

Oracle® Field Service

Implementation Guide

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Oracle Field Service Implementation Guide, Release 12.1

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Primary Author: Ashita Mathur, Rinku Mohapatra

Contributor: Archana Singh, Irshad Pananilath, Ramakanth Chintala, Ramesh Kamasamodram, Srinivas Ramakuri, Vasanth Terrance

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Send Us Your Comments

Oracle Field Service Implementation Guide, Release 12.1

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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.

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Preface

Intended Audience

Welcome to Release 12.1 of the *Oracle Field Service Implementation Guide*.

This guide is designed for implementers, administrators, and users of the Oracle Field Service application. It assumes that you have a working knowledge of the principles and customary practices of your business area, along with specific application knowledge of the Oracle Field Service suite of products.

See Related Information Sources on page xiii 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>.

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Structure

1 Introduction

In this chapter we provide an overview of the products in the Field Service suite and an overview of the Field Service application.

2 Architectural Overview and Technology Requirements

This chapter provides an architectural overview of the Field Service application and references information sources for technology stack, software, and hardware requirements.

3 Mandatory and Conditional Dependencies

This chapter gives an overview of the mandatory and conditional application dependencies prior to implementing Field Service or Advanced Scheduler.

4 Performance Requirements and High Availability

This chapter documents about High Availability (HA), mapping of responsibilities for HA and the user actions supported in Field Service in HA.

5 E-Business Suite Application Implementation Tasks

This chapter describes in detail and in the recommended order, the implementation tasks for Oracle E-Business Suite applications relevant to Oracle Field Service.

6 Field Service Implementation Tasks

This chapter describes the implementation tasks for Field Service-specific tasks, including setting up the Dispatch Center, and Debrief.

7 Spares Management Implementation Tasks

This chapter documents setup for Oracle Spares Management, External Repair Execution, and Warehouse Replenishment Planning.

8 Setting Up Oracle Advanced Scheduler

This chapter documents tasks for implementing Oracle Advanced Scheduler.

9 Preventive Maintenance Setup Steps

A Windows/Pages and Navigation Paths

Related Information Sources

You can choose from many sources of information, including online documentation, training, and support services, to increase your knowledge and understanding of Oracle Field Service.

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.

Online Documentation

All Oracle Applications documentation is available online (HTML or PDF).

- **PDF** - PDF documentation is available for download from the Oracle Technology Network at <http://otn.oracle.com/documentation>.
- **Online Help** - Online help patches (HTML) are available on My Oracle Support.
- **About Documents and Release Notes** - Refer to the About Document or Release Notes for the mini-pack or family pack that you have installed to learn about new documentation or documentation patches that you can download. About Documents and Release Notes are available on My Oracle Support.
- **My Oracle Support Knowledge tab** - The My Oracle Support Knowledge tab lets you browse the knowledge base by technology, industry, integration, application, documentation, training, and services, to find all documents for a product area. Use the Knowledge Home to search for release-specific information, such as FAQs, recent patches, alerts, white papers, troubleshooting tips, and other archived documents.
- **Oracle E-Business Suite Electronic Technical Reference Manuals** - Each Electronic Technical 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 and integrate Oracle Applications data with non-Oracle applications,

and write custom reports for Oracle Applications products. Oracle eTRM is available on My Oracle Support as part of Online Documentation.

Guides Related to All Products

Oracle Applications User's Guide

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) of an Oracle Applications product. This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent programs.

You can access this guide online by choosing "Getting Started with Oracle Applications" from any Oracle Applications help file.

Guides Related to This Product

Oracle Advanced Scheduler User Guide

Oracle Advanced Scheduler enables you to create optimized schedules for assigning tasks to qualified field service technicians. It enables you to define constraints and parameters such as overtime allowed, proximity to the customer site, resource skill, spare part availability, and customer preference of resource and use these to calculate operational costs and provide the most efficient service.

Oracle Field Service User Guide

Oracle Field Service enables the automation of field service operations such as scheduling and dispatching tasks to field technicians, ordering parts, and tracking task completion. You can use its debrief capabilities to access notes and interaction history in support of call closure, and report task execution time, parts and expenses.

Oracle Mobile Field Service Implementation Guide

This guide describes how to create and manage mobile users, implement the wireless option, and set up the interapplication bar to conveniently navigate between applications to perform diagnostic testing. This enables mobile users to periodically synchronize their mobile computer devices with the enterprise system in order to download new Oracle Mobile Field Service data and upload changes that they have made in their applications. For example, the technician can access and update the material debrief at a customer site for materials installed and returned in the task. When out of wireless coverage, technicians can continue to perform tasks using the voice interface or phone.

Oracle Mobile Field Service User Guide

Oracle Mobile Field Service offers both connected browser-based solution and a

disconnected solution that enables field service technicians to service their customers in a fully automated way. With the service request, field service technicians automatically receive the customer service history and customer install base information. For replacement parts, they can access the robust spare parts management feature of Oracle Mobile Field Service. After completing their tasks, they report labor, materials, and expenses and this information is sent back to the service organization at electronic speed so that an invoice can be given to the customer in a timely manner.

Oracle Spares Management User Guide

This guide describes the tools and features provided by Oracle Spares Management that field service technicians can use to maintain personal and warehouse inventories, locate parts not available in the normal supply chain, create requirements and orders for parts, track order status, and successfully execute internal and external repair. You can learn how to create planning loops that coordinate planning and execution activities across multiple locations, and control the total inventory across all subinventories in the loop.

Installation and System Administration

Oracle Alert User's Guide

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

Oracle Applications Concepts

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12, or contemplating significant changes to a configuration. After describing the Oracle Applications architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

Oracle Applications Developer's Guide

This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards for Forms-Based Products*. It also provides information to help you build your custom Oracle Forms Developer forms so that they integrate with Oracle Applications. In addition, this guide has information for customizations in features such as concurrent programs, flexfields, messages, and logging.

Oracle Applications Installation Guide: Using Rapid Install

This book is intended for use by anyone who is responsible for installing or upgrading Oracle Applications. It provides instructions for running Rapid Install either to carry

out a fresh installation of Oracle Applications 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 Applications 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 tells you how to apply this UI to the design of an application built by using Oracle Forms.

Other Implementation Documentation

Oracle E-Business Suite Flexfields Guide

This guide provides flexfields planning, setup and reference information for the Oracle E-Business Suite implementation team, as well as for users responsible for the ongoing maintenance of Oracle E-Business Suite product data. This guide also provides information on creating custom reports on flexfields data.

Oracle Applications Multiple Organizations Implementation Guide

This guide describes how to set up multiple organizations and the relationships among them in a single installation of an Oracle E-Business Suite product such that transactions flow smoothly through and among organizations that can be ledgers, business groups, legal entities, operating units, or inventory organizations. You can use this guide to assign operating units to a security profile and assign this profile to responsibilities such that a user can access data for multiple operation units from a single responsibility. In addition, this guide describes how to set up reporting to generate reports at different levels and for different contexts. Reporting levels can be ledger or operating unit while reporting context is a named entity in the selected reporting level.

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 tells you how to apply this UI to the design of an application built by using Oracle Forms.

Oracle Diagnostics Framework User's Guide

This guide contains information on implementing, administering, and developing diagnostics tests for Oracle E-Business Suite using the Oracle Diagnostics Framework.

Oracle E-Business Suite Integrated SOA Gateway Implementation Guide

This guide explains the details of how integration repository administrators can manage

and administer the entire service enablement process based on the service-oriented architecture (SOA) for both native packaged public integration interfaces and composite services - BPEL type. It also describes how to invoke Web services from Oracle E-Business Suite by working with Oracle Workflow Business Event System, manage Web service security, and monitor SOAP messages.

Oracle E-Business Suite Integrated SOA Gateway User's Guide

This guide describes how users can browse and view the integration interface definitions and services that reside in Oracle Integration Repository.

Oracle Workflow Administrator's Guide

This guide explains how to complete the setup steps necessary for any Oracle E-Business Suite product that includes workflow-enabled processes. It also describes how to manage workflow processes and business events using Oracle Applications Manager, how to monitor the progress of runtime workflow processes, and how to administer notifications sent to workflow users.

Oracle Workflow Developer's Guide

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

Oracle Workflow User's Guide

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

Training and Support

Training

Oracle offers a complete set of training courses to help you master your product and reach full productivity quickly. These courses are organized into functional learning paths, so you take only those courses appropriate to your job or area of responsibility.

You have a choice of educational environments. You can attend courses offered by Oracle University at any of our many Education Centers, you can arrange for our trainers to teach at your facility, or you can use Oracle Learning Network (OLN), Oracle University's online education utility. In addition, Oracle training professionals can tailor standard courses or develop custom courses to meet your needs. For example, you may want to use your organization structure, terminology, and data as examples in a customized training session delivered at your own facility.

Support

From on-site support to central support, our team of experienced professionals provides the help and information you need to keep your product working for you. This team includes your Technical Representative, Account Manager, and Oracle's large staff of consultants and support specialists with expertise in your business area, managing an Oracle server, and your hardware and software environment.

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

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

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

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

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

Introduction

In this chapter we provide an overview of the products in the Field Service suite and an overview of the Field Service application.

This chapter covers the following topics:

- Oracle Field Service Suite Overview
- Oracle Field Service Overview

Oracle Field Service Suite Overview

The Oracle Field Service suite supports an automated process used by service organizations to manage their field service operations. It assists in the entire service process from taking the customer call to fixing and reporting on the problem at a customer site.

The Oracle Field Service suite offers a range of products to meet your organizations business needs. The following table lists all the products in the suite.

Suite Product	Description
Advanced Scheduler	Advanced Scheduler enables optimization of scheduling capabilities of tasks to qualified resources. It takes into account driving time, distance, part availability, and creates part reservations.

Suite Product	Description
Complex Maintenance, Repair and Overhaul (CMRO)	<p>CMRO functionality is used to support the Preventive Maintenance module. It enables you to create PM programs and activities to be used in a preventive maintenance operation. For the purposes of Preventive Maintenance, a profile option setting in CMRO enables it to run in a Preventive Maintenance mode, whereby PM-specific functionality is available to the user.</p> <p>Important: It is not necessary to purchase a CMRO Application license. When you define Preventive Maintenance programs a few setup steps are required in the CMRO application. That CMRO functionality is delivered with Field Service.</p>
CRM Gateway for Mobile Devices	The CRM Gateway for Mobile Devices consists of a mobile client and a central application. It provides data transport between the Oracle CRM enterprise database and the Oracle mobile client database.
Customer Care	Not really a product of the Field Service suite but the Service Request window is delivered along with the Field Service application to take the customers call for service and create a service request.
Field Service	The Field Service application assists in assigning tasks to service representatives, creating and dispatching daily schedules, monitoring progress, and reporting on material, expense, and labor transactions.
Field Service Administrator Portal	The HTML-based field service portal module enables administrators to track and close field service tasks assigned to technicians in their territories. Their activities include reviewing debrief and billing.
Field Service/Laptop	This is a remote application typically installed on a service representatives laptop to receive his daily schedule and report on progress, material, expense, and labor.
Field Service/Palm Devices	This is a remote application for a handheld device so a service representative can receive his daily schedule and report on progress, material, expense, and labor.

Suite Product	Description
Field Service Technicians Portal	The HTML-based field service portal module enables your technicians to manage and report on their task-based customer calls from any computer with an internet connection. Third party technicians can also use this portal to manage and report on their tasks.
Field Service Third Party Administrator Portal	The HTML-based field service portal module enables third party administrators to track field service tasks assigned to technicians belonging to their third party organization. Their activities include manually managing third party technician schedules, assigned tasks, and third party technician trunk stock.
Oracle Common Application Components	The products in Oracle Common Application Components are essential to use Field Service. They are used to create tasks, territories, define resources, and help in the assignment of tasks to resources. Oracle Common Application Components is delivered with Field Service.
Preventive Maintenance	This module enables a Field Service operation to address service needs in a proactive manner, as well as reactively. The Preventive Maintenance solution provides the capability to log service requests and allocate tasks to the appropriate resources with the right parts and schedule them in anticipation of the service need.
Spares Management	Spares Management is a module of Field Service and is used to provide additional logistics and planning features to manage a service parts inventory in a multi-location environment.
Wireless Option for Service	This is a remote application for a WAP enabled device so a service representative can receive his daily schedule and report on progress, expense, and labor.

