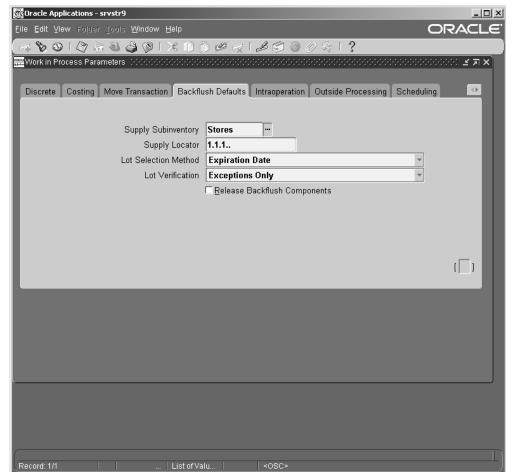
- 1. In the Organization window, select MRP Organization. Click the Others button.
- **2.** The Planning Parameters window opens. Select the Net WIP and Net Reservation check box.
- 3. Save your work.

Planning Parameters Window Oracle Applications - srystr9 ORACLE ■Snapshot Lock Tables Execution Defaults -☑ Net WIP ☑Plan Safety Stock ✓ Net Purchases Material Scheduling Method Order start date Planned Items All planned items Repetitive Planning Parameters – Use Calendar dates -Anchor Date 19-FEB-2004 First Bucket Days 7 35 14 56 Third Bucket Days 40

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

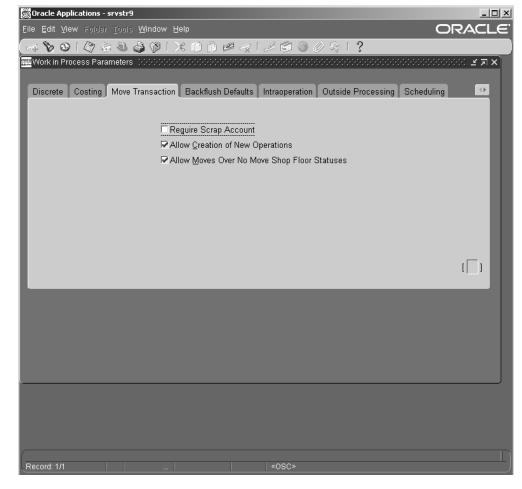
Record: 1/1

- Select WIP Organization in the Organization window. Click the Others button.
- 2. Click the Backflush Defaults tab. Select Supply subinventory from the LOV. Enter a Supply Locator (if required).



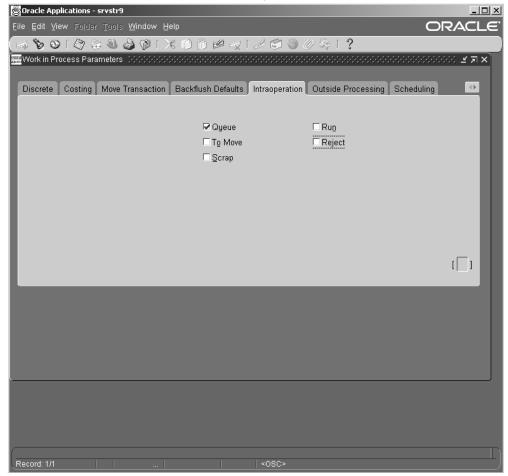
Work In Process Parameters Window - Backflush Defaults Tab

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



Work In Process Parameters Window - Move Transaction Tab

- Select the Intra-operation tab. Enable the Queue Check Box. Disable other check boxes.
- **5**. Save your work.



Work In Process Parameters Window - Intraoperation Tab

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

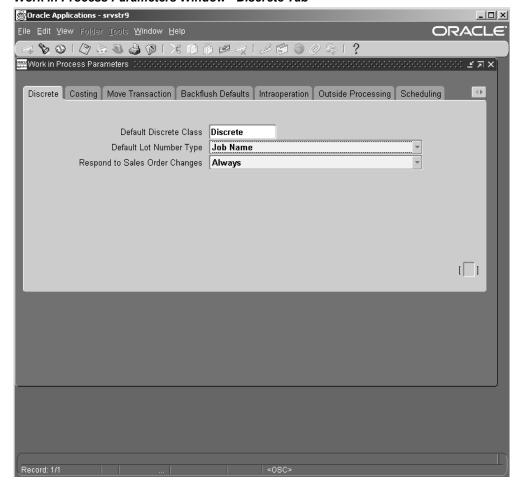
Oracle Applications - srvstr9 ORACLE Class Discrete Description Discrete Job WIP Accounting Class Type Standard Discrete Accounts 101.1020.500.531101.0000.000 101.1020.000.144000.0000.000 Material Overhead 101.1020.000.144500.0000.000 Resource 101.1020.000.145000.0000.000 101.1020.500.532101.0000.000 101.1020.500.531107.0000.000 Outside Processing 101.1020.000.146000.0000.000 Overhead 101.1020.000.145500.0000.000 101.1020.500.532104.0000.000 101.1020.500.534105.0000.000 Costing Completion Cost Source System Calculated Use Actual Resources

WIP Accounting Classes Window

- 10. Similarly, 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.
- **11**. Save your work.

Record: 1/1

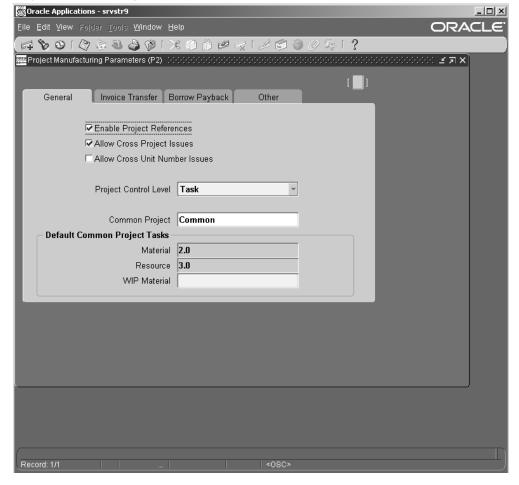
- 12. From the Navigator, select Inventory, Setup, Organizations, Organizations. Query for your Organization.
- 13. Select WIP Organization within the Organization Classifications block. Click the Others button. The Work in Process parameters window appears.
- 14. Select the Discrete tab. Choose a default Discrete Class from the Default Discrete Class list of values.
- **15**. Save your work.



Work in Process Parameters Window - Discrete Tab

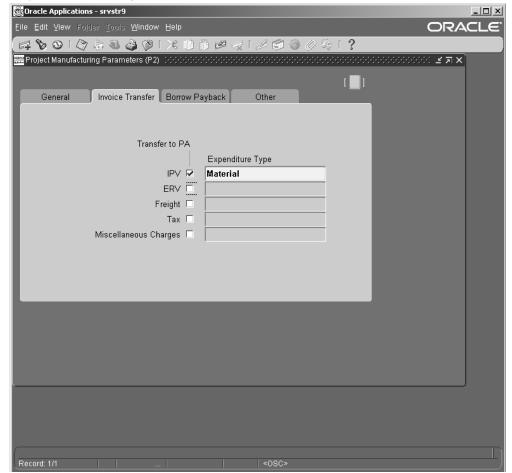
To set up Project Manufacturing parameters:

- 1. In the Organizations window, select Project Manufacturing Organization. Click the Others button. The Project Manufacturing Parameters window opens.
- **2.** Select the General tab. Check the Enable Project Reference check box.
- 3. Select Task from the Project Control Level drop-down list.



Project Manufacturing Parameters Window - General Tab

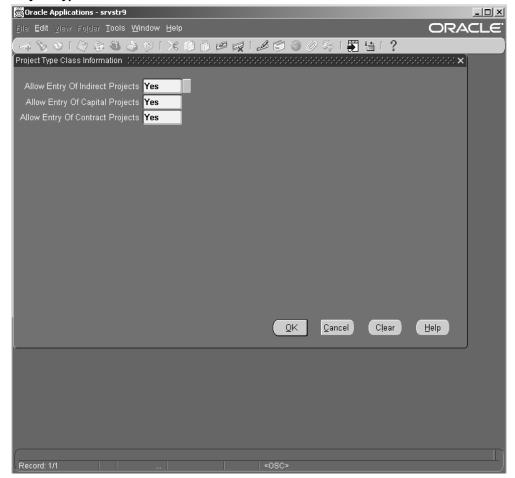
- Click the Invoice Transfer tab. Check the IPV check box to enable IPV.
- Select Material from the Expenditure Type LOV.
- Save your work.



Project Manufacturing Parameters Window - Invoice Transfer Tab

To set up Project Task Owning Organization parameters:

- 1. In the Organizations window, select Project Task Owning Organization. Click the Others button. The Additional Organization Information window opens.
- 2. Click in the Project Type Class Information field. In the Project Type Class Information sub-window that opens, select Yes for all the following parameters:
 - Allow Entry of Indirect Projects
 - Allow Entry of Capital Projects
 - Allow Entry of Contract Projects
- 3. Click OK. Save your work.

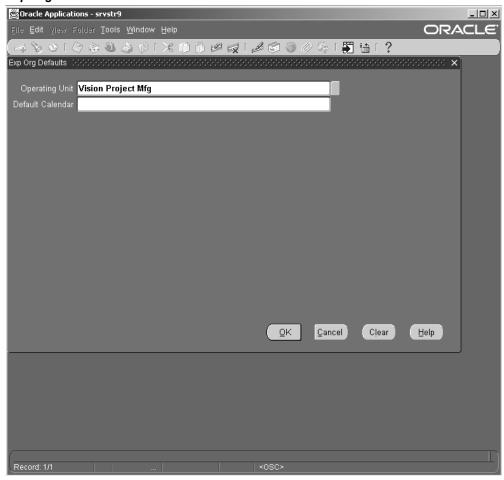


Project Type Class Information Window

To set up Project Expenditure/Event Organization parameters:

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

Exp Org Defaults Window



Additional Setup

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



Inventory Accounting Periods Window

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 reference 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 Subinventory

For every Inventory Organization, you must define Items and set up at least one subinventory. Cost group and Locator should have been setup prior to setting up subinventory.

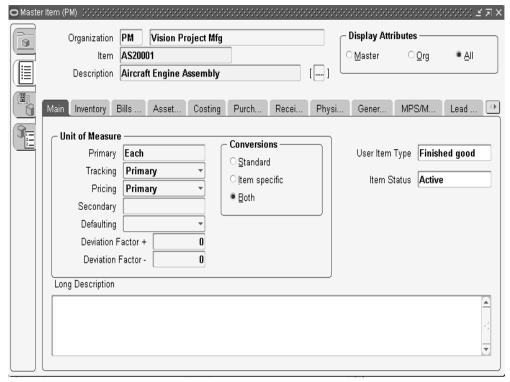
To create Component Items

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 in the Description field.
- 4. Click the Main tab. Select Active from the Item Status drop-down menu.

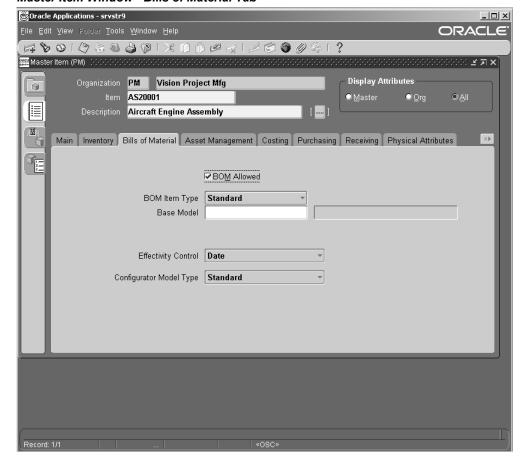
Master Item Window - Main Tab



- Click the Inventory tab. Select the following check boxes:
 - Inventory Item
 - Stockable
 - Reservable
 - Transactable
- For Lot and Lot Expiration, select No control from the Control drop-down menu.
- 7. Select Serial Control: At receipt (if the items are serial number trackable; otherwise set it to non-serialized) from the Serial Generation drop-down menu.
- Select No Control from the Locator Control drop-down menu.