Oracle Contracts Family Suite for Preventive Maintenance

To enable the Preventive Maintenance module in Oracle Field Service, you must also install the Oracle Contracts Family Suite. The following product is used for Preventive Maintenance:

Field Service Suite of Products

Suite Product	Description
Service Contracts	Service Contracts is used to author service contracts with coverages associated to a PM program, which can be sold against serviceable products. In Service Contracts, you can define coverage templates for PM programs and author and maintain service contracts with PM coverage.

Oracle Field Service Overview

Oracle Field Service is an essential part of the Field Service application suite. At the core of Field Service is the Dispatch Center, which enables the Field Service dispatcher to plan, dispatch, and monitor all field service activities, ultimately ensuring that the right person is in the right place at the right time with the right parts. Field Service Debrief functionality enables you to report all activities performed out in the field.

Review the following to learn more about the Field Service application:

- Field Service Administrator Portal Features, page 1-4
- Field Service Debrief Features, page 1-5
- Field Service Dispatch Center Features, page 1-5
- Field Service Technician's Portal Features, page 1-6
- Field Service Third Party Administrator Portal Features, page 1-7
- Preventive Maintenance Features, page 1-7
- Spares Management Features, page 1-8

Field Service Administrator Portal Features

- Displays information for a selected task such as related service request, escalations, parts transactions, Install Base related information, resources assigned for a task, and customer address information
- Displays all resources managed by the administrator
- Enables manual rescheduling of tasks
- Enables ordering and receiving of parts and management of resource trunk stocks

- Enables monitoring of task activities
- Enables debrief review and correction
- Enables billing review
- Enables the creation of new service requests
- Enables the creation of new or follow-up tasks

Field Service Debrief Features

- Reporting on parts, expenses, and labor for a task. Ultimately resulting in updates to Inventory, Install Base, and Charges.
- Reporting on counters. From Field Service Debrief you can easily access the Capture Counter Reading functionality from Oracle Service to capture counter readings.
- Directly accessing specific Spares Management functionality such as View Move Order, Create Move Order, and View Onhand Quantity.
- Directly accessing Notes, Calendar, or Interaction History. A technician can also view notes that were created with service requests or tasks.

Field Service Dispatch Center Features

- Displaying of information for a selected task such as related service request, escalations, parts transactions, Install Base related information, resources assigned for a task, and customer address information.
- Scheduling or task assignment, either automatically or manually, to one or more service representatives. The automatic process of scheduling tasks can be run as a background process.

Task assignment is assisted by the use of the Assignment Manager.

When Oracle Scheduler is installed, you can optimize your scheduling capabilities. Driving time and distance for the service representative is provided, and parts reservations are made.

- Managing parts information. Locating, ordering, and monitoring parts for specific tasks.

When Oracle Scheduler is installed locating parts and creating reservations is done automatically.

- Committing tasks and daily schedules to service technicians, either automatically or

manually. When a parts reservation is created an order for the parts is initiated by this process.

The tasks or daily schedules are sent to the service technicians mobile application with information about the task, related service request, problem and resolution, customer address information, Install Base information when applicable, and counters.

- Monitoring schedules, activities, and progress, of service representatives.
Use different grids to visualize the planning such as a daily view, view over a period of time (user definable), or a geographical representation.
Escalation notifications give you the ability to react to non-conforming tasks (tasks that for some reason have become non-conforming, for example parts aren't available anymore, contract response times can't be met).
- Making a selection of tasks based on characteristics such as ready to be planned, planned for today, or escalated.
- View service history for a customer or a product.
- Manages resource availability for single or multiple technicians. Through the Schedule Management window, a dispatcher can easily block the trips of a single field technician or multiple technicians, temporarily freezing the schedule in the process. You can also unschedule the engineer's tasks.
- Using robust skills management and assignment functionality to effectively assign tasks to appropriate technicians, based upon skill requirements and skill levels.
- Using advanced color coding functionally, which makes the various tasks within the Plan Board and Gantt easily identifiable, depending upon a number of factors, including the tasks priority, status type, or plan option.

Field Service Technician's Portal Features

Field Service Technician's Portal is a web-based module designed to enable field technicians to receive service request and task information for tasks assigned to them. It allows technicians to manage tasks and spare parts, to add notes, and to initiate new service requests.

These are the features of the Field Service Portal:

- Provides a personalized dashboard view to serve as the entry point for a field technician.
- Enables multiple custom views for the dashboard, depending upon the technicians preferences.

- Enables search capabilities on service request, task number, and customer information.
- Provides integration to Oracle Install Base for item instances.
- Supports Knowledge Base integration.
- Provides the ability to view and create service requests, tasks, and notes.
- Provides access to spare parts information and enables a technician to order parts.
- Provides for the ability to receive and return parts.

Note: Although third party technicians can use this technician portal, can neither view service request details nor create new service requests. In addition, they cannot update the Installed Base.

Field Service Third Party Administrator Portal Features

Field Service Third Party Administrator Portal is a web-based module designed to enable field service administrators from third party organizations track and monitor tasks assigned to technicians that they manage.

- Displays information for a selected task such as related service request, escalations, parts transactions, Install Base related information, resources assigned for a task, and customer address information
- Displays all resources managed by the administrator
- Enables manual rescheduling of tasks
- Enables ordering and receiving of parts and stock management of resource's trunk
- Enables the monitoring of task activities
- Enables debrief review and correction
- Enables billing review

For more information on the Third Party Administrator Portal, see the *Field Service User Guide*.

Preventive Maintenance Features

- Maintains and administers Preventive Maintenance programs, which includes authoring service contracts with Preventive Maintenance programs attached, by

leveraging robust Oracle Service Contracts functionality.

- Logs service requests and allocates tasks to the appropriate resources with the right parts and schedules them in anticipation of the service need. The Preventive Maintenance demand can be based on the usage of the relevant item (estimated or actual usage). Also, the demand can be based on the date interval calculated from historical information (such as the service fulfillment date) or on the calendar such as defined in the contract.
- A concurrent program generates the Preventive Maintenance requests automatically (service requests and tasks). The tasks are created as a result of task templates, which are associated with the activities such as defined when recording the Preventive Maintenance demand.

Spares Management Features

- Integrates with Oracle Advanced Scheduler to assign and schedule technicians based on the availability of technicians and the availability of parts.
- Integrates with the Dispatch Center and provides the following functionality:
 - Point-and-click parts search tool
 - Create parts orders for the technician
 - View parts order status for the task
 - View parts required for the task
- Tracks both usable and defective parts through the complete logistics cycle. Defective inventories are created when the technician recovers repairable parts from the customer site.
- Uses order creation functionality specifically designed to handle the technician's parts orders. The user interface can be used to either create an internal order or a parts requirement for a specific task. This functionality allows the dispatcher to link an internal order to a service request or task; automatically enters parts linked to the task; displays a technician's inventory for parts being ordered; integrates with Available-to-Promise to determine source; and offers a view of substitute parts.
- Uses robust excess return functionality to use business rules to focus on high impact parts excess. Excess parts are identified based on max levels and excess orders can be automatically created based on planner review.
- Uses an Authorized Stock List (ASL) to define which parts should be stocked, where they should be stocked, and in what quantities. The ASL recommendation is

based on usage history, planning parameters and planning method. The parameters can be uniquely applied to each technician or warehouse, or defaults can be applied which would help to avoid excessive data entry where many field technicians are involved. Advanced planning methods can be used to address the more complex scenarios typical in a field service environment.

- Spares Management is tightly integrated with Oracle Depot Repair, which is an additional automated warehouse replenishment process, whereby parts are repaired at an internal depot and then circulated back into the supply chain for further use. In this scenario, defective parts are removed by a technician from a customer site and consolidated with other defective parts at an internal warehouse. From there, a planner creates an internal order, which ships the parts to an internal depot that is supported by the Oracle Depot Repair application while, at the same time, creating the repair order and the internal order that ships the repaired parts back to the central warehouse.

Architectural Overview and Technology Requirements

This chapter provides an architectural overview of the Field Service application and references information sources for technology stack, software, and hardware requirements.

This chapter covers the following topics:

- Architectural Overview
- Software and Hardware Requirements

Architectural Overview

Field Service integrates with many other Oracle Applications in the E-Business Suite. The following figure illustrates this integration. The applications involved and their relation are described in more detail in the sections following the figure.

Dispatch Center.

Territory Manager

Territory Manager is used for two purposes.

- It is used to create territories with service technicians assigned to it. These territories are then related to a dispatcher group. The service technicians assigned to the territory display in the Field Service Dispatch Center for the dispatcher.
- It is also used to create territory qualifiers for task assignment. These territory qualifiers are used by the Assignment Manager to retrieve a qualified service technician for a task.

Calendar

For each service representative working hours, shifts, and non-available working hours like public holidays need to be defined. This information is used for scheduling. A service representative can also access his calendar and view his task assignments. For more information see *Oracle Common Application Components User's Guide*.

Assignment Manager

The Assignment Manager assists in the task assignment from the Field Service Dispatch Center by finding a qualified service representative to resolve the task. Indirectly the following applications have a relationship with:

- Install Base, a preferred service representative to perform the field visit can be recommended from the Install Base.
- Contracts, a preferred service representative to perform the field visit can be recommended from Contracts, or Contracts Service.
- Territory Manager, territories with qualifiers are created to filter qualified service representatives.
- Calendar, the availability of the service representative is checked in his or her calendar.

Advanced Scheduler

Advanced Scheduler assists in task scheduling from the Field Service Dispatch Center by finding a qualified service representative to resolve the task with the right part. Advanced Scheduler uses the input from the Assignment Manager and applies its own functionality. It takes into account driving time and distance, part availability and creates part reservations. Advanced Scheduler is tightly integrated with Spares Management.

You can also use the Advanced Scheduler to fully automate the scheduling process

without any manual intervention. The Autonomous Scheduler engine, which is part of the Advanced Scheduler, is a concurrent program that can be scheduled to execute at any predefined times or as needed.

Spares Management

In most situations, you need parts to resolve a problem at the customer's site. You can access the Spares Management component to order parts for a task. When Advanced Scheduler is installed a reservation for the part is created automatically at task assignment. When the task is committed, an order for the part is created. You can update Spares Management indirectly from Field Service Debrief with parts usage for a task. The update is done to maintain stock levels at different locations, and for the subinventories.

Escalation Management

Escalations occur for a wide variety of reasons. An escalation management system enables an organization to identify, track, monitor, and manage situations that require increased awareness and swift action.

Field Service Mobile

After task assignment the schedule is committed and sent to one of the following mobile applications:

- Field Service/Laptop
- Field Service/Palm™ Devices
- Wireless Option for Service

It is received by the service representative and they can update the schedule and create a service report. The data is received back by Field Service to monitor progress and captured on the Field Service Debrief.

Inventory

Inventory provides input for Service Request to determine what product needs service. You can update Inventory (Spares Management) from Field Service Debrief with parts usage for a task. Updating Inventory is done to maintain stock levels at different locations, and subinventories. A subinventory could be a warehouse or a service representative's vehicle. Updating inventory results in activities to supply these warehouses or a service representative with new materials or to retrieve materials from them. For more information, see *Oracle Spares Management Concepts and Procedures*.

You cannot modify reported information in Field Service Debrief once it has been transmitted successfully to Inventory.

Installed Base

Installed Base provides input for the service request to indicate if it is an installed base item. It also provides input to the Assignment Manager regarding preferred service representatives to perform the field visit.

You can update a customer's Installed Base from Field Service Debrief. Updating the Installed Base results in an update of the items of the customer's Installed Base.

You cannot modify reported information in Field Service Debrief once it has been transmitted successfully to the Installed Base.

Interaction History

Oracle Interaction History tracks all customer-agent interactions and serves as a repository for the interaction data. You can view the interaction data as well as the Oracle CRM application data associated to the interaction. Access Interactions from the Field Service Debrief.

Notes

Notes provide a text area where you can enter information about a customer, product, service, or anything related to your service report that may be helpful for other service representatives or customers. Once you create a note, it can be attached to a task, sent to the customer, or submitted to the knowledge base for reuse. You can access Notes from the Field Service Debrief.

Charges

You can update Charges with parts usage, counter information, labor time, and expenses for a task. All information recorded is transmitted to the Charges database when you perform an update transaction. Make sure you update each section on the Field Service Debrief separately to update Charges correctly. In Charges this information is checked against any contracts and a final invoice is generated.

You cannot modify reported information in Field Service Debrief once it has been transmitted successfully to Charges.

Software and Hardware Requirements

Please refer to the System Requirements section of the *Installing Oracle Applications* for software and hardware requirements.

Mandatory and Conditional Dependencies

This chapter gives an overview of the mandatory and conditional application dependencies prior to implementing Field Service or Advanced Scheduler.

This chapter covers the following topics:

- Field Service Mandatory Dependencies
- Field Service Conditional Dependencies
- Advanced Scheduler Mandatory Dependencies
- Advanced Scheduler Conditional Dependencies

Field Service Mandatory Dependencies

Before setting up Oracle Field Service, you must install and fully implement these Oracle applications or components:

- Oracle Inventory
- Oracle Order Management
- Oracle Service
 - Charges
 - Install Base
 - Counters
- Oracle Common Application Components
 - Assignment Manager
 - Resource Manager

- Territory Manager
- Task Manager
- Escalation Manager
- Calendar
- Gantt
- Notes
- Interaction History

Field Service Conditional Dependencies

To work effectively with Oracle Field Service it is recommended that you install and fully implement these Oracle applications or components:

- Oracle Spares Management
- Oracle Advanced Scheduler
- Oracle Contracts Core
- Oracle Service Contracts
- Navigation Technologies spatial data
- Oracle CRM Gateway for Mobile Devices
- Oracle Field Service/Laptop
- Oracle Field Service/Palm™ Devices
- Oracle Field Service/Wireless
- Oracle Depot Repair

If using preventive maintenance, some features of the Oracle Complex Maintenance, Repair and Overhaul (CMRO) application are used.

Important: It is not necessary to license the CMRO application.

Advanced Scheduler Mandatory Dependencies

Before setting up Oracle Advanced Scheduler, you must install and fully implement these Oracle applications and components:

- Oracle Field Service

Prerequisites to the Oracle Field Service implementation require several other Oracle Applications to be installed, such as Oracle System Administrator, and Oracle Inventory.

- Oracle Common Application Components

The following components are applicable to Advanced Scheduler:

- Resource Manager
- Territories
- Tasks
- Calendar

For information regarding the installation and implementation of these applications, see the *Oracle Common Application Components Implementation Guide*.

Advanced Scheduler Conditional Dependencies

To work effectively with Oracle Advanced Scheduler, it is recommended that you install and fully implement the following Oracle applications and components:

- Oracle Spares Management

For the current release, Spares Management implementation documentation is contained in this guide. See *Setting Up Oracle Spares Management*, page 7-2.

- NAVTEQ™

NAVTEQ™ refers to a third-party application. To use the Advanced Scheduler spatial data module, install NAVTEQ™ spatial data, or equivalent, prior to implementing Oracle Advanced Scheduler.

See *Confirming Setup and Loading Spatial Data*, page 8-3 in this guide.

Performance Requirements and High Availability

This chapter documents about High Availability (HA), mapping of responsibilities for HA and the user actions supported in Field Service in HA.

This chapter covers the following topics:

- About High Availability
- About Mapping Responsibilities
- Concurrent Programs Supported in Field Service in High Availability
- User Actions Supported in High Availability

About High Availability

Organizations providing round the clock support to their customers require computer systems to also be available 24x7. Hence, any planned or unplanned outages may bring down employee productivity, reduce customer satisfaction and affect business until all systems are back up and running. Service companies that have shorter turnaround times can adversely be affected by such downtimes. Oracle TeleService provides high availability (HA) of critical features. This feature is especially useful where a single instance is run and entire operations are affected by these downtimes.

High availability refers to enabling operational continuity of the business critical functions of application or system during a scheduled production outage. Planned production downtime may be due to patch applications or other system configurations that require that the production instance is taken offline or restarted.

Related Topics

High Availability Solution, *Oracle TeleService Implementation and Administration Guide*

Critical Business Functions Available in High Availability, *Oracle TeleService Implementation and Administration Guide*

About Mapping Responsibilities

Responsibilities enable users to access different user interfaces on the high availability instance. During the HA Record phase, users are given access only to the HA equivalents of their standard production responsibilities. The HA responsibilities give access to a limited set of UIs and functions that are available on the HA instance. When the production instance is restored, users will resume with their regular responsibilities.

The Service High Availability Administrator must setup the responsibilities on the production instance. Since the high availability instance is a clone of the production instance, the responsibility mapping performed on the production instance is available on the high availability instance when the production instance is brought offline. The fields on the High Availability Responsibility Mapping page display the list of active responsibilities in Service, Field Service, and Mobile Field service.

Seeded Responsibilities

The following are the different seeded responsibilities for Field Service.

- Field Service Technician HA
- Field Service Dispatcher HA
- Field Service Administrator HA
- Field Service Manager HA

Before the HA instance is made available,

1. Only the System Administrator responsibility is available
2. All responsibilities that are marked as HA responsibilities are available. Responsibilities on the production instance are mapped to responsibilities on the HA instance.
3. No other responsibilities are available on the HA instance.
4. These HA responsibilities are then assigned to users with corresponding normal responsibilities.
5. Barring few required programs for Service all other concurrent programs, workflows, and business events cannot be run on the HA instance. See Concurrent Requests Supported in Field Service in High Availability, page 4-3
6. Users will have access to the regular responsibilities when they move back to the production environment.

Mapping Responsibilities

Use this procedure to map responsibilities on the production instance.

To map responsibilities:

1. On the High Availability Responsibility Mapping page, select the responsibility name from the Responsibility Name list. All responsibility mappings related to the selected responsibility are displayed in the Application Name, HA Application Name, and HA Responsibility Name fields.
2. Click Delete to delete a responsibility mapping. To delete multiple responsibility mappings select the check box next to the mapping and click Delete.
3. Click the Add icon to add a responsibility mapping.
4. Click Apply.
5. Click OK. The values in this setup are saved to the CSM_HA-RESP_MAPPINGS table that is used during the HA Record start phase.

Concurrent Programs Supported in Field Service in High Availability

The following concurrent programs are supported on the high availability instance:

1. Generate Field Service Trips
2. Find Invalid Address
3. Auto Commit Tasks
4. Search and Schedule Tasks Automatically
5. Optimize across Trips

User Actions Supported in High Availability

The following table lists the user actions/functionality that is supported in HA. Features that have the Capture Transaction in HA Mode column set to Y (Yes) are supported in HA mode. These functions/transactions will be captured and replayed in the production instance. Features that are set to N (No) in the Capture Transaction in HA Mode column must either be hidden, disabled or enabled in read-only mode so that the users cannot make updates that will not be captured. In OA HTML pages, you can do this through personalization.

Features that have the Enabled in UI in HA Mode column set to Y are displayed on the UI and can be accessed in the HA mode. For features that are marked as N, users cannot

access them and the feature can either be disabled or is not shown on the UI.

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
Debrief		Enter/update debrief (entering information)	Y	Y
		Enter debrief (creating charges)	Y	Y
		Update assignment status	Y	Y
		View/Enter notes	Y	Y
		Access Calendar button (read-only)	N	Y
		Create Personal Task	Y	Y
Dispatch Center	Overview Tab			
		View Task	N	Y
		All Notes button	Y	Y
		Task Notes button	Y	Y
		Customer Confirmation button	Y	Y
	Service Request Tab			

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		View Service Request info (read-only)	N	Y
		View/Enter notes	Y	Y
		View/Query Service History	N	Y
		Add Attachments	Y	Y
	Escalations Tab			
		View Escalations (read-only)	N	Y
	Spares Tab			
		View Spares (read-only)	N	Y
	Product Tab			
		View Product info (read-only)	N	Y
	Resources Tab			
		View Assignee info	N	Y
		Update Task Assignment Status	Y	Y
	Address Tab			
		View Address info (read-only)	N	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
	Contacts Tab			
		View Contacts info (read-only)	N	Y
	Skills Tab			
		View Skills info (read-only)	N	Y
	Access Hours Tab			
		View access hours info (read-only)	N	Y
	Task Dependency Tab			
		View task dependency info (read-only)	N	Y
	Parent/Child Tab			
		View parent/child info (read-only)	N	Y
	Plan Board			
		Update Trip	N – users can do it, but it will not be replayed	Y
		Delete Trip	N – users can do it, but it will not be replayed	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		Block Trip	N – users can do it, but it will not be replayed	Y
		Recalculate	Y	Y
		Optimize	Y	Y
		Commit	Y	Y
		Schedule Task	Y	Y
		Create and Update Personal Task	Y	Y
		Create and Update Follow-up Task	Y	Y
	Setup	Setup access hours	N	N
	Menu – Tools	Lock Query	N – users can do it, but it will not be replayed	Y
		Repeat Last Query	N – users can do it, but it will not be replayed	Y
		Edit Query	N – users can do it, but it will not be replayed	Y
		Save Query As	N – users can do it, but it will not be replayed	Y
		Optimize Across Trips	Y	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		Recalculate All Trips	Y	Y
		Auto Commit Tasks	Y	Y
		Find Invalid Addresses	Y	Y
		Change Invalid Addresses	N – users can do it, but it will not be replayed	Y
		Hide Shift Tasks	N	Y
		Show Regular Shifts	N	Y
		Show Stand By Shifts	N	Y
	Menu – Map Options	View Selected Task(s) on Google Map	N	Y
		View All Territory Task(s) on Google Map	N	Y
		Launch Google Map	N	Y
	Menu – Navigate	Schedule Management	Y	Y
		Access Hours	Y	Y
		Task Dependencies	Y	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		Parent/Child	Y	Y
		Skills Assignment	Y	Y
		Parts Requirement	N	Y, but read-only
		Source Document	Y	Y – launches the SR UI
		Customer Confirmation	Y	Y
		Select Territories and Task Owners	N, users can select but will not be replayed	Y
		Resource Addresses and Subinventories	N	Y, but read-only
		Resource Skills Management	N	Y, but read-only
		Service History	N	Y
		Spares Management	N	N
	SpreadTable – menu	Copy Cell	Y	Y
		Copy Selected Rows	Y	Y
		Copy All Rows	Y	Y
		Find in Table	N	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		Refresh	N	Y
		Sort	N	Y
		Go To	N	Y
		Auto Schedule	Y	Y
		Commit Task	Y	Y
		Schedule	Y	Y
		Reschedule Selected Task	Y	Y
		Reschedule starting at selected Task	Y	Y
		Customer Confirmation	Y	Y
		Unschedule Task	Y	Y
		Cancel selected task	Y	Y
		Cancel starting at selected Task	Y	Y
		Debrief	Y	Y
		Parts Requirement	N	Y, but read-only
		Access Hours	Y	Y
		Task Dependencies	Y	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		Parent/Child	Y	Y
		Change Invalid Addresses	Y	Y
		Send Message	N	Y
		Source Document	Y	Y
		Task Related Information	Y	Y
		View Task on Google Map	N	Y
	Menu – Plan Board/Gantt	Create Personal Task	Y	Y
		Create Trip	N – not replayed; trips must be created before entering HA mode	Y
		Receive Parts	Y	Y
		Return Parts	Y	Y
		Commit Schedule	Y	Y
		Schedule Management	Y	Y
		Resource Information	Y	Y
		Calendar	Y	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
Technician/Administrator Portal & MFS Wireless	Tasks	Resource Address and Subinventories	N	Y, but read-only
		Resource Skills Management	N	Y, but read-only
		View Technician Location on to Google Map	N	Y
		Task list on dashboard	N	Y
		Search task	N	Y
		Update task	Y	Y
		Create follow up task	Y	Y
		Create personal task	Y	Y
		Schedule task	Y	Y
		Update IB (Actions LOV)	N	N
	Service Request	Search service request	N	Y
		Update service request	Y	Y
		Create service request	Y	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		View service history	N	Y
		Update counter readings	Y	Y
		Parts		
		Search parts	N	Y
		Transfer parts	N	N
		Order parts	N	N
	Debrief	Receive parts	N	N
		Return parts	N	N
		Capture debrief-labor, material, expense	Y	Y
		Process debrief to charges	Y	N/A
		Travel debrief	Y	Y
		Debrief error correction	Y	Y
		Debrief E-record Approval	N	N
		Default travel and labor debrief based on task status updates	Y	Y
		Capture signature	Y	Y
	Contract	View contracts	N	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
	Customer	View customer and contact info	N	Y
	Notes	View/create notes	Y	Y
	Install Base	View install base configuration	N	Y
		Update install base configuration	N	N
	Knowledge Management (KM)	View KM	N	Y
		Create/update KM	N	N
	Miscellaneous	Upload/download attachment	Y	Y
		Access maps and driving directions	N	Y
	Planners Desktop			
	Spares Management	Spares Logistics	Part Search Hierarchy	N
		Parts Return	N	N
		Parts Requirement Search	N	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
Advanced Scheduler	Move Order	Receive Inbound Orders and Reservations	N	N
		Repair Purchase Order Details	N	N
		Part Search Hierarchy	N	Y
		Order Part	N	N
		Repair Part	N	N
		Create Move Order	N	N
		Reservations	N	N
		Print Picklists	N	N
		Confirm Picklists	N	N
		Packlists	N	N
		Receive Shipments	N	N
		Move Order Status	N	N
		Geocoding addresses	N – not replayed in production instance	Y

Module	Flow/Location	User Action	Capture Transaction in HA Mode	Show/Enable in UI in HA Mode
		Find Invalid Addresses	N	Y
		Record confirmation requirement, receipt	Y	Y
		Schedule a task in intelligent mode	Y	Y
		Schedule a task in window-to-promise mode	Y	Y
		Schedule a task in assisted mode	Y	Y
		Unschedule a task	Y	Y
		Optimize trip	Y	Y
		Parts search	Y	Y
		Parts order/reservations	N	N

E-Business Suite Application Implementation Tasks

This chapter describes in detail and in the recommended order, the implementation tasks for Oracle E-Business Suite applications relevant to Oracle Field Service.