Master Item Window - Inventory Tab Oracle Applications - srystr9 _ | U × ORACLE' Display Attributes Organization PM Vision Project Mfg 9 . Θ<u>A</u>II Item AS20001 Description Aircraft Engine Assembly [...] ij Main Inventory Bills of Material Asset Management Costing Purchasing Receiving Physical Attributes ✓ Inventory Item ✓ Stockable ▼ Transactable Revision Control (D) ✓ Reservable (G) ☐ Check Material Shortage - ✓ Cycle Count Enabled-- Lot Expiration (Shelf Life) — Control No Control Negative Measurement Error Shelf Life Days Positive Measurement Error 0 Serial -Lot -Generation At Receipt Control No Control Starting Prefix Starting Prefix Starting Number Starting Number Locator Control No Control Restrict Sybinventories Restrict Locators (J)

9. Click the Bills of Material tab. Select the BOM Allowed check box.



Master Item Window - Bills of Material Tab

10. Click the Asset Management tab. Select Rebuildable from the Asset Item Type dropdown menu.

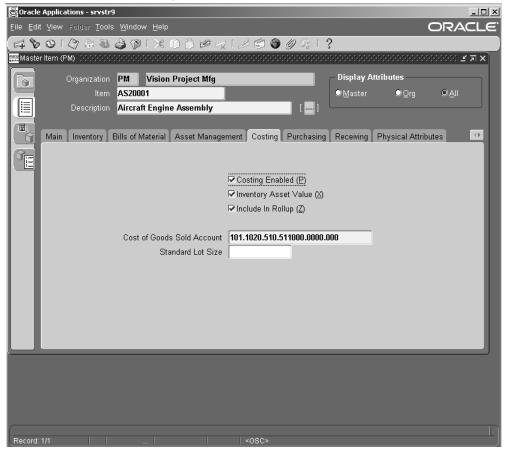
Oracle Applications - srvstr9 ORACLE 四多010年3001×10日四月12日30年1? Organization PM Vision Project Mfg Display Attributes 9 Item AS20001 . ■ <u>M</u>aster QAII. Description Aircraft Engine Assembly Main Inventory Bills of Material Asset Management Costing Purchasing Receiving Physical Attributes Asset Item Type Rebuildable **Asset Activity Properties** Shutdown Type Activity Type Activity Notification Required Activity Cause Activity Source

Master Item Window - Asset Management Tab

Note: You can select a value in the Asset Item Type field only if Oracle Enterprise Asset Management (eAM) set up is complete. Set up at least one item with 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 value for Cost of Goods Sold Account.

Master Item Window - Costing Tab



- **13**. Click the Purchasing tab. Select the following check boxes:
 - Purchased
 - Purchasable
 - Allow Description Update
- 14. Under Invoice Matching, set Receipt Required to No.

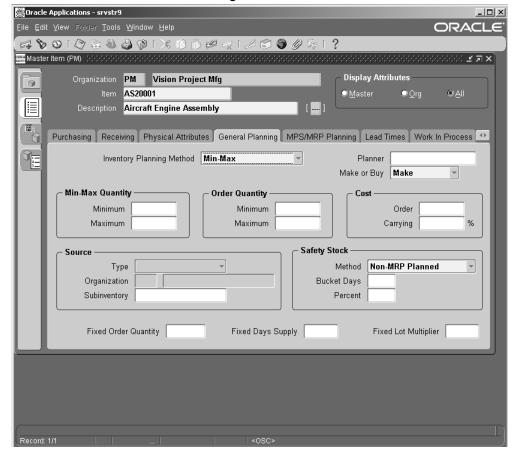
Oracle Applications - srystr9 उरस्टरस्ट ≝ ज 🗙 Display Attributes Organization PM Vision Project Mfg 9 AS20001 Q<u>A</u>II Description Aircraft Engine Assembly Main Inventory Bills of Material Asset Management Costing Purchasing Receiving Physical Attributes ✓ Purchased ✓ Purchasable Use Approved Supplier ✓ Allow Description Update RFQ Required No Invoice Matching Outside Processing Item Taxable No Receipt Required No Unit Type Tax Code Inspection Required Default Buyer Unit of Issue Receipt Close Tolerance Invoice Close Tolerance % UN Number Hazard Class List Price Market Price Price Tolerance 0 % Rounding Factor Encumbrance Account Expense Account 101.0000.740.711000.0000.000 Asset Category

Master Item Window - Purchasing Tab

15. Click the Physical Attributes tab.

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

16. Click the General Planning tab. Select Min-Max from the Inventory Planning Method drop-down menu.



Master Item Window - General Planning Tab

- 17. Click the MSP/MRP Planning tab. Select MRP Planning from the Planning Method drop-down menu.
- **18.** Select Hard Pegging from the Pegging drop-down menu.

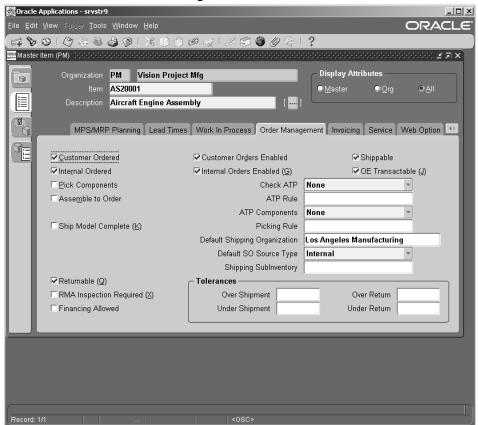
Oracle Applications - srvstr9 ORACLE **Display Attributes** Organization PM Vision Project Mfg 9 Item AS20001 Description Aircraft Engine Assembly Purchasing Receiving Physical Attributes General Planning MPS/MRP Planning Lead Times Work In Process oe i Planning Method MRP planning Exception Set Shrinkage Rate Forecast Control Acceptable Early Days Pegging Hard Pegging Round Order Quantities ☐ Planned Inventory Point Create Supply - MPS Planning Repetitive Planning Calculate ATP Acceptable Rate + Reduce MPS Acceptable Rate -Planning Time Fence User-Defined Days Demand Time Fence Days Days Release Time Fence Substitution Window Days

Master Item Window - MSP/MRP Planning Tab

- 19. Click the Order Management tab. Select the following check boxes:
 - Customer Ordered
 - Internal Ordered

Record: 1/1

- 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 Window - Order Management Tab

- **20**. Click the Work in Process tab. Select the Build in WIP check box.
- **21**. Select Supply Type of Push from the Supply Type drop-down menu.

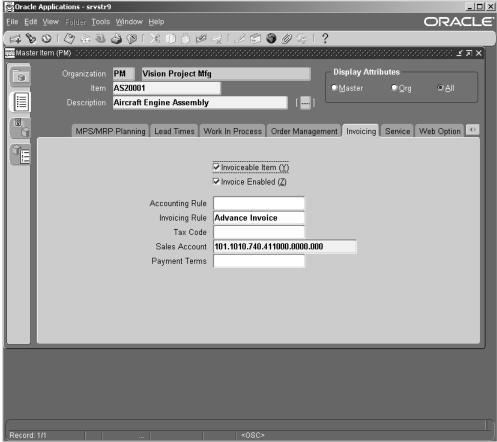
Oracle Applications - srystr9 Organization PM Vision Project Mfg Display Attributes 9 Item AS20001 Q<u>A</u>II Description Aircraft Engine Assembly MPS/MRP Planning Lead Times Work In Process Order Management Invoicing Service Web Option TE. ☑ Build in WIP Scheduling Penalty Per Day – Supply – Type Push Inventory Carry Operation Slack Subinventory Locator Overcompletion Tolerance Type Tolerance Value

Master Item Window - Work in Process Tab

Record: 1/1

22. Click the Invoicing tab. Select the Invoiceable Item and Invoice Enabled check boxes.

Master Item Window - Invoicing Tab



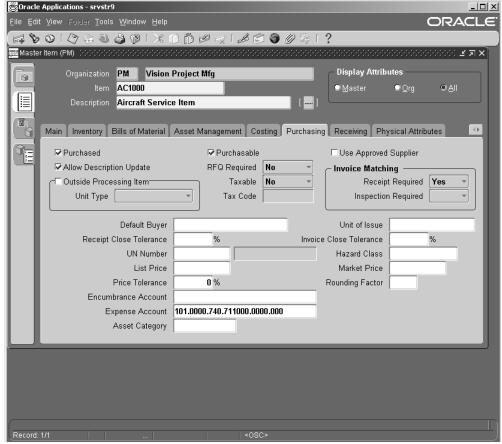
- 23. Click the Service tab. Select the Serviceable Product and Install Base Tracking check boxes.
- 24. Save your work.

To set up Service Items

1. Set up Service Items with attributes as described below.

Attribute	Value
Item Status	Active
Inventory Item	Disabled
Stockable	Disabled
Reservable	Disabled
Purchased	Enabled
Purchasable	Enabled
Description Update	Enabled
Receipt Required	Yes
OSP	Disabled

Master Item - Purchasing Tab



Save your work.

To set up Subinventory

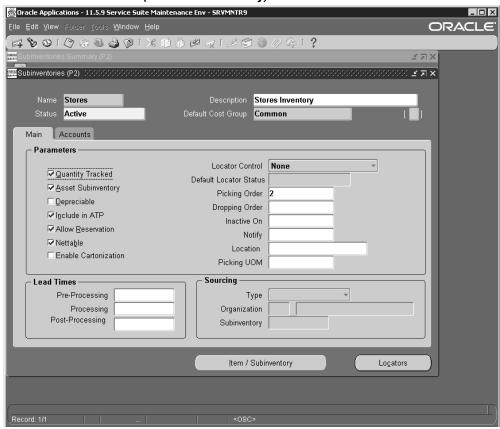
- 1. From the Navigator, select Inventory > Setup > Organization > Subinventories. The Subinventories window appears.
- 2. Define the Stores, MRB, and Consumable subinventories.

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

- 3. To define the **Stores** subinventory, type Stores in the Name field.
- 4. Select Active from the Status list of values.
- **5**. Select the following check boxes:

- Quantity Tracked
- Asset Subinventory
- Include in ATP
- Allow Reservation
- Nettable

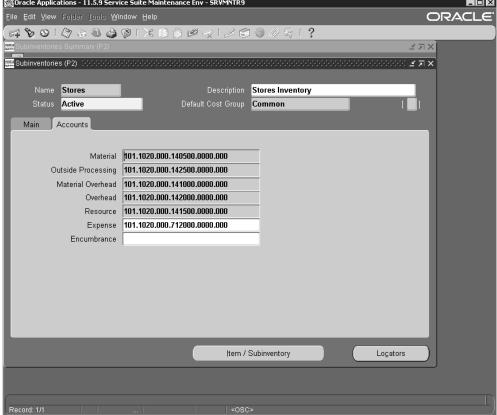
Subinventories Window (Stores Subinventory)



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

Oracle Applications - 11.5.9 Service Suite Maintenance Env - SRYMNTR9

Subinventories Window - Accounts Tab

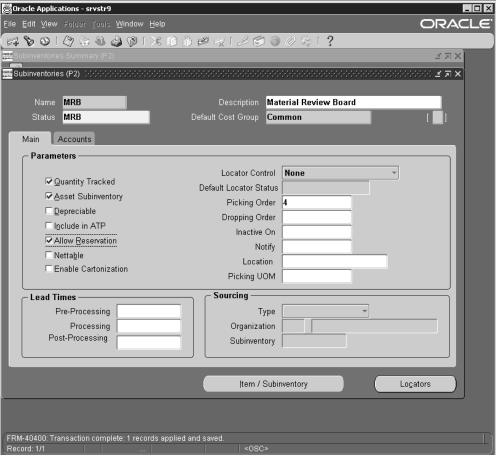


- Save your work.
- Click the New icon to create a new subinventory. Type MRB in the Name field. Select Active from the Status list of values.

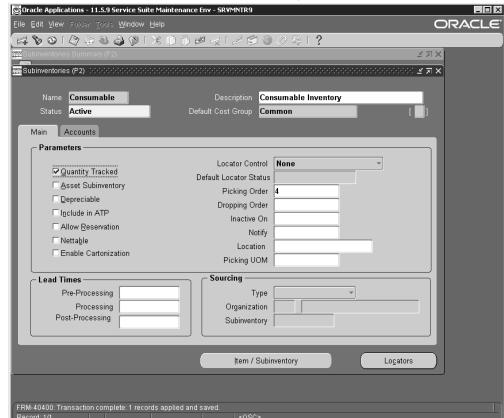
Note: The status must be set to MRB Review. You must install Oracle Warehouse Management (WMS) to use this status. You can set the status to Active initially, install Warehouse Management, create additional Transaction Types in WMS and then change subinventory status to 'MRB Review'.

- **9.** Select the following check boxes:
 - Quantity Tracked
 - Asset Subinventory
 - Allow Reservation

Subinventories Window (MRB Subinventory)



- **10.** Select the Accounts tab and enter appropriate values. Save your work.
- 11. Click the New icon to create a new subinventory. Type Consumable in the Name field. Select Active from the Status list of values.
- **12.** Select the Quantity Tracked check box. Disable all other attributes.



Subinventories Window (Consumable Subinventory)

- 13. Select the Accounts tab and enter appropriate accounting values. Save your work.
- 14. Define a new subinventory by clicking the New icon. Type Scrap in the Name field. Select Unserviceable from the Status list of values. Select the Quantity Tracked check box. Disable all other attributes.

Oracle Applications - srvstr9 ORACLE 日本の1日本の日間1×10日日日11日日の日本1? **≚** ⊼ × Subinventories (P2) 🔀 ≟ ⊼ × Name Scrap Default Cost Group Common Status Un-Serviceable Main Accounts Parameters Locator Control ☑ Quantity Tracked Default Locator Status ☐ <u>A</u>sset Subinventory Picking Order □ Depreciable Dropping Order ☐ Include in ATP Inactive On ☐ Allow Reservation Notify □ Nettable Location ☐ Enable Cartonization Picking UOM Sourcing **Lead Times** Pre-Processing Туре Processing Organization Post-Processing Subinventory Item / Subinventory Logators FRM-40400: Transaction complete: 1 records applied and saved.