This chapter covers the following topics:

- Summary of E-Business Suite Implementation Tasks
- Setting Up the System Administrator
- Defining Key Flexfields
- Defining Calendars, Currencies, and Set of Books
- Confirming Setup of Territory Manager
- Setting up Field Service Customers and Resources
- Confirming Setup of Inventory
- Confirming Setup of Order Management
- Setting Up Business Processes
- Setting up the Field Service Request and Solution

Summary of E-Business Suite Implementation Tasks

You can implement Oracle Field Service in many different ways, the following checklist describes the recommended order to implement the relevant applications in the Oracle E-Business Suite as they relate to Oracle Field Service. These setups are standard for the application unless Field Service-related steps are noted in the details.

Complete the following implementation steps in sequential order:

E-Business Suite Implementation Task Sequence

1. Setting Up the System Administrator, page 5-3
 2. Defining Key Flexfields, page 5-4
 3. Defining Calendars, Currencies, and Set of Books, page 5-6
 4. Confirming Setup of Employees, page 5-9
 5. Confirming Set Up of Resources, page 5-9
 6. Confirming Setup of Inventory, page 5-12
 7. Confirming Setup of Order Management, page 5-20
 8. Setting Up Oracle Work In Process, page 5-22
 9. Setting Up Oracle Bills of Material, page 5-22
 10. Setting Up Oracle Purchasing, page 5-23
 11. Confirming Setup of Service Request, page 5-27
 12. Confirming Setup of Customer Model 11i (TCA), page 5-8
 13. Confirming Setup of Territory Manager, page 5-7
 14. Confirming Setup of Tasks, page 5-28
 15. Confirming Setup of Escalation Management, page 5-31
 16. Confirming Setup of Charges, page 5-33
 17. Confirming Setup of Knowledge Management, page 5-28
 18. Confirming Setup of Counters, page 5-18
 19. (Optional) Confirming Setup of Notes, page 5-32
 20. (Optional) Confirming Setup of Interaction History, page 5-32
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- 21. Confirming Setup of Install Base, page 5-24
 - 22. (Optional) Confirming Setup of Contracts Core, page 5-26
 - 23. (Optional) Confirming Setup of Service Contracts, page 5-26
 - 24. Confirming Setup of Assignment Manager, page 5-26
 - 25. Confirming Setup of Calendar, page 5-10
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Setting Up the System Administrator

To fully implement Oracle Field Service, and set up the system across all applications, you need the *System Administrator* responsibility. Please see *Oracle Applications System Administrator's Guide* for more information.

The Oracle Field Service application is delivered with these seeded responsibilities:

Field Service Seeded Responsibilities

Responsibility	Description
Field Service Administrator	Can perform all administrative tasks within CRM Service, such as Setup.
Field Service Manager	Access to all applications and windows within CRM Service. Limited setup capability, such as creating task types.
Field Service Dispatcher	Access to all applications within CRM Service.
Field Service Representative	Access to a limited set of windows from the applications within Oracle Field Service.
Preventive Maintenance	Access to Preventive Maintenance setups.
Preventive Maintenance Reports	Provides access to Preventive Maintenance-related concurrent programs, which are used during the execution phase of the program.

Responsibility	Description
Field Service Technician Portal	Provides access to the Field Service web-based module.

You will need to create an Oracle Applications user with the appropriate responsibilities for performing implementation procedures. The user name you assign to the user can be used to log on to the Oracle Field Service suite of products.

You must use the System Administrator responsibility to create the user. The user you create must be specified as a Person by selecting the appropriate name in the Person field in the User window. The name of the person will be available in the list of values only if the person has already been defined as an employee.

Assign all of the following responsibilities to the user you are creating:

- Spares Management
- Field Service Manager
- Order Management Super User
- System Administrator
- Inventory

Optionally, if you are using the Preventive Maintenance module, you must assign the following two responsibilities to the user:

- Preventive Maintenance
- Preventive Maintenance Reports

Use the Users window to define the Oracle Field Service user. This user will need to be uniquely identified by an application user name.

- To define additional responsibilities, please see *Oracle Applications System Administrator's Guide*.
- Set up printers (optional). For more information, see Setting Up Your Printers, *Oracle Applications System Administrator's Guide*.

Defining Key Flexfields

The setup of key flexfields is required.

Be sure to coordinate with other applications such as Oracle Human Resource

Management or Oracle General Ledger, those products' flexfield setup before defining the key flexfields here, as it is not recommended to change flexfields frequently. For more information, see *Oracle Applications Flexfields Guide*.

For each key flexfield, you perform the following tasks, some of which are optional for some flexfields:

- Define the flexfield structure.
- Define value sets.
- Define flexfield segments.
- Define flexfield segment values.
- Define security rules.
- Assign security rules.
- Define roll-up groups.
- Define cross-validation rules.

Steps

1. Set up the Accounting flexfield.

You may not need to perform this step if you have already installed and set up Oracle General Ledger or performed a common application setup. For more information, see *Oracle General Ledger User's Guide*.

2. Set up the following Human Resources key flexfields.

You may not need to set up these key flexfields if you have already installed and set up Oracle Human Resource Management Systems or performed a common applications setup:

- Grade flexfield
- Job flexfield
- Position flexfield
- People Group flexfield

For more information, see *Oracle Human Resources User's Guide*.

Defining Calendars, Currencies, and Set of Books

The setup of calendars, currencies, and a Set of Books is required.

If you have defined your calendars, currencies, and set of books while setting up a different Oracle Applications product, proceed with the next step. However, if you are performing a multi-organization implementation, see the note below.

Note: If you are performing a multi-organization implementation, you may optionally create more than one calendar, currency, or set of books. For more information, see *Multiple Organizations in Oracle Applications*.

To set up calendars, currencies, and a set of books perform these steps:

- Define a Calendar, page 5-6
- Define Currencies, page 5-7
- Define a Set of Books, page 5-7
- Open and Close Accounting periods, page 5-7

Defining a Calendar

Carefully consider the type of calendar that you need for the organization, it can be difficult to change the calendar (for example, from a fiscal year to a calendar year) after you have used it to enter accounting data.

You must set up the following calendars:

- Define period types. For more information, see *Defining Period Types, Oracle General Ledger User's Guide*.
- Define accounting calendar. For more information, see *Defining Calendars, Oracle General Ledger User's Guide*.
- Define transaction calendar. For more information, see *Defining Transaction Calendars, Oracle General Ledger User's Guide*. (Optional)
- Define workday calendar. For more information, see *Overview of Workday Calendar, Oracle Bills of Material User's Guide*. (Optional)
- Define exception templates. For more information, see *Creating a Workday Exception Template, Oracle Bills of Material User's Guide*. (Optional)

Defining Currencies

Use the Currencies window, page A-1 to define non-ISO (International Standards Organization) currencies and to enable or disable currencies. Oracle has predefined all currencies specified in ISO standard 4217. To use a currency other than U.S. dollars (USD), you must enable that currency. USD is the only currency that is enabled by default.

Perform these setups:

- Define currencies.
- Define conversion rate types.

For more information, see *Defining Currencies* and *Defining Conversion Rate types* in the *Oracle General Ledger User's Guide*.

Defining a Set of Books

A set of books determines the functional currency, account structure, and accounting calendar for each company or group of companies. If you need to report on the account balances in multiple currencies, you should set up one set of books for each reporting currency.

Your primary set of books should use your functional currency. Each reporting set of books should use one of your reporting currencies.

Proceed with these setups as you set up a Set of Books:

- Assign your set of books to a responsibility.
- Set up accounting code combinations.

For more information, see the *Oracle General Ledger User's Guide*.

Opening and Closing Accounting Periods

It is necessary to open and close accounting periods. For more information, see *Opening and Closing Accounting Periods*, *Oracle General Ledger User's Guide*.

Confirming Setup of Territory Manager

In Oracle Field Service, territories are used for three purposes:

- You create territories for scheduling purposes based on qualifiers. These territories are used by the Assignment Manager and Oracle Scheduler (when installed) to assign a task to a service representative.

Note: To ensure that the Scheduler can schedule to the technicians from the appropriate territories, you can optionally enable the Time of the Day and Day of the Week territory qualifiers in Oracle Territory Manager. Additionally, you must define territory types with these qualifiers as the attributes prior to creating territories. See: *Enabling Matching Attributes in Oracle Territory Manager Implementation Guide* and *Creating Territory Types in Oracle Territory Manager User Guide*.

- You create territories with resources (field service representatives) assigned to them. You will use these territories to assign them to one or more planner groups (created in Resource Manager). Once they are assigned to the planner groups this is the default group of field service representatives that is shown to a planner in the Oracle Field Service Dispatch Center.

Set up Territory Manager as described in the *Oracle Territory Manager Implementation Guide*. Create Territory Types as described in *Oracle Territory Manager User Guide*.

The creation of territories is also addressed in more detail in Setup Resource Relations as part of Confirming Setup of Resources, page 5-9

Setting up Field Service Customers and Resources

Field Service is provided to customers by technicians who are assigned to these tasks by dispatchers and managed by administrators. These resources of dispatchers, administrators, and technicians can be employees or suppliers or belong to third party organizations that provide the service.

Confirming Setup of Customer Model 11i (TCA)

Customer Model 11i is an architecture designed to support complex trading communities. The goal of the Customer Model is to provide the foundation for Oracle ERP, CRM, and E-Business applications. It strives to model all relationships within a given trading community. For example the trading community of an appliance manufacturer might include suppliers, distributors, re-sellers, retailers, and service providers.

To maintain consistency across all applications Oracle Field Service shares the new customer master information with other modules. Customers can be defined in Order Management, Oracle Receivables, and Customer Support.

Multiple addresses can be defined for one or more businesses, for example Ship-To address, Bill-To address, and installation address. To be able to assign tasks to field service representatives, the Installed-At address needs to be defined.

In both applications make sure the Installed At address is defined.

For setup details please refer to *Oracle Customer Care Concepts and Procedures* or *Oracle Order Management User's Guide*.

Confirming Setup of Employees

The setup of employees is required. You setup employees in Oracle Human Resources.

Please refer to the appropriate section in *Oracle Human Resource Management Systems* to enter and maintain employees.

The Setup of Employees is also addressed in more detail in Confirming Setup of Resources, page 5-9 of the Field Service set up.

Confirming Setup of Resources

Make sure you implement Resource Manager as described in the Resource Manager section in the *Oracle Trading Community Architecture Technical Implementation Guide*.

The Oracle Field Service specific setup of Resource Manager involves the following:

- Set up service technicians. In the Resource Manager assign the role of Field Service Representative or Field Service Third Party Technician to a resource to make the resource visible in the Dispatch Center.

A field service technician does not have to be defined as an employee and does not have to be an Oracle Applications User. A third party technician can be defined as a supplier contact or an employee who is not on the payroll.

- Set up dispatchers. A dispatcher does not need a specific role assigned. You can assign the role of "Field Service Dispatcher" in the Resource Manager.

A dispatcher needs to be defined as an employee and assigned an Oracle Applications User. Define the dispatcher as an employee, create an application user ID for the dispatcher, and then import the employee into the Resource Manager to define it as a resource.

- Create dispatcher groups by creating resource groups with only dispatchers assigned to it. The dispatcher groups are used to group service technicians assigned to the same territory.
- Set up administrators. An administrator needs to be defined as an employee and assigned an Oracle Applications User ID. Define the administrator as an employee, create an application user ID for the dispatcher, and then import the employee into the Resource Manager to define it as a resource.

Note: You can set up third party administrators in the same way by assigning the role of Field Service Third Party Administrator to a not-on-the-payroll employee in the CRM Resource Manager.

- Create administrator groups by creating a resource group with only an administrator assigned to it. You can then assign territories to these groups which in turn enables service technicians in these territories to be grouped under an administrator.
- Optionally, if you are using Preventive Maintenance, you must create a resource group of type *Preventive Maintenance*. In this case, set the following values for this resource group:
 - Access Type set to Service Request
 - From the Members tab, choose Employee in the Category field and associate each employee that ought to be included in the group by choosing the employee identifier in the Number field.
 - From the Usage tab, choose Support in the Usage field.
- If you are using Third Party Service Providers for greater and faster field service coverage, create a resource group of type Third Party. You can then create multiple resource groups of this type each group consisting of individual resources such as third party service provider or third party organization, third party administrator, and third party technician. For more information, see Setting up Third Party Field Service Resources, page 6-31.

The set up of Resources is also addressed in more detail in Setting Up Field Service Technicians and Dispatchers, page 6-13 .

Confirming Setup of Calendar

The setup of Calendar is required to define the availability and non-availability of resources (field service representatives). This information is used when scheduling a task for a resource. Especially the setup of shifts is very important because it is used to generate departure and arrival tasks for each service representative. These departure and arrival tasks show up in the Oracle Field Service Dispatch Center and are used for scheduling purposes. Make sure to perform the following setup steps:

- Defining a Calendar, page 5-11
- Defining Calendar Exceptions, page 5-11
- Defining Shifts, page 5-11
- Assigning Shifts/Exceptions to Calendar, page 5-11
- Assigning Resources to Calendar, page 5-11

Defining a Calendar

Create a high level definition for a calendar for a particular group of resources.

Steps

1. Navigate to the Calendar window, page A-1.
2. For details, see *Oracle Common Application Calendar Implementation Guide*.

Defining Calendar Exceptions

Define the exceptions that could occur for a calendar, such as Christmas holidays.

Steps

1. Navigate to the Exceptions window, page A-1.
2. For details, see *Oracle Common Application Calendar Implementation Guide*.

Assigning Resources to Calendar

Define for each calendar for which resources it applies.

For information on defining an accounting calendar, see Defining a Calendar , page 5-6 and Defining a Calendar., page 5-11

Steps

1. Navigate to Assign Resources window, page A-1.
2. For details, see *Oracle Common Application Calendar Implementation Guide* and Assigning the Resource to a Calendar., page 6-20

Defining Shifts

Define the regular and stand by availability types (including working hours) for your resources.

Steps

1. Navigate to Define Shifts window, page A-1.
2. For details, see the *Oracle Common Application Calendar Implementation Guide*.

Assigning Shifts/Exceptions to Calendar

Define what shifts and exceptions you want to associate with a calendar.

Steps

1. Navigate to Assign Shifts/Exceptions window, page A-1.
2. For details, see *Oracle Common Application Calendar Implementation Guide*.

Confirming Setup of Inventory

The implementation of Inventory is required for several purposes within the Field Service suite of products. These include:

- To define the units of measurement (UOM) required by Oracle Field Service.
- To report on items used, taken down on the Field Service Debrief. You update Inventory from the Field Service Debrief.

Field Service Debrief contains three tabbed pages: Material, Labor and Expense. The Item field in the Field Service Debrief for each tab displays the following items:

Material tab: All items defined in the Service tabbed page of Master Items having a billing type associated with a billing category of Material are displayed in the list of values for items in the Material tabbed page.

Labor tab: All items defined in the Service tabbed page of Master Items having the billing type with a billing category of Labor are displayed in the list of values for items in the Labor tabbed page.

Expenses tab: All items defined in the Service tabbed page of Master Items having the billing type with a billing category set to Expense are displayed in the list of values for items in the Expenses tabbed page.

- Spares Management functionality requires Inventory setups to enable the following core functionality:
 - Inventory organizations are used to define warehouses and groups of field technicians.

Spares Management uses inventory organizations as a structure for subinventories that contain spare parts. Inventory organizations represent warehouses and groups of field engineers.
 - Subinventories are used to define parts inventory locations for defective and usable parts.
 - The Inventory Item Master is used to define spare parts. The additional features of serial number, lot, locator and revision control can optionally be implemented in Spares Management.
 - Items, or spare parts, are assigned to subinventory locations.
 - Inventory balance tracking is viewable in Spares Management.
 - Inventory accounting is used when a short receiving line is closed for parts.
 - The Inventory Min/Max Planning concurrent program is used to automatically

replenish spares parts inventories.

- Preventive Maintenance module uses items in Inventory to enable PM programs and the creation of coverage templates.

Refer to the following sections of the *Oracle Inventory User's Guide* for detailed instructions on how to set up and administer inventory organizations:

- Overview of Inventory Structure
- Creating an Organization
- Defining Organization Parameters

In the Organization Classification section of the Define Organizations window, each Spares Management organization must include *Inventory Organization* as a classification. Otherwise the setup is standard.

The following Field Service-specific setup steps are necessary.

- Define Unit of Measurement, page 5-14
- Check Profile Option for Operating Unit Setting, page 5-14
- Defining Subinventories, page 5-14
- Additional Setup Required for Intransit Subinventory, page 5-15
- Set Up Account Aliases, page 5-16
- Define Items, page 5-16
- Define Planners, page 5-18
- Define Shipment Methods, page 5-19
- Define Freight Carriers, page 5-20

Suggestions for setting up organizations in Oracle Inventory for Spares Management

You should set up an organization for each warehouse that stores parts. You should also set up organizations for groups of field engineers, based on your organizational structure. The Spares Management logistics process can move parts within a single inventory organization and across multiple inventory organizations.

Spares Management provides for the management of both usable and defective inventories. If costing for the defective inventory is different than costing for the same items in usable inventory, separate organizations should be created for the defective subinventories.

Set up Inventory as described in Overview of Setting Up in *Oracle Inventory User's Guide*. Ensure that all the following required steps have been reviewed and completed as necessary:

- Create items.
- Make sure that on Master Item level the Serviceable Product flag is checked for the organization.

Defining Unit of Measure

You need to define the unit of measure (UOM) for Hour and Minute. Two profile options in Field Service make use of these UOMs. It is used to define a planned start and end time when creating a task.

Note: The Unit of Measure for Hours is pre-defined for use on the Oracle Field Service Report.

Make sure the unit of measure for Hour and Minute is defined. For setup details please refer to *Oracle Inventory User's Guide* for more information.

Checking Profile Option for Operating Unit Setting

Make sure the profile option MO: Operating Unit is set to the operating unit that represents your enterprise.

Steps

1. Navigate to the System Profile Values window, page A-1.
2. To narrow your search, enter MO% at the Profile field.
3. Click Find.
4. Check if the following profile option is set to the appropriate operating unit:
 - MO: Operating Unit

Defining Subinventories

Subinventories are unique physical or logical separations of material inventory. Spares Management uses subinventories for tracking usable and defective spare parts.

Standard setup is required in Oracle Inventory for subinventories. The setup of a subinventory in Oracle Inventory is a partial setup. The balance of the setup occurs in Spares Management where additional parameters for the subinventory are defined in either loops or hierarchies.

The minimum setup for subinventories to be used in Spares Management follows. For detailed information regarding subinventories, please refer to the *Oracle Inventory User's Guide*.

Steps

1. Navigate to the Subinventories window, page A-1.
2. Enter a name for the subinventory.
3. Enter a description for the subinventory.
4. Check the following check boxes so the subinventory can be used by Spares Management:
 - Qty Tracked
 - Asset Subinventory
 - Allow Reservation
5. Save your work.

Additional Setup Required for Intransit Subinventory

A special subinventory is required to track intransit between subinventories for each organization. This subinventory can be named, for example, INTRANSUB with a description of Intransit subinventory.

The following parameters should be checked:

- Qty Tracked
- Asset subinventory

The Locator Control field must be set to NONE. The Intransit subinventory does not use locators.

The Lead Times, Sourcing, and Items/subinventories fields should be left blank. These fields are either not used or are populated in the Authorized Stock List from the Spares Management windows.

Guidelines

Spares Management provides for the management of both usable and defective inventories. Subinventories for defective items should be set up along with the subinventories for usable items. The distinction between usable and defective subinventories will be made in the Spares Management setup window.

Setting up Account Aliases

An account alias is used to identify the financial account to be used for over- and under-receiving in Spares Management. To use it, you must set up an account alias in the relevant organization. This also enables the Close Line button on the Receive Shipments window.

You must set up the specific alias outlined in the following steps.

Steps

1. Navigate to the Account Aliases window, page A-1.
2. After choosing the Organization, in the Account Aliases window, enter the following name of the alias in the Alias field: CSP_RECEIPT.
3. Enter the following description:
Account for Spares Management over and under receipt.
4. Select the account to be used.
5. Enter the date on which this alias account is to be effective.
6. Save your work.

Defining Items

Standard setup in Oracle Inventory is required for items. Additionally, Field Service Debrief, Spares Management, and Preventive Maintenance all use items and require some specific settings to enable items to be properly displayed in the application.

For Debrief, you can set up items that are both trackable (those items associated with the billing category of Material) and items that are non-trackable, which includes those items that are of a billing category of Labor or Expense.

In addition to the standard item setup, the specific requirements for both trackable and non-trackable items to be used by Field Service Debrief, Spares Management, and Preventive Maintenance are as follows:

Service Tab

- If the item is to be trackable, select the Serviceable Product check box. Additionally, the Install Base Tracking checkbox is automatically selected.
- For trackable items, select a Billing Type that is associated to the Material Category.
- For items that are set up as Labor, select the Billing Type of "Labor."

- For Spares Management, in the Recovered Part Disposition field you can optionally choose a value. The Recovered Part Disposition field defines items as spares parts that will be active in Spares Management.

The Recovered Part Disposition field has three choices:

- No Return. Indicates to the service representative that return of the recovered part is not required.
- Fast return. An RMA is created and the recovered part is returned to Depot Repair.
- Slow Return. The part is transacted into the service representative's designated defective subinventory.

Inventory Tab

- The Inventory Item check box must be selected for items of type Material. This requirement applies to all items to be used by Spares Management as well.
- For items of billing category of Material, select the Stockable check box. This automatically enables the Reservable and Transactable attributes.

Order Management Tab

- For items with a billing category of Material, select the Customer Ordered check box. This automatically enables the Customer Orders Enabled checkbox
- The following two attributes must be set to allow the item to be shipped on an internal order in Order Management:
 - Internal Ordered
 - Internal Orders enabled

For detailed information relating to setting up Items refer to the *Oracle Inventory User's Guide*.

Guidelines

Items with the associated billing category of Material must be associated with a price list. For details, see Setup of Price Lists, page 5-20.

Once you have set up an item in a master organization, you can assign it to all organizations by navigating to Tools > Organization Assignment and clicking Select All.

Setting Up On Hand Quantity for Items

To set an on-hand quantity value for items of billing category Material for specific subinventories, you must set these up in Oracle Inventory.

Prerequisite

Items and subinventories must be set up.

Steps

1. Navigate to the Miscellaneous Transaction window, page A-1.
2. In the Transaction Type field, select Miscellaneous Receipt from the list of values.
3. Click the Transaction Lines button.
The Miscellaneous Receipt window appears.
4. Choose the Item you want to set an on-hand quantity for from the list of values.
5. Choose the Subinventory you want to associate to this Miscellaneous Receipt line from the list of values.
6. Enter a numeric value in the Quantity field.
This represents the on-hand quantity value for this item and subinventory.
7. If the Account field is enabled, select an Account from the list of values.
8. Save your work.

Guidelines.

You must repeat the above steps for each subinventory that you want to set an on-hand quantity for a specific item.

You can verify these values by navigating to Inventory > On-Hand Availability > On-Hand Quantities and selecting the Item/Subinventory combination that you setup during this process. The Quantities will be displayed.