Subinventories Window (Scrap Subinventory)

15. Select the Accounts tab and enter appropriate accounting values. Save your work.

See Also:

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.

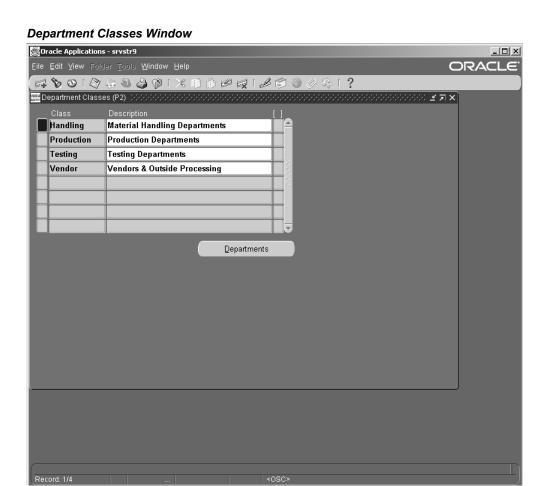
Before setting up Oracle Bills of Material, you must ensure that:

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

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

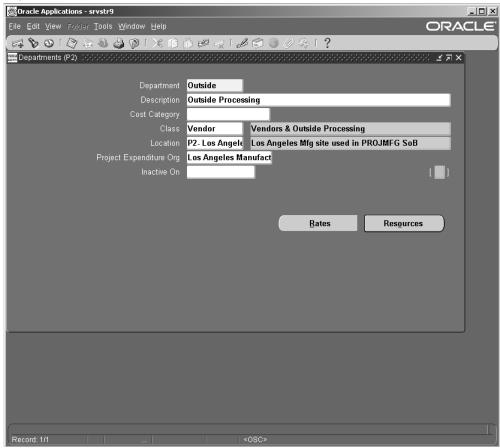
To set up Departments and Resources:

- 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.



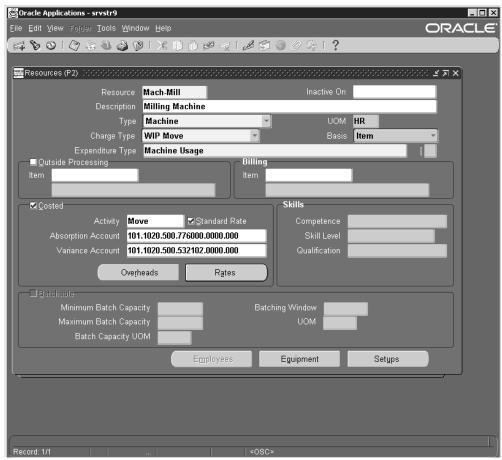
- To set up a department, navigate to Bills of Material > Routings > Department. The Departments window appears.
- Set up at least one Department that will be associated with the department class Vendor (case sensitive). It is recommended that you set up a Department that the users can easily identify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

Departments Window



- **6.** Set up Resources and associate with Employees. To set up resources navigate to Routings > Resources.
- 7. Define a resource of type Machine.

Resources Window



Note: In the item master you must check 'Equipment' flag (Physical attributes) to see valid values.

- Set up Standard Operations.
- 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/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

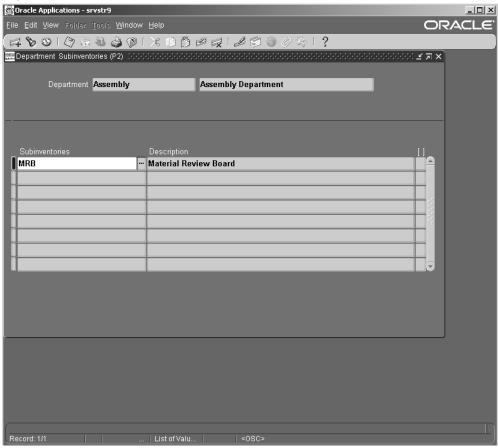
Setting up Oracle Warehouse Management includes:

- Associating departments with subinventories
- Defining Material status
- Associating material status with subinventories
- Setting up Profile Options

To associate departments with subinventories:

- Change 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 department from the Department list of values and associate it with a Subinventory.
- 3. Save your work.

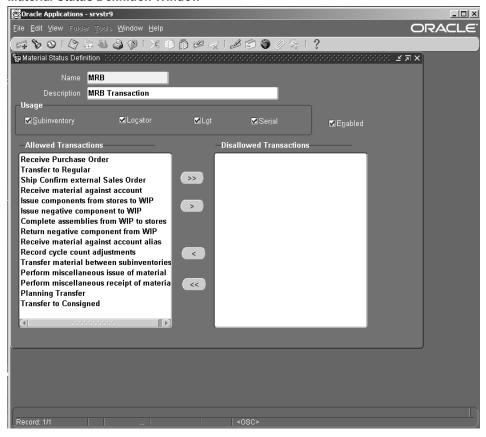
Department Subinventories Window



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



3. Save your work.

To associate Material Status with Subinventories:

- 1. Navigate to Setup > Warehouse Configuration > Warehouse > Subinventories. The Subinventories Summary window appears.
- 2. Select a subinventory and associate a Material Status with it.

Oracle Applications - srvstr9 ORACLE Eile Edit ⊻iew Folder Tools Window Help 3 Name Description Status Default Cost Group MRB Material Review Board MRB Common Item / Subinventory Logators New <u>O</u>pen Record: 1/1

Subinventories Summary Window

To set up Profile Options

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

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

©trade Applications - srystr9 Eile Edit View Folger Tools Window Help ○RACLE* Personal Profile Values Profile Name Default Value User Value | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | MRB | | AHL: Material Status - MRB | | AHL:

Personal Profile Values Window

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

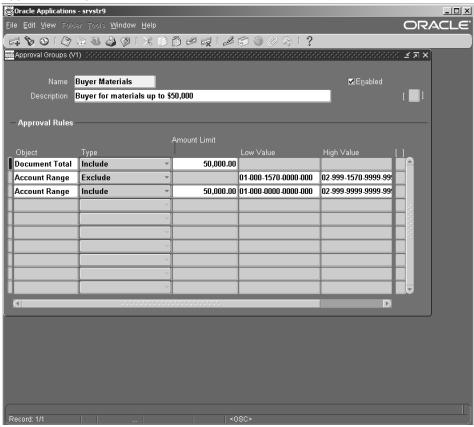
To set up Oracle Purchasing:

1. Change responsibility to Manufacturing and Distribution Manager. From the

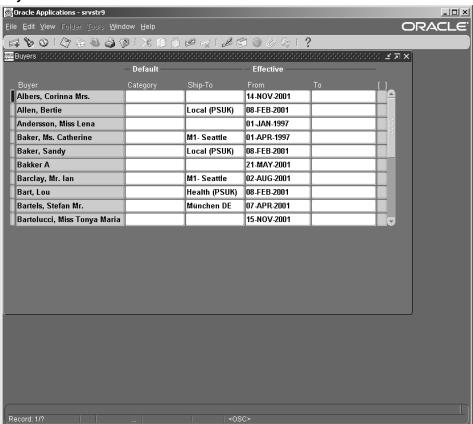
Navigator, select Purchasing.

- **2**. Set up the following in Oracle Purchasing:
 - Buyers
 - Approvals
 - **Purchasing Options**
 - **Receiving Options**
 - Financial Options
 - Open Accounting Periods

Approval Groups Window



Buyers Window



Oracle Applications - srystr9 ORACLE **☆boi9毎830m×mmm☆18000**年!? Open and Close Periods (Vision Operations) Accounting Period Latest Open Jan-04 Latest Open 2003 Ogen Next Period Open Next Year 1 2004 01-JAN-2004 31-DEC-2004 Open ... Jan-04 Open Adj-03 13 2003 31-DEC-2003 31-DEC-2003 Dec-03 12 2003 01-DEC-2003 31-DEC-2003 11 2003 01-NOV-2003 Nov-03 30-NOV-2003 Oct-03 10 2003 01-OCT-2003 31-OCT-2003 Open Open Sep-03 9 2003 01-SEP-2003 30-SEP-2003 8 2003 01-AUG-2003 31-AUG-2003 Aug-03 Open Jul-03 7 2003 01-JUL-2003 31-JUL-2003 Open Jun-03 6 2003 01-JUN-2003 30-JUN-2003 Open List of Valu

Open Accounting Periods Window

3. Save your work.

See Also:

Oracle Purchasing User's Guide

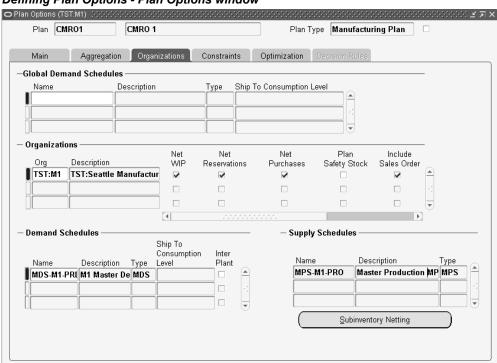
Setting Up Oracle Advanced Planning and Scheduling

Oracle Complex Maintenance, Repair, and Overhaul 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, as well as scheduling through ASCP. Demand Planning (DP), 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 faculties. Additionally, Oracle APS's Inventory Optimization (IO) application is required for complete supply chain planning.

The sections below discuss the setups required:

For 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 and DP, and ATP queries from the CMRO instance must be directed to the correct instance. For information, refer to Section 2 of 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 Section 5 of the Oracle Advanced Planning Implementation and User's Guide.



Defining Plan Options - Plan Options window

For Demand Planning

- Demand planning collections must be setup. For information on setting up data collections, refer to Section 2 of the Oracle 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, which will have CMRO material requirements, must be checked.

Application Instance From APS Instance From Source Code Instance Type Version To APS To Source TST **▼** 11i Discrete & Process Organizations Instance TST Org Description Enabled Collection Group XNA American Eagle - XNA V V1 Vision Operations 1 1 S1 Chicago Subassembly Plant M1 Seattle Manufacturing M2 **Boston Manufacturing** VS Vision Services VA Vision ADB D1 Singapore Distribution Center D2 Miami Distribution Center PM Vision Project Mfg

Defining Application Instances - Application Instances window

• 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 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 Unit Maintenance Plan's history)

For information on creating demand plans, refer to Section 7 of the *Oracle Demand Planning Implementation and User Guide*.

For Available to Promise

The source and destination instance must be defined. For information, refer to Section 2 of 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:

- From the Manufacturing and Distribution Manager responsibility, navigate to Order Management > Set Up > Rules > Security > Processing Constraints. The Processing Constraints window appears.
- 2. Query for the Order Sales Credit entity using the Find icon.
- In the Constraints field, disable Create, Update, Delete, and Cancel Operations.
- Click the Applicable To tab. Select the Authorized Responsibilities Radio Button and provide a list of Responsibilities that can perform the above listed actions.
- Save your work.
- Query for the Order Line entity.
- Disable Create, Update, Delete, and Cancel operations for the same.
- Click the Applicable To tab. Select the Authorized Responsibilities Radio Button and provide a list of Responsibilities that can perform the above listed actions. Save your work.

Note: Setting up Processing Constraints ensures that Order Management users are not able to update Sales Orders created within CMRO.

To define Customers:

- Navigate to Customers > Standard. The Find/Enter Customers window opens. 1.
- 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 Project

Oracle's CMRO application uses 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. Project Manufacturing's standard billing functionality can be used to generate the required reports for the corresponding visit work packages.

Setting up Oracle Projects includes the following steps:

- Creating a Project Template
- Assigning the Project Template name to an user profile

To create a Project Template:

- Change responsibility to Project Super User. From the Navigator, select Setup > Projects > Project Templates.
- 2. Click on New. Enter the required information.
- 3. Select the Template check box to classify the project as template.
- 4. Ensure that all Project Class Categories that are marked Required are included, else you cannot approve Project Templates. Save the Project Template.

Note: This template should be created for the applicable inventory master organization. All projects created for 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 an user profile

- Change responsibility to System Administrator. From the Navigator, select Profile > System. The Find System profile Values window appears.
- 2. Find System Profile Value AHL: Default Project Template ID.
- 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 you enter in the User Value field overriding the values preset by the System Administrator. A few profile options cannot be changed, but are displayed for informational purposes only. To change the User Profile options, from the Application Developer Responsibility, navigate to Other > Profile. 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 System Administrator's Guide.*.

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

Each time the maintenance planner creates a project in Visit Work Package (CMRO), the project's parameters must be manually defined.

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

- 1. Change responsibility to Manufacturing and Distribution Manager. From the Navigator, select 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.** Select 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.