Setting up Counters

The setup of Counters is required to be able to report counter readings when performing a field service visit. You can access counters through the Field Service Debrief. Only items that are set up as trackable (the Stockable and Trackable check boxes are selected in the Inventory tab of the Master Item window) and have a billing type of Material or Component can be associated with a counter.

You must set up Counter Groups and individual counters that you associate with items.

Please refer to the appropriate section from *Oracle Service Implementation Guide* for Counters setup.

No additional Field Service specific setup steps are necessary.

Defining Planners

Use this procedure to define planners. In Spares Management, inventory planners are

required to be associated with parts loops.

Prerequisite

The employee to be defined as a planner must have already been defined in Oracle Human Resources or Oracle Purchasing. Please refer to the *Oracle Inventory User's Guide* for additional information about planners.

Steps

1. Navigate to the Planners window, page A-1.
2. In the Planners window, enter the name of the planner in the Name field.
3. Enter the user role in the Description field.
4. Select the employee name from the Employee list of values.
5. Save your work.

Defining Shipment Methods

The Spares Management module provides functionality to specify estimated delivery times for the shipment methods and freight carriers that are used to deliver spare parts. Shipment methods must be defined in Oracle Inventory before delivery times can be set up in Spares Management.

An overview of the steps for defining shipment methods follows. For additional information about defining shipment methods, refer to the Defining Shipping Methods section in the *Oracle Inventory User's Guide*.

Steps

1. Navigate to the Shipping Methods window, page A-1.
2. From the Ship Method Lookups window, enter a unique alphanumeric code describing the shipping method.
3. Enter the Meaning of the shipping method code.
4. Enter a Description of the shipping method.
5. Optionally, enter from and to effective dates.
6. Indicate whether the shipping method is enabled.
7. Save your work.

Defining Freight Carriers

Spares Management provides functionality to specify estimated delivery times for the shipment methods and freight carriers that are used to deliver spare parts. Freight carriers must be defined in Oracle Inventory before delivery times can be set up in Spares Management.

For additional information about defining freight carriers, refer to the Defining Freight Carriers section in the *Oracle Inventory User's Guide*.

Confirming Setup of Order Management

Implement Order Management as described in the Overview of Setting Up section of the *Oracle Order Management User's Guide*.

Field Service Report requires specifically that you setup Price Lists, Units of Measure (UOM), and two Inventory Item Attributes in Order Management. Price Lists contain the list price for an item. Items could be material, but also labor and expenses like units of driving distance. Once material, expense and labor transactions for a task have been taken down on the Field Service Debrief, this information is updated to Charges. In Charges the list price for the item is received from Order Management and is used to generate an invoice for a customer.

Oracle Field Service requires a unit of measure (UOM) for measuring the item, for example, Each or Dozen. The UOM is displayed on the Field Service Debrief in accordance with the item that is selected. After setup of Unit of Measurement for an item, it is displayed automatically in the Field Service Debrief when the item is selected.

The Spares Management module uses Order Management to process internal orders that move across inventory organizations, and pick, pack and shipping processes for internal orders. The two attributes are as follows:

- Internal Ordered Item - Allows an item to be ordered on an internal requisition.
- Internal Orders Enabled - Allows an item to be ordered internally.

Refer to the Item Attributes section of the *Oracle Order Management User's Guide* for additional information about setting these attributes.

Setting Up Price Lists

Perform these steps to create price lists listing prices for items.

Steps

1. Navigate to the Price List Setup page, page A-1.
2. From the Price List setup page, in the Name field, enter a name for the Price list.

3. At Description enter a description of the Price List.
4. The functional currency for your business unit defaults into the Currency field.
5. At Round To enter the rounding factor to be applied in the Price list.
 - A positive number indicates the number of digits to the right of the decimal point.
 - A negative number indicates the number of digits to the left of the decimal point.

The default setting is -2.
6. At Effective Dates enter the start and end date for the Price List to be effective.
7. Select Payment Terms from the list of values.

Examples of options include Collect, Prepaid, Third Party Billing, etc.
8. Select the default Freight Terms and Freight Carriers from the list of values.
9. Click on the List Lines tab.
10. In the Product Context field, select Item.
11. Select Item Number in the Product Attribute field from the list of values.
12. In the Product Value field, select the item number of the item you want to associate with the price list from the list of values.
13. Keep the default values for UOM.
14. Choose an Application Method for the price list for this item.

Acceptable values are as follows:

 - Unit Price or Percent Price for service items.
 - For inventory items or item categories only, Unit Price is used.
15. In the Value field, enter the list price for the item.
16. For service items enter a value at Dynamic Formula and leave Static Formula open.
17. At Start Date and End Date enter the effective date for this item line.

The dates entered should be within the Effective Dates entered for the Price List.
18. At Line Type select Price List Line from the list of values.

19. At Modifier Level select Line from the list of values.
20. Enter a value at Precedence.

This is the product precedence. When the pricing engine is trying to locate a price, it uses Precedence to resolve conflicts when it selects more than one list line from a Price List.
21. Check Primary UOM if this is the primary pricing UOM for this list line item on the price list.
22. Repeat steps 8-20 for each item you want to associate with this price list.
23. Save the Price List.
24. Click the Pricing Attributes button to define pricing attributes.
25. Enter a pricing context in the Product Context column and an attribute in the Product Attribute column.
26. At Operator select = or BETWEEN.
27. At Value:
 - When Operator is BETWEEN, enter To.
 - Otherwise enter From.
28. Save Pricing Attributes.

Please refer to the *Oracle Order Management User's Guide* for additional details in this procedure.

Setting Up Oracle Work In Process

Set up Work in Process (WIP) as described in Overview of Setting Up, *Oracle Work in Process User's Guide*. Make sure that all of the steps described have been reviewed and completed as necessary.

WIP functionality is used along with BOM in Spares Management to create and manage repair orders. The repair order is a key piece of the total Loop Quantity. Without WIP or equivalent functionality, the Spares Management planning process is not complete.

Setting Up Oracle Bills of Material

This is an optional step for Spares Management functionality, which is required only if you have Oracle Bills of Material installed.

Set up Oracle Bills of Material (BOM) as described in Overview of Setting Up, *Oracle*

Bills of Material User's Guide. Make sure that all of the steps described have been reviewed and completed as necessary.

This step is required only if you have Oracle Work in Process installed.

Setting Up Oracle Purchasing

The Spares Management module is dependent on Oracle Purchasing for the following functionality:

- Internal requisitions for processing internal orders for parts that move across inventory organizations.
- Receiving functionality for parts on internal orders.

Set up Oracle Purchasing as described in Overview of Setting Up, *Oracle Purchasing User's Guide*.

Purchasing functionality in Spares Management is used to create and manage new-buy orders. The repair order is a key piece of the total Loop Quantity. Without Purchasing or equivalent functionality, the Spares Management planning process would not be complete.

Setting Up Business Processes

Business Process setup is required to select the service activity codes in Field Service Debrief and to get the order type information for creating orders or returns against debrief lines.

Business processes are also used in the Preventive Maintenance module for service request generation.

A business process groups the service activity codes to restrict the service activity code availability. For example, Oracle has provided an out-of-box Field Service business group that enables the relevant service activity codes. You can update this group because it is not a seeded value.

Steps

1. Navigate to the Service Business Process window, page A-1.
2. Enabling the Service Request flag enables the user to pick this business process when charges are invoked from Service Request.
3. Enabling the Depot Repair flag enables the user to pick this business process when charges are invoked from Depot Repair.
4. Enabling the Field Services flag shows service activity codes for all business processes that have this flag enabled in Field Service Debrief.

Please refer to the appropriate section from *Oracle Service Implementation Guide* for detailed Charges setup.

5. Save your work.

Setting up the Field Service Request and Solution

Field Service begins when customers who have purchased inventory items from an organization, require that the organization repair or replace the item bought as part of the warranty service.

Confirming Setup of Install Base

The Install Base is a repository that contains vital information and details of a service provider's customers, products, and services. The service provider updates all data contained in the Install Base.

Install Base is a component of Oracle Service, it consolidates information for customer products in the Install Base. Each customer product includes the following:

- Customer name and number
- Bill-to location code, address, and contact
- Ship-to location code, address, and contact
- Installation location, address, and technical and administrative contact
- Service Provider
- Any other user-defined contacts

Use the Install Base to track your serviceable and customer products.

Make sure you set up Install Base as described in *Oracle Service Implementation Guide*:

- Confirm the ERP setup
- Confirm Customer Product Status setup
- Confirm Customer Product Types (optional)
- Confirm System Types setup
- Confirm Transaction Billing Types setup
- Confirm Split Product Reasons setup

- Confirm Business Processes setup
- Confirm Customer Product Configuration Types setup
- Confirm profile options setup:
 - Many service options
 - Options to access HTML windows
 - Options for the Install Base Interface concurrent program
- Confirm System Administration menu setup.
- Confirm inventory item setup.
- Test the Install Base Interface concurrent program.

Once the Install base has been set up you maintain it using the Field Service Debrief to report on install base transactions and update Install Base from it.

Make sure the following is setup correctly:

- Confirm Setup of Business Processes

Field Service Debrief displays the transaction types for only those business processes that have the Field Service flag turned on. Oracle provides the following business processes out-of-the-box. (These are not seeded values and therefore the customer can update them.)

 - Field Service
 - Depot Repair
- Confirm Setup of Transaction Billing Types

As mentioned above, transaction billing types with all business processes with the Field Service flag turned on are displayed in the list of values for transaction types on the Field Service Debrief page. This means you can have the same transaction types repeated in the list of values because they can belong to multiple business processes.
- Confirm Setup of Billing Types

Currently three Billing Types are supported by Field Service Report: M (Material), L (Labor) and E (Expense). These are seeded.

Complete the following Oracle Field Service specific setup steps:

- Setting up Business Processes, page 5-23

- Setting up Transaction Billing Types, page 5-32

Confirming Setup of Service Contracts

Oracle Service Contracts is not required. You can create a service request without any service coverage.

When you are using Service Contracts a service contract is associated with a service request. The service contract is associated with the:

- Party
- Account
- System
- Customer Product
- Inventory Item

Select Service Contracts from the Product Coverage tabbed page on the service request window. You can drill down to contract details on the Product Coverage tabbed page.

Please refer to the *Oracle Service Contracts Implementation Guide* for Service Contracts setup.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Contracts Core

The set up of Contracts Core is optional, but when you have installed it, please refer to the *Oracle Contracts Implementation and Administration Guide* for Contracts setup.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Assignment Manager

The set up of Assignment Manager is required because it is used to assign a service representative to a task. It can be used from the service request window and the Oracle Field Service Dispatch Center.

Please refer to the appropriate section from *Oracle Common Application Calendar Implementation Guide* for Assignment Manager setup.

Please ensure the following profile options are set before using Oracle Field Service. The profile options are set at the application level and are unique to Assignment Manager.

Steps

1. Navigate to the Personal Profile Values window, page A-1.

2. Click the Find icon and enter AC% in the Find field.
3. At Profile Name enter AC%.
4. Click Find.

You can set these options in any sequence.

Assignment Manager Profile Options

Step	Profile Option	Description
1	Activate Auto Selection of Resources	To activate auto selection of resources. Default set to: Y (yes).
2	Activate Workflow Name	To activate the workflow plug-in. Default set to: None.
3	Activate Install Base Preferred Resource	To retrieve preferred resource information from the install base application. Default set to: Y (yes).
4	Activate Contracts Preferred Resources	To retrieve preferred resource information from the contracts application. Default set to: Y (yes).
5	Activate Install Base Preferred Engineers	To retrieve preferred engineer information from the install base application. Default set to: Y (yes).

1. Save your work.

Confirming Setup of Service Requests

On the Service Request window, page A-1 all information for a field service visit is captured. Tasks are assigned to this service request and these tasks are assigned to field service technicians.

Make sure you set up the following:

- Service Request Statuses

- Request Severities
- Request Types
- Service Request Urgencies
- Problem Codes
- Resolution Codes
- Message Action Requests
- Call Types
- Call Follow-up Types

Note: If you are using the Preventive Maintenance module, you must create a Request Type of "Preventive Maintenance" and relate it to a Business Process of type "Field Service."

For setup details please refer to the *Oracle Support Implementation Guide*. Also make sure the profile options for Service Request are set.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Knowledge Management

Knowledge Management is used from the Service Request window.

Please refer to the appropriate section from *Oracle Service Implementation Guide* for Knowledge Management setup.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Tasks

The setup of tasks is required to be able to perform a field service visit. You create tasks for service requests that have been logged. In the Oracle Field Service Dispatch Center and Field Service Technician and Administrator Portals you schedule tasks.