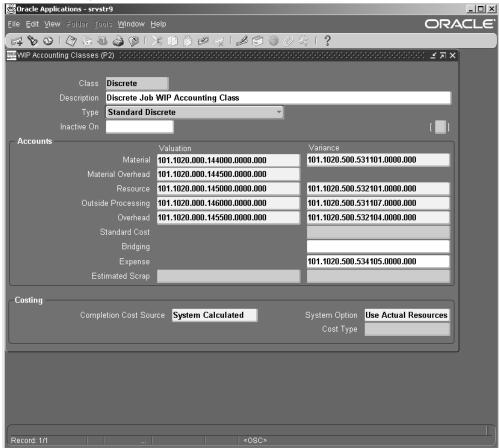
Before setting up Oracle eAM, you must ensure that:

- Oracle Inventory setup is complete
- Oracle WIP setup is complete
- Oracle BOM setup is complete
- Oracle Purchasing setup is complete

To set up Oracle Enterprise Asset Management:

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

WIP Accounting Classes Window



Set up the eAM parameters.

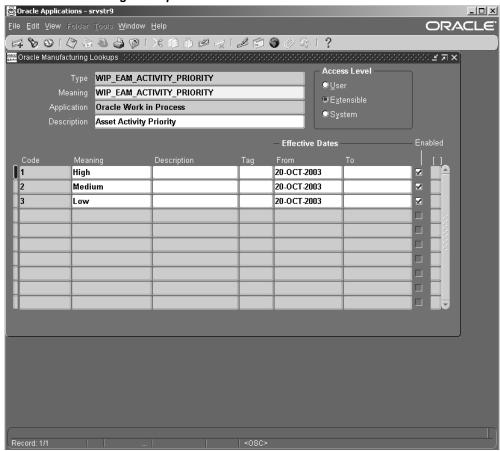
||× Oracle Applications - srystr9 ORACLE Enterprise Asset Management Parameters (P2) Asset Number Defaults . Asset Number Auto Generation Cost Defaults Cost Element Material Cost Category Maintenance Work Request Request Type Work Request ■ <u>Auto</u> Approve Work Order Defaults ☑Auto Firm on Release ■Enable Material Issue Requests ■Invoice Billable Items Only Account Defaults FRM-41830: List of Values contains no entries

Enterprise Asset Management Parameters Window

- **4.** Navigate to Setup > Category > Category Codes. Set up the Asset Category Code for structure Asset Management.
- To establish the Asset Category as the default category, navigate to Set up > Category > Category Sets. The Category Sets window 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 setup:

Code	Meaning
1	High
2	Medium
3	Low

Oracle Manufacturing Lookups Window



See Also:

Oracle Enterprise Asset Management User Guide

Setting Up Oracle Service

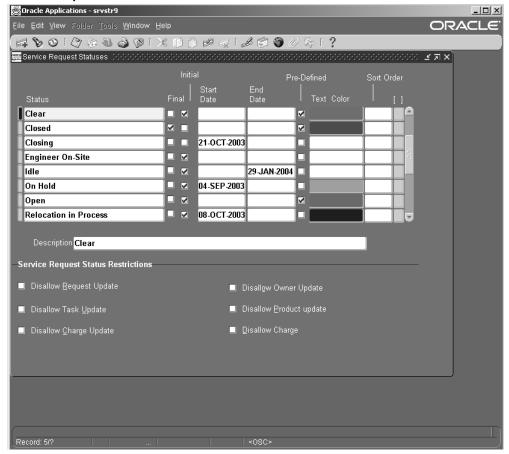
Oracle Service provides Oracle CMRO with the functionality to create and update service requirements in a maintenance organization. The association of a service request to a visit task and production job allows the maintenance organization to track the service difficulty (non-routine) to the associated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

Setting up Oracle Service includes:

- Verifying, defining service request type, status, and severity,
- Setting up the profile options.

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

- 1. Change responsibility to Customer Support. From the Navigator choose Setup > Service Request > Request Status. The Service Request Statuses window appears.
- **2.** You can define the following statuses:
 - New
 - Open
 - Working
 - Assigned
 - Closed



Service Request Statuses Window

Navigate to Setup > Service Request > Request Types. The Service Request Types window 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

- You can define the following Request Types:
 - Pilot Log
 - Cabin Log
 - Mechanic Log
 - Inspection Log

Technical Problem

Service Request Types Window



- **5.** Navigate to Setup > Service Request > Request Severities. The Service Request Severities window appears.
- **6.** Select the Complex Maintenance check box.
- 7. Verify that the following Request Severities are defined:
 - High
 - Low
 - Medium

Oracle Applications - srvstr9 ORACLE 🚃 Service Request Severities 💥 💥 🔆 High Requires immediate Severe Business impacted to Medium 1 TO 3 Day response Low Response in one wee Very Low 22-OCT-2003 22-OCT-2003

Service Request Severities Window

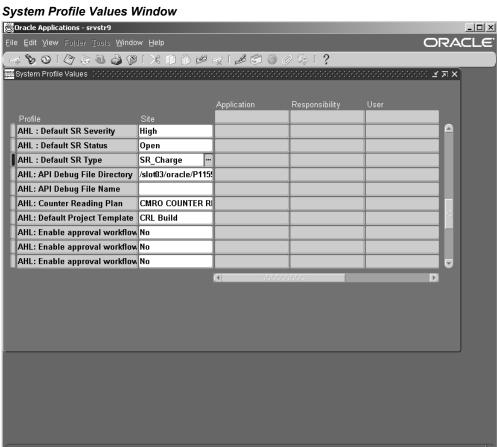
Select values in the Type, Status, and Severity fields, if they are different than the default values. Default values in these fields are governed by the profiles setup. For more information on profiles, see Setting Up Oracle Support Profiles in the Oracle Support Implementation Guide.

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:

- Change responsibility to System Administrator. Navigate to Profile > System. The Find System Profile Values window appears.
- 2. Find System profile value AHL: Default SR Customer Name. Select the default Customer Name from the Site LOV.
- 3. Save your work.

- 4. Find System profile value AHL: Default SR Severity. Select the default Severity Value from the Site LOV.
- Find System profile value AHL: Default SR Status. Select a default Status Value.
- Find System profile value AHL: Default SR Type. Select the default SR Type.
- Save your work.



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 Also:

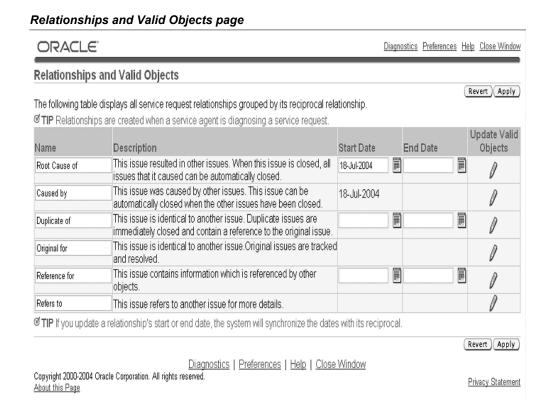
Oracle Customer Support Implementation Guide

Setting Up Object 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. Post installation, you must create a relationship between Disposition and an object type of Service Request.

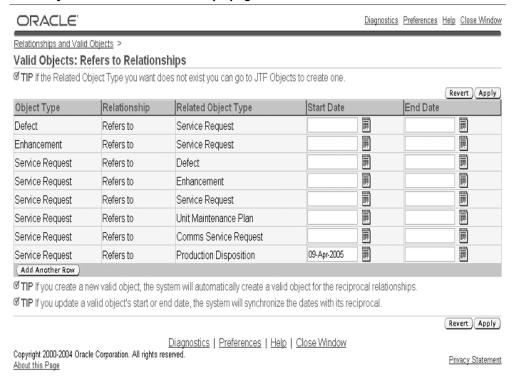
To create a relationship between Disposition and the Service Request Object Type:

Log in with Customer Support responsibility. Navigate to Setup> Service Request > Relationships and Valid Objects. The Relationships and Valid Objects page appears.



Click the Update (pencil) icon for the Refers to relationship. The Valid Objects: Refers to Relationships page appears. Click Add Another Row. Add a new relationship as Service Request (Object Type) – Refers to (Relationship) - Production Disposition (Related Object Type). Save the record.

Valid Objects: Refers to Relationships page



Setting Up Oracle Contracts

CMRO's Outside Processing module uses the Oracle Contracts' functionality supporting Loan and Borrow Transaction.

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

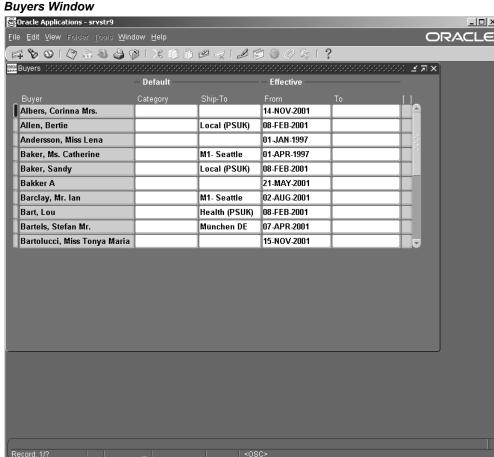
- Oracle Inventory setup is complete
- Oracle Receivables setup is complete
- Oracle Order Management setup is complete
- Oracle Purchasing setup is complete

Setting up Oracle Contracts includes:

- Setting up Buyers
- Setting up Suppliers
- Other Setups

To set up Buyers:

- From the Navigator, select Contract Manager > Setup > Others > Buyer > Buyer. The Find Buyer window appears. Click the New Buyer button.
- Select a Buyer Name from the list of values. 2.
- Enter other required data.



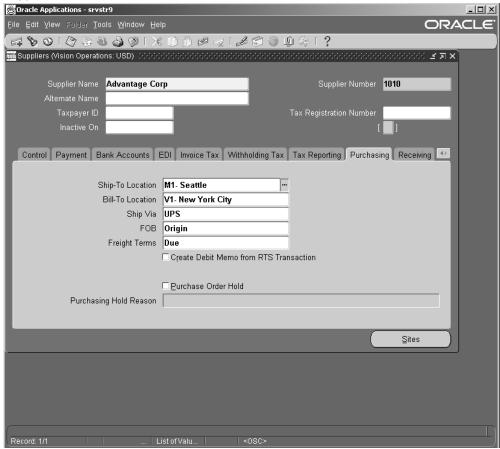
Note: The buyers setup in Oracle Contract will be displayed in the CMRO Select Buyer Name list for the user to select as the OSP Buyer.

To set up Suppliers

Navigate to Contract Manager > Setup > Others > Supplier > Entry. The Suppliers window appears.

2. Enter required information.

Suppliers Window



Note: These setup suppliers will be available in CMRO OSP Vendor Name list for the user to select.

Other setups:

- 1. Navigate to Contract Manager > Setup > Contract. Verify the contract setup.
- 2. Set up Standard Articles and Categories and Sources.
- 3. Optionally, set up Customers.
- **4.** Set up Contract Groups and Contract Events.

Note: To find the approver of the contracts, you must look at the profile

value: OKC: Contract Approver.

See Also:

Oracle Contracts Core Concepts and Procedure Guide

Setting Up Oracle Install 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 Complex uses the Installed Base' methods to populate the database with transactions representing the as operated configuration of the system.

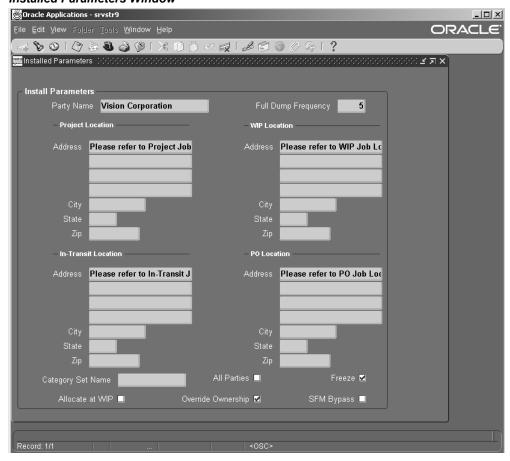
Before you set up Oracle Install Base, ensure that:

- Oracle Inventory setup is complete
- Oracle Counters setup is complete
- Supplier and supplier sites are set up (Purchasing)
- Customer and customer sites are set up (Receivables)

To set up Oracle Install Base:

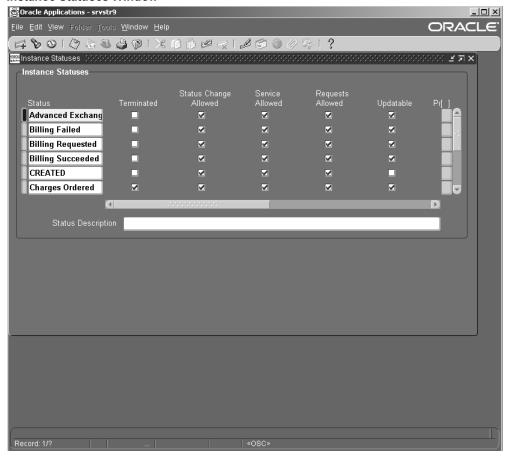
- Change responsibility to Oracle Installed BaseAdmin. Navigate to Setup > Install Parameters.
- 2. Set up Install Parameters.

Installed Parameters Window



Set up Instance Statuses.

Instance Statuses Window



- Optionally, set up Maintain Locations.
- Set up Asset Locations.

See Also:

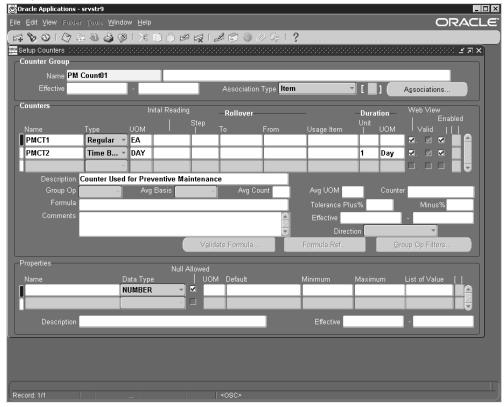
Oracle Install Base Implementation Guide

Setting Up Oracle Counters

To set up Oracle Counters:

- From the Navigator, select Field Service Manager > Field Service Set Up > Counters > Define Counters.
- 2. Click the New button. Set up Counter Groups.

Setup Counters Window



- 3. Associate the Counter Groups with the Install Base items.
- 4. Optionally, associate the Counter Groups with Maintain Locations.

See Also:

Oracle Service Implementation Guide

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 capturing 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 either be used as-is or adjusted with additional quality elements, except the counter reading template which 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

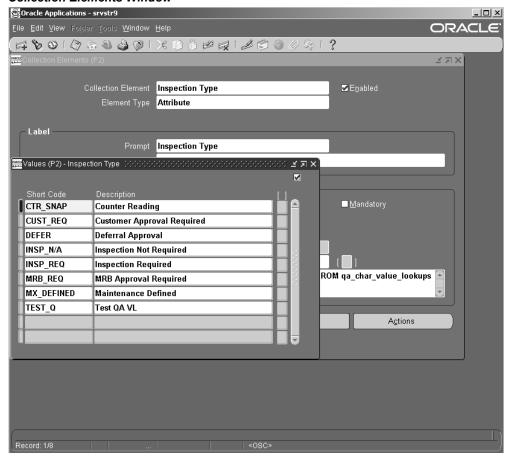
Creating Inspection Types:

You can create the different Inspection Types for route and/or operation quality recording. The inspection types are maintained in a seeded collection element called Inspection Type. Creating collection elements, collection element types and collection plan types have no specific CMRO set up requirements.

To create Inspection Types

- 1. Change responsibility to Manufacturing and Distribution Manager. From the Navigator, select Quality > Setup > Collection Elements. From the organization list, select the Organization that you want to set-up the quality plan for. The Collection Elements window appears.
- Query for or find the Collection Element 'Inspection Type'.
- 3. Click the Values button.
- Define Inspection Types.

Collection Elements Window



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.

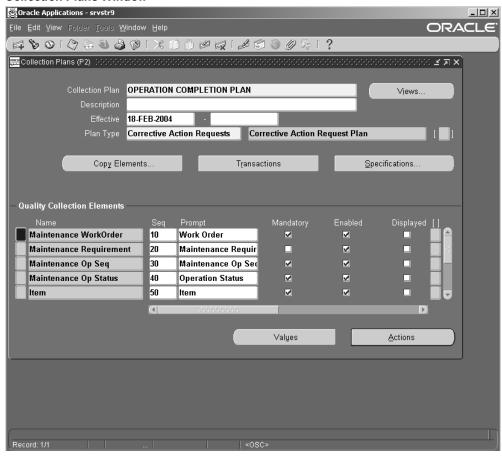
Creating Quality Plans

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 plan from scratch, 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 etc., which allow for a convenient quality reporting and analysis. The templates also contain seeded displayed items that are either mandatory or optional. 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 has no specific CMRO set up requirements.

To create Quality Plans:

- Navigate to Quality > Setup > Collection Plans. The Collection Plans window opens.
- 2. Define the collection plan. Select the plan type.
- Click the Copy Elements button. The Copy From Plan window appears.
- Select the Plan template that you want to copy from. For CMRO, the options are:
 - Advanced Service Online Operation Completion Plan
 - Advanced Service Online Route Completion Plan

Collection Plans Window



- 5. Click the Transactions button. The Collection Transaction window appears.
- **6**. Select the seeded transaction for either route or operation. The options for CMRO are:
 - 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 set-up in the Inspection Type collection element.
- 8. Save your work.

Oracle Applications - srystr9 ORACLE 网络101日春33日1米田市四尺12日90年1? 🚟 Collection Transactions (P2) - OPERATION COMPLETION PLAN 🔅 <u>⊀</u>я× **Quality Collection Transactions** Maintenance Route Completion (Advanced Service Online) Maintenance Operation Completion (Advanced Service Online Collection Triggers (all conditions must be met for data collection) Inspection Type equals (=) MX DEFINED ...

Collection Transactions Window

Note: The Inspection Types created can be associated with a route or operation in route management. When the route and/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 Deferral, MRB, 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 in, an mrb disposition is initiated and/or a non-routine job/operation is created. You can create the different inspection types for job deferral, mrb disposition, and non-routine quality recording.

To create Inspection Types:

Navigate to the Collection Elements window. Query for the Collection Element

'Inspection Type'.

Click the Values button. Define 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/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/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 name list of values. The trigger value is selected from the set-up in the Inspection Type collection element.
- **6.** Save your work.

System Profile Options Setup

Set up the following System Profile Options for Job Deferral, MRB disposition and Non-Routine job/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 end 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, since the end-user has no influence over the recording of the counter values.

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

To create Quality Plans:

- 1. Navigate to the Collection Plans window. Define the collection plan.
- 2. Select the plan type from the Plan Type list of values.
- 3. Click the Copy Elements button. Select the following plan template: Advanced Service Online Counter Readings Plan

Note: Do not adjust collection elements.

4. Do not define any Transactions.

System Profile Options Setup

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

See Also:

Oracle Quality User's Guide

CMRO Specific Setups

Oracle Complex Maintenance, Repair, and Overhaul is an integrated, web-enabled software application suite designed to empower complex equipment maintenance organizations. Oracle Complex Maintenance, Repair, and Overhaul 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. It provides models for electromechanical systems and defines rules for assembling units. It also records unit-specific information, allowing quick access to the maintenance history of a product component.

Oracle Complex Maintenance, Repair, and Overhaul 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)
- Execution
 - Production
 - Production Planning
 - Outside Processing

This section includes the following:

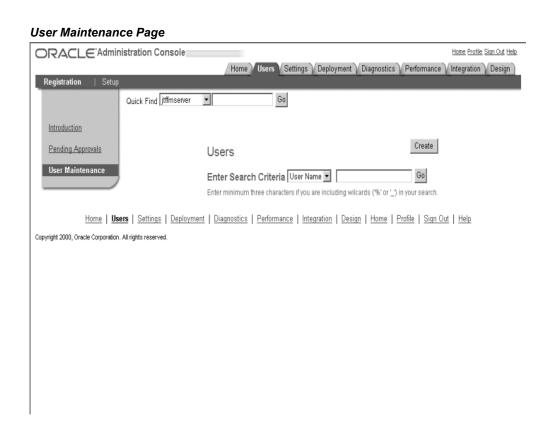
- Oracle Complex Maintenance, Repair, and Overhaul Standard Setup, page 2-92
- Oracle CMRO Approval Workflow Setup, page 2-97
- Oracle CMRO Module Setup, page 2-108

Oracle Complex Maintenance, Repair, and Overhaul Standard Setup

CMRO Standard Setup involves assigning roles to AHL Super User, setting up advanced properties and system profile options.

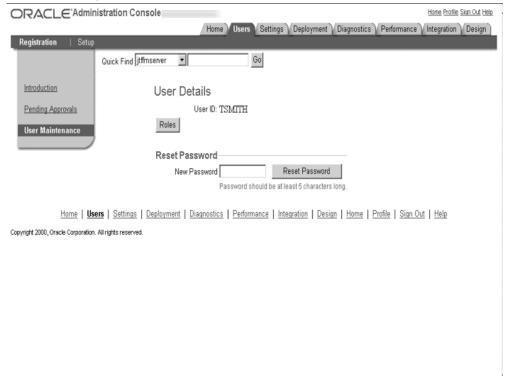
To assign roles and set up advanced properties:

1. Login to JTF using the System Administrator responsibility. Click the Users link in the Home page.



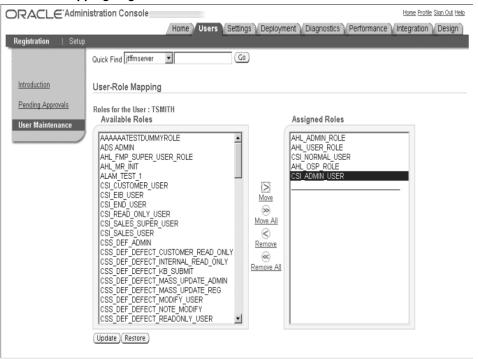
Click User Maintenance. In the Users page, query for the user having AHL Super User responsibility. Click Go. Click the user name to navigate to the User Details page.

User Details Page



- 3. Click Roles. The User-Role Mapping page appears. 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 Page

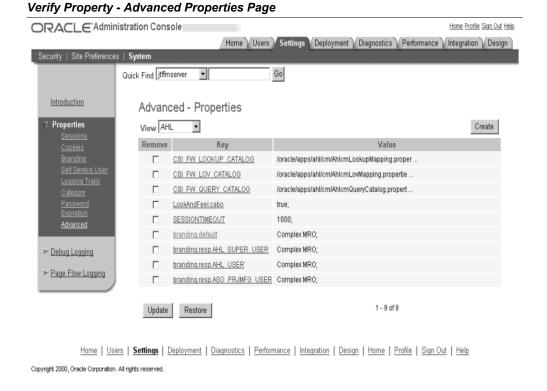


4. To set up advanced properties, click the Settings secondary tab. Click the Settings subtab. Click Advanced to navigate to the Advanced-Properties page.

Advanced-Properties Page



5. Select AHL from the View list. Click branding.default. Verify that the value is Oracle Complex MRO.



To set up the System Profile options:

- **1.** From the Navigator, choose System Administrator. Navigate to the System Profile Values window.
- 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	

Note: 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 profile options, if you do not specify an approval rule, the application uses the default approval rule.

CMRO Approval Workflow setup includes:

- Setting up Profile Options
- Creating Approval Users and Roles

Setting Up Profile Options

By default, maintenance programs, activities and routes are automatically approved at the time of creation when you click the Approved button. To set up an approval process, you must set up the system profile options as indicated in the table below.

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

Profile	Value	Description
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.

Note: The following set up steps are depending on the use of the seeded approval workflow. If you decide to create your own workflow you will have to adjust these steps to the functionality of this workflow.

Defining Approval Employees in Oracle Human Resources

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

Note: If you want to notify the approval user via e-mail, then in addition to the application work list notification, you must also set up the e-mail 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.*

Creating Application User for Approval Employees

Every approval employee needs to have an Oracle Application login. When defining the application user you have to associate the approval employee, set up earlier in HR, to that application user.

Creating Approval Roles

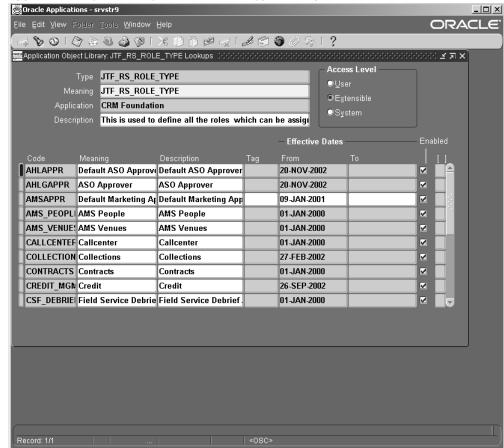
Associating the approval employees to a role is an optional step. If you have set up the employees in Oracle HR and created application users for them, you can associate the employee directly with an approval rule. You can set up the following two types of approval roles:

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 is best used, when the same people in the same hierarchy will approve every CMRO object. 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. Login to the forms environment of Oracle Applications. Select the CRM Resource Manager responsibility.
- **2**. Navigate to Setup > Role Types.
- **3**. Query for JTF_RS_ROLE_TYPE.
- **4.** Create a role type code for the default approval role.



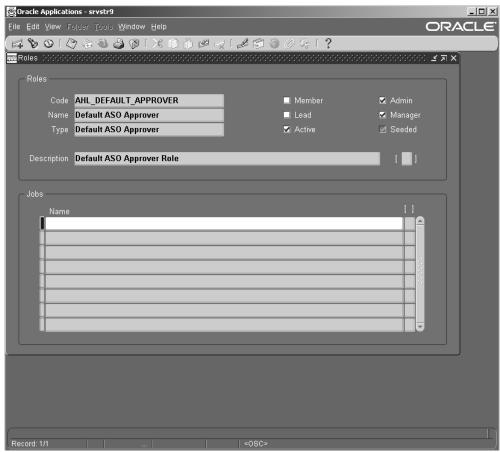
Application Object Library Window - Role Type Lookups

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

Note: The code must be defined as described above otherwise the default rule will not recognize this role. The role name can be user defined.