Make sure you implement Task Manager as described in *Implementing Task Manager* as part of the *Oracle Common Application Calendar Implementation Guide*.

Perform the following Field Service specific setup steps:

- Set Up Task Status and Transition Rule , page 5-29
- Set Up Task Type, page 5-30

- Set Up Task Priority, page 5-30
- Set Up Task Manager Profile Options, page 5-31

Setting Up Task Status, Transition Rules, and Cross-Task Validation

Set up task statuses to define the task flow. Oracle Field Service comes with a pre-defined task status flow.

For the Preventive Maintenance module, you must define a Task Status of *Confirm*.

Steps

1. Navigate to the Task and Escalation Status window, page A-1.
2. At the Status field enter the name of the Task Status you want to define.
3. At Description enter a brief description of the Task Status you are defining.
4. At From and To enter the date for the Task Status to be effective.
5. Check the task status flags you want to assign to the Task Status.

For more information on the task status flags, see the Defining Task Statuses and Status Transition Rules section of the Oracle Common Application Calendar Implementation Guide.

Note: Make sure to select the Schedulable check box to be able to schedule a task in Oracle Field Service.

6. Optionally, enter validation start and end dates for the status for which you want to set cross-task validations and check the Enforce Validation check box. For more information, see Cross-task Validation for Task Assignment Status Updates in the *Oracle Field Service User Guide*.
7. Optionally, define the transition values to determine user privileges for each status type by clicking Define Transition.

When the Status Transition window opens, from within the Rule tab, query the Applications field for Field Service.
8. In the Current State field, select the task status that you want to set a transition for. (For example, Open).
9. In the Next State field, select the task status that you want the Current State that you selected to transition to. (For example, Closed).
10. Repeat this process for each status you want to set a transition status for, such as

Cancelled, Reject, Complete, Assigned, and so on.

11. Save the Task Status.

Setting Up Task Type

Set up task types to make a task qualify as a Field Service task so it can be scheduled.

Steps

1. Navigate to the Task Types window, page A-1.
2. In the Task Types window, at the Type field enter the name of the Status Type you want to define.
3. At Rule select Dispatch from the list of values.

Note: For a task to qualify as a field service specific task the Rule has to be set to Dispatch.

4. At From and To enter the date for the Task Type to be effective.
5. Select an UOM (Unit of Measurement) to go with the Task Type.
6. Check the task type flags you want to assign to the Task Type.

For more information on the task types flags, see the Defining Task Types section of the Oracle Common Application Calendar Implementation Guide.

7. Save the Task Type.

Setting Up Task Priority

Set up task priorities.

Steps

1. Navigate to the Task Priority window, page A-1.
2. In the Task Priority window, enter the name of the Status Priority you want to define in the Priority field.
3. At Importance enter a numerical value between 1 and 4.
In this field, 1 is highest priority and 4 is the lowest.
4. At Description enter a brief description of the Task Priority you are defining.
5. At From and To enter the date for the Task Priority to be effective.

6. Save the Task Priority.

Setting Up Task Manager Profile Options

Several Task Manager profile options need to be set before creating a task. It is not possible to save a task when the profile options aren't set.

Steps

1. Navigate to the Personal Profile Values window, page A-1.
2. Open the Find Personal Profile Values window.
3. At Profile Name enter Task Manager%.
4. Click Find.
5. Enter User values for the following seven profile options returned from a list of 11:
 - Task Manager: Default Priority
 - Task Manager: Default Task Status
 - Task Manager: Default Task Type
 - Task Manager: Default task owner
 - Task Manager: Delete Any Task Privilege
 - Task Manager: Owner type for a task
 - Task Manager: View All Tasks

Please refer to the Oracle Common Application Calendar Implementation Guide for more information on the profile options.

Confirming Setup of Escalation Management

An escalation management system enables an organization to identify, track, monitor, and manage situations that require increased awareness and swift action. Escalation Management is offered as an integrated part of the Field Service Dispatch Center.

Escalation Management features include:

- Escalation situation tracking information
- Service Request, Task, and Defect linking capability
- Ownership assignment based on escalation territory
- Resolution plan definition with associated tasks and notes

- Automatic notification of escalation progress to identified contacts
- De-escalation and closure

Please refer to the appropriate section from *Oracle Common Application Calendar Implementation Guide* for Escalation Manager setup.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Notes

Notes provide a text area where you can enter information about a customer, product, service, or anything related to the service report that may be helpful for other service technicians or customers. After you create a note, it can be attached to a task, sent to the customer, or submitted to the Knowledge Base for reuse. You can access Notes from Field Service Debrief.

Please refer to the appropriate section from *Oracle Common Application Calendar Implementation Guide* for Notes setup and to define source types.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Interaction History

Oracle Interaction History tracks all customer-agent interactions and serves as a repository for the interaction data. You can view the interaction data as well as the Oracle CRM application data associated to the interaction. You can access interactions from Field Service Debrief.

Please refer to the appropriate section from *Oracle Customer Interaction History Implementation Guide* for Interaction History setup.

No additional Field Service specific setup steps are necessary.

Setting Up Transaction Billing Types

Setup for transaction billing types is required in Field Service to update the Install Base and Charges. It is used to determine:

- How Service and Order Management transactions affect the Install Base.
- What kinds of charges transactions taken down on the Field Service Debrief can be created.

The Transactions Billing Type window is used to define transaction types and associate billing types (labor, material, and expenses) to them.

The Oracle Field Service application comes with the following predefined transaction billing types. They are seeded values provided out of the box, and they cannot be deleted.

- Autocreate System
- Expense Transaction
- Labor Transaction
- Material Transaction
- New
- Product Upgrade
- Replacement
- Revision Update

For step-by-step details, see the Set Up Billing Types and Service Activity Codes section in the following chapter.

Confirming Setup of Charges

Oracle Field Service requires the setup of Charges to be able to create Orders and Return Material Authorizations for an Install Base product. Charges also consolidates the service billing information to generate the final invoice to the customer through Order Management. All this information is taken down on the Field Service Debrief. You update Charges from the Field Service Debrief.

Please refer to the appropriate section from *Implementing Oracle Service* for Charges setup. Make sure the following has been set up:

- Set Up Order Type
- Set Up Line Type
- Define Currency
- Define Currency Type
- Define Currency Conversion Type
- Define Coverage Template
- Define Contracts
- Profile Options for Order Capture and Order Management

No additional Field Service specific setup steps are necessary.

Field Service Implementation Tasks

This chapter describes the implementation tasks for Field Service-specific tasks, including setting up the Dispatch Center, and Debrief.

This chapter covers the following topics:

- Field Service Implementation Task Summary
- Creating Field Service Territories
- Setting Up Skills Management
- Setting Up Internal Field Service Resources
- Setting up Third Party Field Service Resources
- Generating Field Service Trips
- Activating Automatic Commitment of Tasks
- Setting up the Technician and Administrator Portals
- Setting up the Field Service Dispatch Center
- Setting Up the Map

Field Service Implementation Task Summary

The following checklist shows the recommended order to implement the Oracle Field Service Suite of products. This includes Field Service, Spares Management, and Advanced Scheduler. Complete the following implementation steps in sequential order:

Field Service Suite Implementation Task Sequence

1. Create Field Service Territories, page 6-3

Before you can set up technicians and dispatchers you need to create field service territories.

2. Set up Skills Management, page 6-10

Define skills, skill levels, and the scales used in managing field service technicians' skills, and for assigning tasks to technicians that have the right skills.

3. Set Up Field Service Technicians and Dispatchers, page 6-13

To launch the Field Service Dispatch Center you need to set up the following resources: field service dispatchers and field service technicians.

4. Set Up Third Party Field Service Resources, page 6-31

To launch and use the Field Service Third Party Portal, you must set up third party service providers, third party administrators, and third party technicians.

5. Generate Field Service Trips, page 6-33

Use this Field Service concurrent program to create departure and arrival tasks for internal field service representatives based on their work shifts. Departure and arrival tasks are used for scheduling.

6. Activate Automatic Commitment of Schedules, page 6-39

Use this procedure to commit schedules at predefined intervals to service technicians automatically (without dispatcher intervention).

7. Set Up Technician and Administrator Portals, page 6-41

Define material, labor, and expense justification lookup codes that are used in Field Service Debrief and reviewing and correcting debrief. Set up multiple service activity codes for billing types used in debrief and post-debrief activities. In addition, set up the ability to capture and approve electronic records.

8. Set Up the Field Service Dispatch Center, page 6-58

Set up color coding for tasks viewed in the Dispatch Center so dispatchers can quickly identify task requirements. Optionally, customize the display of task attributes in the tasks list table of the Dispatch Center, and the icons and text displaying information on task bars in the Scheduling or Gantt Chart so the dispatcher can quickly identify tasks that need attention. In addition, set up task owner context for dispatchers to oversee tasks owned by other dispatchers who may be on leave.

9. (Optional) Setting up the Map, page 6-62

A map and eLocation services are available to the user as part of Field Service. The Map display is supported by the MapViewer which is part of Oracle 9iAS. In addition, you can register with Google Inc. to use Google maps, upload multiple spatial datasets for more accurate and wider coverage of geocoding and time and distance calculations, and use GPS for better task and technician tracking.

10. (Optional) Setting Up Oracle Spares Management

For information, see *Setting Up Oracle Spares Management* in this guide.

Set up and enable the Spares Management module.

11. (Optional) Set Up Oracle Advanced Scheduler

For information, see *Setting Up Oracle Advanced Scheduler* in this guide.

Oracle Advanced Scheduler is an optional module used to enhance scheduling capabilities.

12. (Optional) Preventive Maintenance Setup Summary

For information, see *Preventive Maintenance Setup Summary* in this guide.

Set up the Preventive Maintenance functionality.

Preventive Maintenance Task Sequence

For the Preventive Maintenance implementation task sequence, see Implementation Task Sequence for Preventive Maintenance in the *Oracle Field Service Implementation Guide*.

Advanced Scheduler Task Sequence

For the Advanced Scheduler implementation task sequence, see Oracle Advanced Scheduler Implementation Task Sequence in the *Oracle Field Service Implementation Guide*.

Creating Field Service Territories

The process to create a new field service territory is a multiple step process. Use these procedures to create a field service territory:

1. Create a new field service territory., page 6-4
2. Run the Synchronize Territory Assignment Rules Program., page 6-9

For additional information about creating territories, see *Confirming Setup of Territory Manager* in the *Oracle Field Service Implementation Guide*.

Creating Field Service Territories

Steps

To Create Territory Details

1. Navigate to the Territories page, page A-1.
The Territory Manager: Territories page appears.
2. Select an Operating Unit, Usage, and whether you want to view all territories for the operating unit or only those territories active on a specific date. Then click Go.
All the territories matching the search criteria appear in a table in the lower region of the page.
3. Expand the Organization node that you want to work with. Click the + next to the node.

Note: Define a territory type template that you want to use for a territory.

Territories already created for this organization display under the node.

4. Click Territory Type tab. The Territory Types page appears.
5. Click Create. The Create Territory Type page appears.
6. Select an Operating Unit and Usage.
7. Enter the Name for the Territory Type.
For example, enter the Spares%Routing% to use the Spares Management Return Routing seeded territory type template.

Note: The Spares Management Return Routing seeded territory type template is used to define return routing rules to display the destination location in Parts Returns page.

Refer to the Overview: Parts Return section in the *Oracle Spares Management User Guide* for more information.

8. Click Apply.
9. Click Territories tab. The Territories page appears.
10. Determine where you would like to create the new territory in the organization structure. Expand the nodes as necessary.

11. Select the Select radio button next to the node where you want to add a territory and click Create.

The Create Territory: Select Territory Type page appears.

12. Select the territory type and click Continue.

The Create Territory: Enter Details page appears.

Note: This page displays the predefined territory types and the types that you have created using the qualifiers that meet your requirement. See *Enabling Matching Attributes in Oracle Territory Manager Implementation Guide* and *Creating Territory Types in Oracle Territory Manager User Guide*.

13. Enter these fields on this page:

Page Element	Description
Territory Name	Enter a name for the territory.
Description	Enter a description for the territory.
Rank	Select a rank in context with the other territory ranks. The ranking helps determine which territory resource wins an assignment when the task fits the territory qualifications of more than one territory.
Winners	Enable only at the parent level

14. Click Next.

The Create Territory: Assign Resources page appears.