7. Associate the default approval role type code to this role.

Roles Window



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

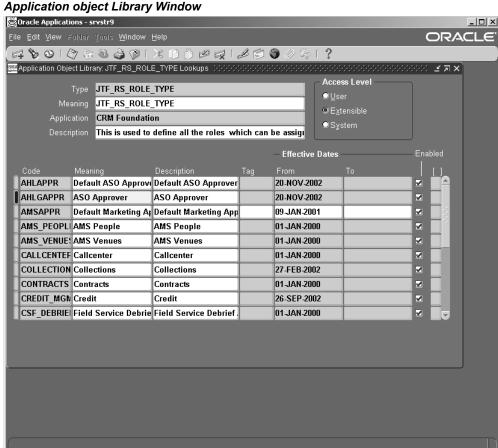
Note: For CMRO approval, only one user can be associated with a role, otherwise the approval workflow will fail. Therefore, you must create as many roles as you have approvers. The sequence of notification will be defined in the approval rule setup.

General Approval Role

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

- 1. Login to the forms environment of Oracle Applications. From the Navigator, select CRM Resource Manager.
- 2. Navigate to Setup > Role Types.

- Query for JTF_RS_ROLE_TYPE.
- Create role type code(s) for the General Approval Role(s).

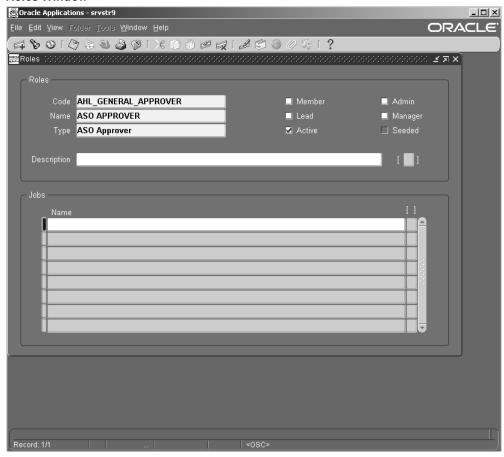


Application object Library Window

Note: You can create multiple role type codes for grouping the roles together but one is minimum.

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

Roles Window



Importing resources

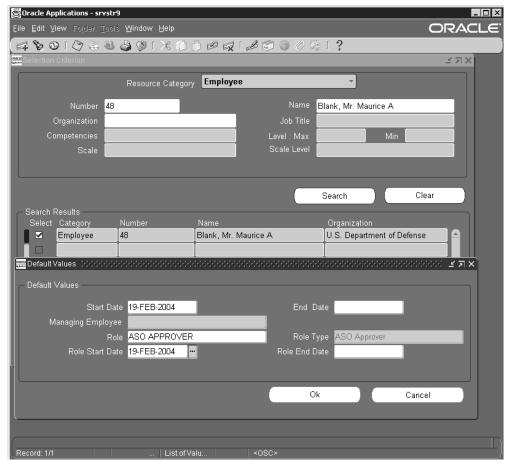
After you have created the employees and the roles, you must map the two together.

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 Window



- If you want to associate the same employee with an additional role click Details. Add Roles.
- **6**. Repeat steps 1 through 5 for every approval employee.

Creating Approval Rules in CMRO

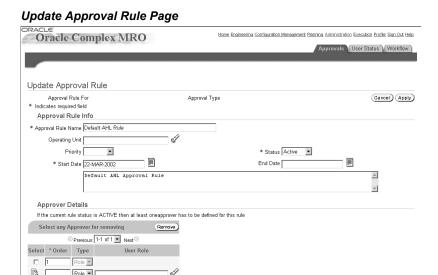
As mentioned earlier you can either use the seeded default approval rule or specify an object specific approval rule for the different CMRO objects. In the approval details you can either pick a role that you have set up, or a user that has been created as an employee in HR, and is associated with an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

To adjust the Default Approval Rule:

- Login to the jtf environment of CMRO.
- Click on the Administration link. Click the Go button. 2.
- Click on the link 'Default AHL Rule'.

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

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



5. Click Apply.

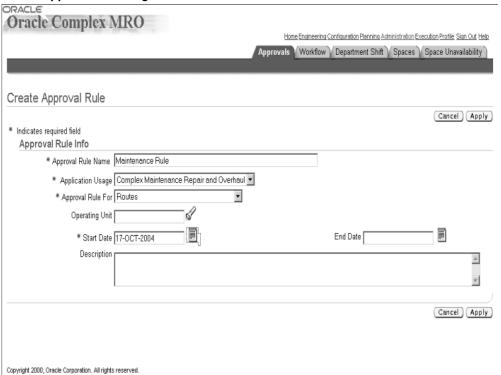
Note: Do not add any values to the operating unit attribute. Custom values are currently not supported by Complex Maintenance, Repair, and Overhaul and would cause the workflow to fail. Also, you cannot change the status of the default rule once it is set to Obsolete.

To define Object Specific Approval Rule

To define approval rules with specific approval hierarchy:

- 1. Login to the jtf environment of CMRO.
- 2. Click on the Administration link.
- **3.** Click the Create button.
- 4. Enter the Approval Rule Name.
- 5. Select Application Usage as Complex Maintenance, Repair, and Overhaul.
- **6.** Select the required value from the Approval Rule For list box.

Create Approval Rule Page



- Do not add any values to the operating unit attribute. Click Apply.
- Add roles or users to the approval details in the sequence in which you want your objects to be approved.
- Select Active from the Status list of values.

Oracle Complex MRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help Approvals | Workflow | Department Shift | Spaces | Space Unavailability Update Approval Rule Approval Rule For Routes Cancel Apply Application Usage Complex Maintenance Repair and Overhaul * Indicates required field Approval Rule Info * Approval Rule Name Maintenance Rule 8 * Status Active Operating Unit * Start Date 17-OCT-2004 End Date Α Description Approver Details

Edit Rule - Update Approval Rule Page

If the current rule status is ACTIVE then at least oneapprover has to be defined for this rule

Type User Role

Role Advanced Service Online De

10. Click Apply.

Workflow Process Mapping

Role 🔻

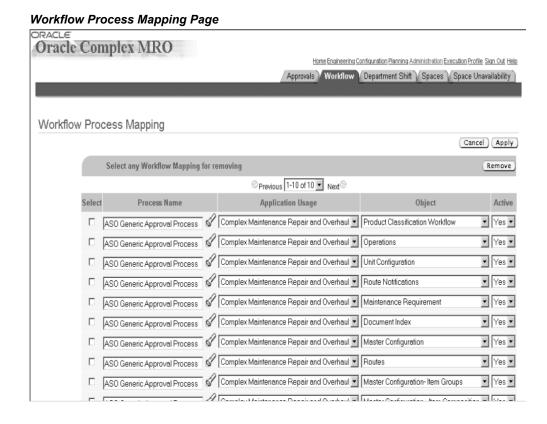
Select * Order Type

The final step in the approval workflow set up is to map the object with a workflow. As previously mentioned, Oracle recommends that you use seeded workflow that is delivered with CMRO. If you call a customized workflow, instead of CMRO Deferral workflow, it complicates the workflow as CMRO Deferral workflow might be internally performing several processes or integration required for the standard functionality. If you try to replace this workflow with a customized one, the deferral functionality gets affected.

To map the workflow with the CMRO object:

- 1. Login to the jtf environment of CMRO.
- 2. Click on the Administration link.
- 3. Click the Workflow tab.
- **4.** If you want to use the same workflow for all of your objects, leave the object field empty, otherwise choose the object, which you want to add from the drop-down list.

Define the desired workflow in the Process Name field. The CMRO default workflow is called ASO Generic Approval Process.



- Select Complex Maintenance, Repair, and Overhaul from the Application Usage drop-down list box.
- Select Yes or No from the Active list box.
- Click Apply.

The Approval Workflow

When a Maintenance Program, Activity or Route is sent for approval the user defined in the approval role is notified by e-mail, if it has been setup at employee creation, and/or with an entrance in the work list 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. At this point 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 Document Index, page 2-109
- Setting Up Route Management, page 2-111
- Setting Up Master Configuration, page 2-118
- Setting Up Unit Configuration, page 2-120
- Setting Up Fleet Maintenance Program, page 2-126
- Setting Up Unit Maintenance Plan, page 2-128
- Setting Up Visit Work Package, page 2-131
- Setting Up Long Term Planning, page 2-134
- Setting Up Production, page 2-136
- Administrative Setup, page 2-144

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 below.

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. 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
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_S TATUS_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
Frequency Type	AHL_FREQUENCY _TYPE	Quarterly, Weekly, Yearly	User

Application Object Library Lookups (2004) 2004 (2004) Access Level AHL DOC TYPE Туре ○ <u>U</u>ser Document Type Meaning ■ Extensible Complex Maintenance Repair and Overhaul Application ○ System Document Type Description Enabled Effective Dates Code Meaning Description From AIRCRAFT 24-JAN-2002 Aircraft Aircraft COMPONENT Component Component 24-JAN-2002 ENGINE Engine Engine 24-JAN-2002 1 • GROUND SUF Ground Support Equ Ground Support Equip 24-JAN-2002 04-FEB-2002 V LOCOMOTIVI Locomotive Locomotive v MATERIAL Co Material Catalog Material Catalog 24-JAN-2002 QUALITY AS! Quality Assurance 04-FEB-2002 Quality Assurance TANK Tank Tank 04-FEB-2002

Application Object Library Lookups Window

Setting Up Route Management

The Route Management module in Oracle Complex Maintenance, Repair, and Overhaul provides a single interface for managing all maintenance tasks.

Maintenance personnel can:

- Prepare and maintain work instructions.
- Search the database for a specific operation for reference purposes, or for editing purposes.
- 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 for carrying out a maintenance task
- Search for maintenance routes, for reference, or for editing route 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 Complex Maintenance, Repair, and Overhaul 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

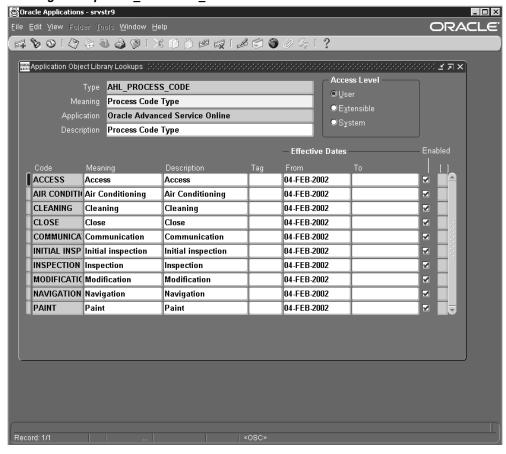
To define lookups for Route Management:

- 1. 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
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
Sub-Type	AHL_DOC_SUB_TY PE	AD, SB	User
Revision Type	AHL_REVISION_TY PE	Temporary, Full Version	User

Attribute	Lookup	Suggested Values	Access Level
Process	AHL_PROCESS_CO DE	Access, Cleaning, Close	User

Defining Lookup: AHL PROCESS CODE



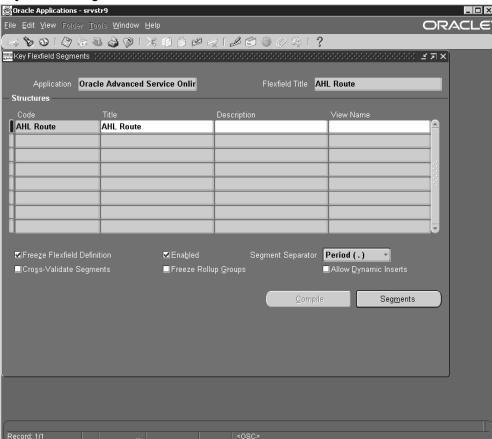
To Set Up Key Flexfields:

Validate Existence of Route Flexfield

Note: To enable Route Management, you must set up a key flexfield to define the System attribute.

- 1. Login into the forms environment with Application Developer Responsibility.
- 2. Navigate to Flexfield > Key > Segments.

3. Query for Flexfield Title 'AHL Route'. Query should return the record.



Key Flexfield Segments Window

Add segments to this flexfield

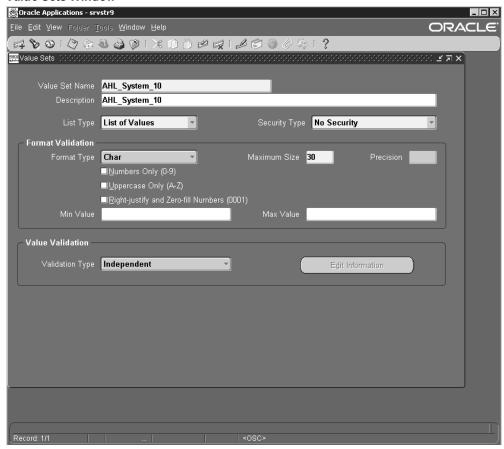
- Click the Segments button.
- Enter Records for System Flexfield Segment.

Segments Summary Window Oracle Applications - srvstr9 _ 🗆 × ORACLE Segments Summary (AHL Route) - AHL Route (1999) (1999) SEGMENT4 10 System 1 System 1 AHL_System_10 20 System 2 System 2 SEGMENT5 AHL_System_20 30 System 3 System 3 SEGMENT6 AHL_System_30 Flexfield Qualifiers Value Set New <u>O</u>pen

Create Value Sets to be used by Flexfield Segments

- 1. Click the Value Set button.
- **2**. Define Value Set Name.
- **3**. Define List Type as 'List of Values'.
- 4. Define Security Type as 'No Security'.
- 5. Define Format Type as 'Char'.
- 6. Define Validation Type as 'Independent'.

Value Sets Window

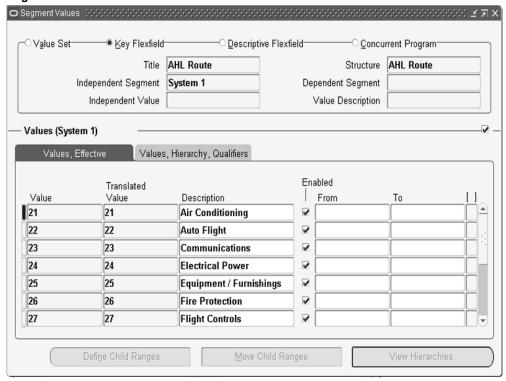


Update Flexfield Segments with the Value Sets.

Create values for Value Sets

- Navigate to Flexfield > Key > Values.
- Find the Value Sets for the System Flexfield.

Segment Values Window



3. Add the desired values to the value Set.

To Set Up Descriptive Flexfields:

Validate Existence of Route Flexfield

- 1. Login into the forms environment with 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 Records for System Flexfield Segment.
- 3. Click Enable checkbox

Create Value Sets to be used by Flexfield Segments

Note: Perform these steps only if relevant value set is not defined.

- Click the Value Set button.
- Define Value Set Name.
- Define List Type as 'List of Values'.
- Define Security Type as 'No Security'.
- Define Format Type as 'Char' or 'Number' or 'Date' (based on the property of your attribute / segment)
- Define Validation Type as 'Independent'.
- Update Flexfield Segments with the Value Sets.

Create values for Value Sets

- Navigate to Flexfield > Descriptive > Values.
- Find the Value Sets for the System Flexfield.
- Add the desired values to the value Set.

Complile the Flexfields

- Compile the flexfields using the Compile button.
- 2. Click on 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 further).

Setting Up Master Configuration

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 Master Configuration, you must ensure that:

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

Setting up Master Configuration includes defining the lookup values as indicated below.

To define lookups for Master Configuration

- 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
Rule code (Position ratio list)	AHL_COUNTER_R ULE_TYPE	Bird Strike, Heavy Landing	User
Alternate Part Interchangeability Type	AHL_INTERCHAN GE_ITEM_TYPE	1-Way, 2-Way, No Interchange, Superseded By	Extensible
Position reference	AHL_POSITION_RE FERENCE	Forward, Inboard , Left, Lower, Outboard, Position 1, Position 2, Position 3, Right, and Upper	User

Application Object Library Looku AHL COUNTER RULE TYPE User Counter Rule Type Meaning ○ E<u>x</u>tensible Complex Maintenance Repair and Overhaul Application System Description | Counter Rule Type Enabled Effective Dates Code Meaning Description From Tag AFT BURN After burner After burner 04-FEB-2002 BIRD STRIKE Bird strike Bird strike 04-FEB-2002 **HEAVY LAND Heavy Landing Heavy Landing** 04-FEB-2002 HIGH ALTITU High Altitude Takeof High Altitude Takeoff 04-FEB-2002 STANDARD Standard Standard Counter Rul 20-JUN-2001 STANDARD C Standard Counter Ru Standard Counter Rule 04-FEB-2002

Setting Up Unit Configuration

The Unit Configuration module in Oracle Complex Maintenance, Repair, and Overhaul 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/CDL for affected unit configurations.
- Search for unit configuration records that exist in the database.
- Add new part information to the database.

Defining Lookup: AHL CONfIG STATUS

• Search for, 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. Unit Configuration provides models of individual tracked parts to support unit-specific information.

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

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

To set up attributes

- 1. Change responsibility to Oracle Install Base Admin.
- **2.** From the Navigator, select 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_N UM

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 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 inoperable under certain operation conditions, but still provides an acceptable level of safety. The MMEL contains the conditions, limitations, and procedures required for operating the aircraft with these items inoperable.

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/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 Standard Organization and Inventory Setup Define Applicable Profiles Define Maintenance and Operational (M&O) Procedures Define ATA Code Lookups Define MEL/CDL* Repair Categories CMRO's Master Configuration (MC) Associate MEL/CDL Deferral Instructions and M&O Procedures to a PC CMRO's Unit Configuration (UC) Associate Units to a Product Classification (PC)

*Minimum Equipment List and Configuration Deviation List

Setting Up a MEL/CDL

To set up a MEL/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/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 the made to the configuration which could impact the investigation.

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

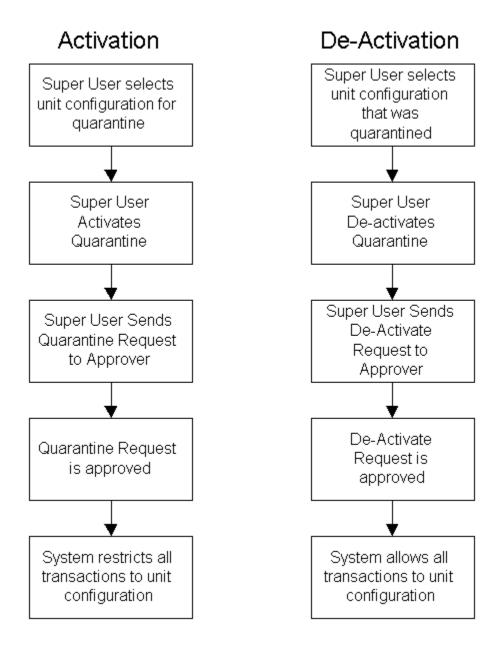
- The CMRO system administrator edits the configuration access control workflow using the Approvals page.
- The CMRO system administrator creates a super user role to be used for configuration access control.
 - The system administrator assigns the AHL UC QUARANTINE ROLE to the appropriate super user.
- The CMRO system administrator creates the super user role using the User Maintenance page.

Related Topics

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

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 Fleet Maintenance Program, you must ensure that:

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

• ASO Visit Work Package is set up

Setting up Fleet Maintenance Program includes defining the lookup values as indicated below.

To define lookups for Fleet Maintenance Program:

- 1. Login using the Application Developer Responsibility.
- **2.** Navigate to the lookups window and query for the following lookups. 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, etc.	Extensible
Category	AHL_FMP_MR_CA TEGORY	Power plant, airframe, component, ground equip., etc.	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

Application Object Library Lookups Access Level AHL FMP MR CATEGORY Туре OUser Maintenance Requirement Category Meaning Extensible Complex Maintenance Repair and Overhaul Application System Description | Maintenance Requirement Catgory Enabled Effective Dates Code Meaning Description From Tag AIRFRAME Airframe Airframe 15-OCT-2002 COMPONENT Component Component 15-OCT-2002 GROUND SEF Ground Service Equi Ground Service Equip 15-OCT-2002 OFFICE EQUI Office Equipment Office Equipment 13-JUN-2003 POWERPLAN Powerplant 15-OCT-2002 Powerplant

Defining Lookup: AHL FMP REVISION STATUS

Setting Up Unit Maintenance Plan

The Unit Maintenance Plan module in Oracle Complex Maintenance, Repair, and Overhaul 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

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

Before setting up Unit Maintenance Plan, you must ensure that:

- Look up value is set up in Oracle Application
- System profile is set up in Oracle Application: Profile system value
- Product Classification is set up
- Master Configuration is set up
- Unit Configuration is set up
- ARO Visit Work Package is set up

Setting up Unit Maintenance Plan includes:

• Setting up System Profile options

To set up the System Profile Options:

- 1. Login using the System Administrator responsibility. Navigate to the System Profile Values window.
- **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

Oracle Applications - srystr9 ORACLE AHL: Maximum Planning Wind 2 AHL: Maximum Planning Wind Years AHL: Non-routine Job Inspectio AHL: Non-routine Operation Ins AHL: OE Mixed Order Type ID AHL: OE Return Line Type ID AHL: OE Ship Only Line Type II AHL: Preventive Maintenance I No AHL: Turn On Development Del AHL: Workflow Loop Counter

System Profile Values Window

These profile options determine the period that is taken into account when calculating the due date and repetitive MR in Unit Maintenance Plan. 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 Unit Maintenance Plan (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 calculation date (current date).

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 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 association of tasks with visits and visit templates, and definition of task hierarchy and cost structure.

Maintenance planners can:

- Create maintenance visit records, new, or from a template.
- Search for, retrieve, 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.
- Search for, retrieve, and update tasks associated with a visit.
- Create visit templates, new, or from an existing visit record.
- Search for, retrieve, and update existing visit templates.
- Search for, retrieve, and update visit template tasks.
- Create shift schedules for department workers based on planned visits.
- Search for and retrieve existing department shifts.

Visit Work Package enables maintenance planners to organize a maintenance visit execution for an equipment unit.

Before setting up Visit Work Package (VWP), you must:

- Verify Projects (VWP exports visit objects to Oracle Projects)
- Verify HRMS (VWP uses HR's organization information)
- Verify Installed base (VWP uses IB's item instance information about maintainable assets)
- Verify Inventory (VWP uses Inventory's information to describe maintainable asset types)
- Verify Support (VWP associates Service Requests with maintenance visit tasks)
- Verify Unit Maintenance Plan (associates UMP MR to VWP)

- Verify Fleet Maintenance Program
- Create Project Template

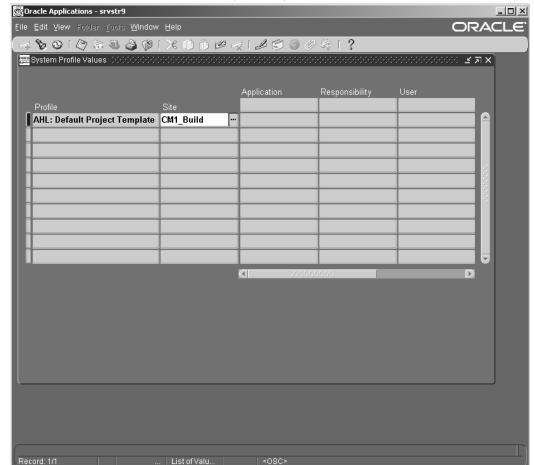
Setting up Visit Work Package includes:

- Setting up System Profile Options
- Defining lookups

To set up System Profile Options:

- 1. Login using the System Administrator responsibility. Navigate to the System Profile Values window.
- **2**. Set up the following System Profile options:
 - AHL_DEFAULT_PA_TEMPLATE_ID : To store the default value of project template id for a visit.
 - AHL_DEFAULT_NUMBER_OF_STAGES: To store the maximum number of stages for a visit. This value is used both in engineering and planning related to the visits and the routes in a maintenance requirement.

AHL: Default Project Template ID (Name of the Project template that will be used as default)



System Profile Value - AHL: Default Project Template

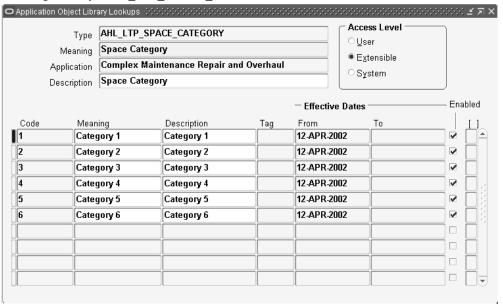
To define lookups for Visit Work Package:

- 1. Change responsibility to Application Developer.
- 2. Navigate to the lookups window and define the lookups as indicated in the following 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

Attribute	Lookup	Suggested Values	Access Level
Hour List	AHL_VWP_HOURS	00, 01	User
Visit Priority	AHL_VWP_VISIT_P RIORITY	1,2,3,4	User

Defining Lookup: AHL_LTP_SPACE_CATEGORY



Setting Up Long Term Planning

The Long Term 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 Maintenance Workload Capacity by analysis of available labor by skill, level and certification, available tools, materials, and location capabilities balanced against known workloads.
- Create a Visit in order 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 a Visit's Resource Requirements to enable accurate scheduling and capacity planning.
- Analyze capacity versus work load requirements.
- Run simulations in order to evaluate different scheduling scenarios before implementing actual plan changes.

Long Term Planning maximizes maintenance scheduling by balancing maintenance requirements with available maintenance capacity. The maintenance planner is able to do this by balancing forecasted maintenance requirement information from 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 increasing the life expectancy of subcomponents. Serial number reservations are set up in Oracle Inventory.

Long Term Planning, Oracle Complex Maintenance, Repair and Overhaul User's Guide and Oracle Planning

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

To define lookups for Long Term Planning

- 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
Category	AHL_LTP_SPACE_ CATEGORY	Category 1, Category 2	Extensible
Display Only	AHL_LTP_VISITS_ DISPLAY_ONLY	Scheduled, Unscheduled	Extensible
Status	AHL_LTP_SPACE_S TATUS	Inactive, Active	Extensible
Visit Type	AHL_PLANNING_ VISIT_TYPE	A-Check, B-Check, C-Check	User

Application Object Library Lookups Access Level AHL_LTP_VISITS_DISPLAY_ONLY Туре OUser Visits Display Only Meaning ■ Extensible Application | Complex Maintenance Repair and Overhaul System Description Visits Display Only Enabled Effective Dates Code Meaning Description From Scheduled Visits Scheduled Visits 22-MAY-2002 0 1 Unscheduled Visits Unscheduled Visits 22-MAY-2002 2 Visits with conflicting Visits with conflicting 19-MAY-2003

Defining Lookup: AHL LTO SPACE CATEGORY

Setting Up Production

The Production module enables the execution of routine and non-routine tasks and associated with a visit. It also supports the execution of tasks against an Install Base Tracked Item.

Maintenance personnel can:

- Search for Routine and Non-Routine Jobs using filtered search elements
- Create Jobs from visit tasks for Scheduled, Unscheduled, and Convenience maintenance
- Create Service Requests to track reported problems when an item has a service difficulty
- Create Operations to Non-Routine Jobs for work definition and tracking
- Maintain jobs by adjusting the schedule, the status, completing, deferring, and selecting the actual start and end for a job
- Maintain operations by updating the operations, adding, removing, or updating the material and resource requirements
- Maintain Quality using Route setup from Route Management for Job and Operation compliance

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

Setting up Production includes:

- Setting up System Profile Options
- Defining Lookups

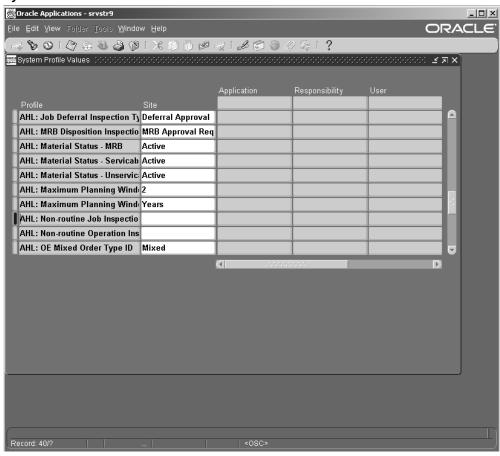
To set up System Profile Options:

- 1. Login using the System Administrator responsibility. Navigate to the System Profile Values window.
- 2. Set up System Profile Options as described in the table below.

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 MRBand a service request creation, when an tracked item is being returned inthe 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 toensure 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



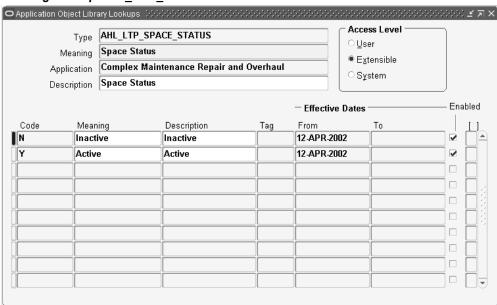
To define lookups for Production:

- 1. Change responsibility to Application Developer.
- 2. Navigate to the lookups window and define the lookups as indicated in the following table.

Attribute	Lookup	Suggested Values	Access Level
Display Only	AHL_LTP_VISITS_ DISPLAY_ONLY	Scheduled, Unscheduled	Extensible
Status	AHL_LTP_SPACE_S TATUS	Inactive, Active	Extensible

Attribute	Lookup	Suggested Values	Access Level
Visit Type	AHL_PLANNING_ VISIT_TYPE	A-Check, B-Check, C-Check	User

Defining Lookup: AHL JOB STATUS



Setting Up Inventory Service Order Outside Processing

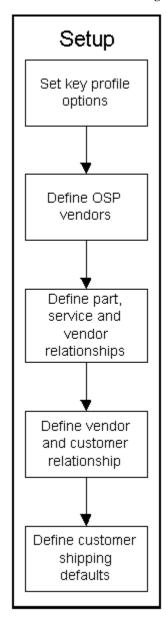
In the airline industry defective parts are often removed, and put in an unserviceable inventory location, before the work order is created. Inventory service orders enable you to create orders for items directly from an inventory location, without creating a visit and work order. This process is automated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

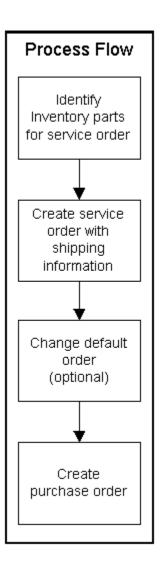
- Automatic service order creation with shipping information for selected items
- Vendor and service sourcing rules are defined based on the item and item location
- Relationship between the vendor information and the customer information is defined
- Both serialized and non-serialized items in inventory can be selected for the creation of a service

- 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.

Setup Profiles

The setup profiles include:

Profile	Description
AHL:Service Order Default Shipment Priority	The default shipment priority used when creating 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 when creating 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 for the need by calculation if there no specific duration be defined. The unit of measure is days .
AHL:OM Shipment Priority	The default value for the shipment priority used when creating a inventory service order with shipping information.
AHL:OM Line Return Reason	The default value for the return reason of a shipment return line when creating a inventory service order with shipping information.

Profile	Description
AHL:OM Mixed Order Type ID	The order management order type created for the shipping information. It is 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.
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 for Enterprise Install 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 for Enterprise Install 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 for Enterprise Install 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 for Enterprise Install 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.

Profile	Description
AHL:PO Line Type ID	The default PO Line Type created when a purchase order is created.
AHL:OSP Default PO Distribution Creation	This option 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 Guide

Administrative Setup

Through the Administration link, you can manage administrative functions related to the Visit Work Package and Long Term 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.

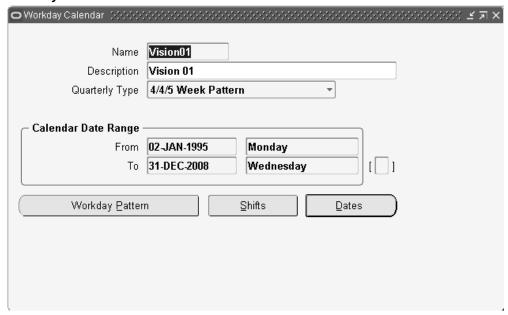
The Reliability Planning functionality is set up in Oracle Inventory and Oracle Planning.

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:

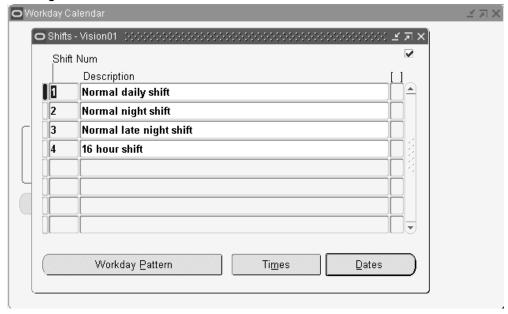
1. From the Manufacturing and Distribution Manager responsibility, navigate to Oracle Bills of Material >Setup > Calendars. The Workday Calendar window appears. Define a BOM calendar.

Workday Calendar window



2. Click Shifts to define shifts for the calendar.

Defining shifts for the calendar - Shifts window



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

O Shift Workday Patterns - Vision01, 1 Secretary Secret

Defining Workday Patterns - Shift Workday Patterns window

The Calendar, Shift Number and Workdays defined will be available for selection 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 their entire 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's CMRO and Enigma's 3C provides an unique solution for maintenance service providers to enable the maintenance technicians with a set of tools that connects Oracle CMRO's extensive back office functionality for configuration management, engineering and maintenance planning with Enigma's flexible and easy to use documentation centric maintenance execution system in a wireless environment. Enigma integration performs the following:

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

Viewing and Printing Enigma Content in CMRO Execution Module

Setup Profiles

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 on master configuration header level. If the profile is set to No, the Enigma Documents region is not displayed.

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 content from AMM, IPC, and WDM manuals. CMRO will maintain the revision of the tasks and for that reason will also store a PDF file as an attachment to the route. Oracle CMRO performs the following setup steps for this functionality:

Provides concurrent program to create draft route templates and associate PDF file

to route templates based on Enigma's content.

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

Overview of Associating Enigma Configuration Information to Master and Unit Configurations

You can look up configuration information in Enigma's 3C application and associate it to Oracle's Master Configuration. With that association you can view the associated document content in Unit Configuration and Production. Oracle CMRO performs the following setup steps for this functionality:

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

Overview of Viewing and Printing Enigma Content in CMRO Execution Module

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

 Provides the user interface to view and print Enigma Documents associated with Work Orders.

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 Managment 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 BaseAdmin > Setup > Install Parameters
Instance Statuses	Oracle Installed BaseAdmin > 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

Index

A	component items setup, 2-31 service items setup, 2-42 subinventory setup, 2-44		
Approval Workflow			
approval users and roles definition, 2-98			
В	<u>L</u>		
Bill of Materials departments and resources setup, 2-50	Lookups Document Index, 2-110		
departments and resources setup, 2 50	Enterprise Asset Management, 2-70		
С	Fleet Maintenance Program, 2-127 Long Term Planning, 2-135		
CMRO	Master Configuration, 2-119		
standard setup, 2-92	Production, 2-139		
CMRO Modules Setup	Route Management, 2-112		
Document Index, 2-109	Visit Work Package, 2-133		
Fleet Maintenance Program, 2-126	· ·		
Long Term Planning, 2-134	0		
Master Configuration, 2-118	Order Management		
Production, 2-136	customer definition, 2-64		
Route Management, 2-111	processing constraints setup, 2-64		
Unit Configuration, 2-120	Organization Setup		
Unit Maintenance Plan, 2-128	creating		
Visit Work Package, 2-131	organization, 2-9		
configuration access control	setting up		
allowed transactions, 2-125	inventory organization, 2-11		
Contracts	operating unit, 2-8		
buyers setup, 2-78	1 0		
suppliers setup, 2-78	Other Oracle Applications Setup		
Counters	Bills of Material, 2-49		
counter groups definition, 2-82	Contracts, 2-77		
	Counters, 2-82		
1	Enterprise Asset Management, 2-67		
	Install Base, 2-80		

Inventory

Inventory, 2-30	Service
Order Management, 2-63	AHL: Default SR Customer Name, 2-74
Project, 2-65	AHL: Default SR Severity, 2-75
Purchasing, 2-57	AHL: Default SR Status, 2-75
Quality, 2-83	AHL: Default SR Type, 2-75
Service, 2-70	Unit Maintenance Plan
Warehouse Management, 2-53	AHL : Consider Department Conflicts, 2
Waterlouse Mariagement, 2 00	129
	AHL: Maximum Planning Window
	(Number), 2-129
rofile Options	AHL: Maximum Planning Window
Approval Workflow	(UOM), 2-129
AHL: Enable approval workflow for	AHL : Minimum maintenance
Maintenance Requirement, 2-97	opportunity duration in minutes
AHL: Enable approval workflow for	required for scheduling a visit , 2-129
Routes, 2-97	Visit Work Package
AHL: Workflow Loop Counter, 2-97	AHL: Default Project Template ID, 2-132
AHL: Workflow Timeout Minutes, 2-97	Warehouse Management
CMRO General Setup	AHL: Material Status-Serviceable, 2-56
AHL: Preventive Maintenance	AHL: Material Status-Unserviceable, 2-
Installation, 2-96	56
AHL: Turn On Development Debug, 2-	
96	AHL: MRB Material Status-MRB, 2-56
AHL: Turn on File Debug, 2-96	Project
Production	project template definition, 2-65
AHL: Job Deferral Inspection Types, 2-	Q
137	<u>u</u>
AHL: Material Status, 2-137	Quality
AHL: Material Status-Serviceable, 2-137	quality plans setup, 2-84
AHL: Material Status-Unserviceable, 2-	
138	S
AHL: MRB Disposition Inspection, 2-137	Service
AHL: Non-routine Operation Inspection,	service request severity definition, 2-73
2-138	service request status definition, 2-71
AHL: OE Mixed Order Type ID, 2-138	service request type definition, 2-72
AHL: OE Return Line ID, 2-138	service request type deminion, 2 · 2
AHL: OE Ship Only Line Type ID, 2-138	W
AHL: Validate Alternate Items, 2-138	
Quality	Warehouse Management
AHL: Counter Reading Plan, 2-90	associate departments with subinventories, 2-
AHL: Job Deferral Inspection type, 2-89	53
AHL: MRB Disposition Inspection Type,	associate material status with subinventories,
2-89	2-55
AHL: Non-routine Job Inspection Type,	material status definition, 2-54
2-90	WIP Accounting Classes
AHL: Non-routine Operation Inspection	asset non-standard, 2-67
Type, 2-90	expense, 2-67

maintenance, 2-67 standard, 2-67