To Assign Resources to the Territory

15. Click Add Another Row.

16. Enter these fields on the Assign Resources page:

Page Element	Description
Resource Type	<p>Select a resource type. Values are:</p> <ul style="list-style-type: none"> • Individual • Group • Team <p>Individual, Group, and Team resources can all be used as resources for a territory.</p>
Resource	Select the resource name.
Service Request and Task	<p>Select the access type. Values are:</p> <ul style="list-style-type: none"> • Default • Escalation Resource • Escalation Owner • None • Team Leader <p>Default appears by default for this field.</p>
Service Request	<p>Select the access type. Values are:</p> <ul style="list-style-type: none"> • Default • Escalation Resource • Escalation Owner • None • Team Leader <p>Default appears by default for this field.</p>

Page Element	Description
Task	<p>Select the access type. Values are:</p> <ul style="list-style-type: none"> • Default • Escalation Resource • Escalation Owner • None • Team Leader <p>Default appears by default for this field.</p>

17. Click Next

The Create Territory: Define Geography page appears.

To Define the Geography for the Territory

18. In the Geographies section (first group box), select the Name. Values are:

- City
- Country
- Postal Code
- Province
- State

To add another name, click Add Another Row and select another name.

19. In the Attribute Values section for the Name, enter the attribute value by selecting a Condition and then specifying the value. The Condition field varies by the Name attribute.

For example, if Postal Code is the Name. You could enter the attribute value of the condition being Between 95100 and 97100.

To add another attribute value click Add Another Row, and enter the new condition attribute.

20. Click Next.

The Create Territory: Add Matching Criteria page appears.

To Add Matching Criteria

21. In the Additional Matching Attributes section (first group box), select a Name.
Values are:

- Customer Name
- Contact Preference
- Group Owner
- Inventory Item
- Platform
- Problem Code
- Product
- Product Category / Product
- Request Creation Channel
- Request Severity
- Request Status
- Request Type
- Request Urgency
- Service Contract Coverage
- Service Item
- Service Request Language
- Task Priority
- Task Type

To add additional matching attributes, click Add Another Row and select another name.

22. In the second group box (attributes value) select the condition and value for the attribute.

For example, if the matching attribute name is Task Type you could then enter a condition of Is equal to Dispatch.

23. Click Finish.

The system will return you to the Territories page where you can view the new territory in the territory tree structure. You will receive a confirmation message that the territory has been created at the top of the page.

24. Close the Territory Manager.

Running the Synchronize Territory Assignment Rules Program

After you create a new territory you will need to run the Synchronize Territory Assignment Rules program so that the system will pick up the changes made to territories.

Steps

Running the Synchronize Territory Assignment Rules Program

1. Navigate to the Find Requests window, page A-1.

The Find Requests window appears.

2. Click Submit a New Request.

The Submit a New Request window appears.

3. Select the Single Request option and click OK.

The Submit Request window appears.

4. Enter Synchronize Territory Assignment Rules in the Name field.

5. Select these parameters:

- A Usage of Service.
- A Run Mode of Total Refresh.

6. Click OK and then Click Submit.

A Decision window appears.

7. Click No.

Monitor Completion of the Concurrent Program

8. Select the All My Requests option.

9. Click Find.
All the concurrent program requests are listed.
10. Monitor the request till it changes to a status of Completed. Click Refresh until the request is completed
11. Close the Requests window.

Setting Up Skills Management

To effectively manage Field Service technicians skills, and assign tasks to technicians that have the right skills, you must define the skills, skill levels and the scales to use.

Skills fall into three major categories: product skills, other technical skills, and non-technical skills. The skill level indicates the expertise scale of the Field Service technicians skill. For example, expert, trainee, and experienced could be skill levels.

The following topics are covered in this section:

- Set Up Rating Scales and Skill Levels, page 6-10
- Define Skills Types and Skills, page 6-12

Once you have set up rating scales and skill levels, defined skills sets and skills, you can add skills to a resource and assign skills to a task. For more information on assigning skill to technicians, see *Assigning Skills and Skill Levels to Technicians*, page 6-26 For more information on assigning skills to tasks, see *Assigning Skills to Tasks*, *Oracle Field Service User Guide*.

Setting Up Rating Scales and Skill Levels

You can define multiple skill scales, which you can use when you are creating skill sets and skills. There are two seeded scales in Field Service:

Rate Scales and Skill Levels

Scale Name	Seeded Skill Levels
Field Service Standard	Trainee, Standard, Expert
Field Service Extra Scale	Low, Moderate, High

You might want multiple rating scales available for your Field Service operation if you have a large technician force with a variety of skill levels for the tasks you perform. Or, you may already have a rating system in place in your operation, which uses different values than those seeded here. In any case, Field Service enables you to set up as many

rating scales as you need.

Note: You can add your own skill levels to those in the seeded scales.
Note that once you add a skill level, you cannot delete it.

After you have defined your rating scales and skill levels for each scale, you use the rating scales when you are creating the Skills Sets. For more information, see Define Skills Types and Skills, page 6-12.

Steps

Use this procedure to set up a new rating scale:

1. Navigate to the Skill Management window, page A-1.
2. Select the Skill Levels tab and open a new window.
Place cursor in Name field and click New button from menu tool bar.
3. In the Rating Scale section, enter a Name for the rating scale.
4. (Optional) Enter a Description.
5. The current date appears by default in the From date. You can change this, if needed.
6. (Optional) If you want to inactivate a Rating Scale, enter a To date in the Rating Scale section.
If you want the Rating Scale to be available indefinitely, leave the To date blank.
7. To set the skill levels for the rating scale, in the first line of the spread table in the Levels section, enter a numerical value in the Order field.
This number determines what order the skill levels will appear in the list of values.
8. In the Name value, enter the word or words you want to represent the skill level in the list of values.
(For example: trainee, expert, top, gold level, and so on.)
9. (Optional) Enter a brief description of the skill level.
10. The current date appears by default in the From date for the level. You can change this date, if necessary.
11. (Optional) If you want to inactivate a particular skill level within a Rating Scale, enter a To date in the field next to the skill level you want to inactivate.
12. Repeat steps 7-11 for each skill level you want to associate with this rating scale.

13. Save your work.

Defining Skill Types and Skills

Skills are the Field Service technicians competencies. Skills fall into three major categories: product skills, other technical skills, and non-technical skills. For product skills, you can set up skills at both the product and product category levels. You can set up skill types and then populate them with specific skills, which will enable a dispatcher to make informed decisions when assigning technicians to tasks, or when assigning particular skill requirements to a task that has yet to be scheduled.

To illustrate this concept, consider the following scenario: Your Field Service operation services computer systems, hardware, software, networking, and so on. A potentially useful skill type could be named "Operating Systems," which you would assign to those technicians who are competent in servicing operating systems. Furthermore, you may service customers using a variety of operating systems. So you might want to add the following values to your skill type: Windows NT, Mac, Windows 2000, Solaris, and so on

You can set up as many skill types with related skills as needed for your Field Service operation.

Prerequisite

Rating Scales must be set up, if you are using anything other than the default.

Steps

Use this process to set up skills and skill types:

1. Navigate to the Skill Management window, page A-1.
2. Select the Skills tab and open a new window.
Place cursor in Name field and click New from the menu tool bar.
3. In the Skills Type section, enter a name for the skills type.
4. (Optional) Enter a Description.
5. In the Use Scale field, select the rating scale that you want to use when assigning skills to a resource.

The rating scale you select will determine the list of values available for assigning skills to a resource or a task. For details on Rating Scales, see Setting Up Rating Scales and Skill Levels., page 6-10
6. The current date appears by default in the From date. You can change this date, if necessary.

7. (Optional) Enter a To date.
You can enter a To Date if you want to end the use of a particular skill type.
8. In the Skills section spread table, enter a Skills Name on the first line.
This name should reflect a skill related to the Skill Type it is associated with.
9. Enter a Description of the Skill.
10. (Optional) Enter an Alias for the skill.
11. The current date appears by default in the From date. You can change this date, if necessary.
12. (Optional) Enter a To date.
You can enter a To Date if you want to end the use of a particular skill.
13. Repeat steps 8-12 for each skill you want to associate with the Skill Type.
14. Save your work.

For more information refer to Understanding Skills Management, .

Setting Up Internal Field Service Resources

To use the Field Service applications you must set up Field Service technicians and dispatchers. Field Service technicians are defined with the Field Service Representative role and dispatchers are defined with the Field Service Dispatcher role. The process to set up a technician or dispatcher entails multiple procedures.

It is optional to define Field Service technicians as employees. For example, a supplier contact is not an employee. However, you must define supplier contacts with the Field Service Representative role as resources in the Resource Manager to be able to assign tasks to them.

Setting Up Technicians That Are Employees

Use these procedures to set up technicians that are employees of your organization.

1. Create an Employee Resource, page 6-15
2. Create an Applications User ID., page 6-17
3. Import the Field Service Employee and Supplier Contact Into the CRM Resource Manager., page 6-18
4. Assign the Resource to a Calendar., page 6-20

5. Assign the Resource to a Territory., page 6-21
6. Run the Synchronize Territory Assignment Rules Program., page 6-9
7. Run the Generate Field Service Trips Program., page 6-33
8. Assign Spares Addresses and Subinventories to the Resource., page 6-22
9. Assign Skills and Skill Levels to the Resource., page 6-26

Setting Up Supplier Contacts (Non-Employees) as Technicians

Use these procedures to set up a supplier contact as a technician that is not an employee of the organization.

1. Create Supplier Contacts (Non-Employee Resources), page 6-17
2. Import the Field Service Employee or Supplier Contact Into the CRM Resource Manager., page 6-18
3. Assign the Resource to a Calendar., page 6-20
4. Assign the Resource to a Territory., page 6-21
5. Run the Synchronize Territory Assignment Rules Program., page 6-9
6. Run the Generate Field Service Trips Program., page 6-33
7. Assign Spares Addresses and Subinventories to the Resource., page 6-22
8. Assign Skills and Skill Levels to the Resource., page 6-26

Setting Up Dispatchers

Setting up a dispatcher requires several procedures. Use these procedures to set up a dispatcher:

1. Create a Human Resources Employee Record., page 6-15
2. Create an Applications User ID., page 6-17
3. Import the Field Service Employee or Supplier Contact Into the CRM Resource Manager., page 6-18
4. (Optional)

Assign Dispatcher Role and Role Type to Resource., page 6-26

Use this procedure if you did not define the role and role type during the import

process.

5. Add the Dispatcher Resource Record to a Planner Group., page 6-28
6. Assign Territories to Planner Groups., page 6-29
7. Associate Territories to a Dispatcher., page 6-30

Creating an Employee Resource

Field service technicians can be employee resources but they don't have to be. However, you must define field service technicians as resources to be able to assign tasks to them.

Field service dispatchers are employee resources.

There are two options for creating employees:

- From the Human Resources application.
- From the Resource Manager application.

Navigation: (Field Service Administrator: CRM Foundation > Resource Manager > Maintain Employee > Employee)

When Human Resources is installed you cannot create employees from the Resource Manager. You will be able to maintain your employees from Resource Manager once they have been created in Human Resources.

Use this procedure to create employee records in the Oracle Human Resources application:

Prerequisites

- User ID (Navigator path: System Administrator: Security > User > Define)
- Responsibilities (Navigator path: System Administrator: Security > Responsibility > Define)
- Groups (Navigator path: Field Service Administrator: CRM Foundation > Resource Manager > Maintain Resources)
- Role Types (Navigator path: Field Service Administrator: CRM Foundation > Resource Manager > Setup > Role Types)
- Roles (Navigator path: Field Service Administrator: CRM Foundation Resource Manager > Setup > Roles)

For more information about setting up any of these items, see *Confirming Setup of Resources and Confirming Setup of Employees* in the *Oracle Field Service Implementation Guide*.

Steps

1. Navigate to the People window, page A-1 of the Human Resources application.
The Find Person window appears.
2. Click New.
The People window appears, ready for creating a new record.
3. Enter the Name and select a Gender.
The current date appears by default in the From Effective Date field.
4. Select Create Employment from the Action list of values.
The Person Types window appears.
5. Select Employee from the Person Type list of values, and then click OK.
6. Enter the social security number. This is required in the US HRMS application.
The current date appears by default in the Latest Start Date field.
7. Enter the Birth Date for the employee under the Personal tab (DD/MMM/YYYY).
This is required in the US HRMS application.
The system calculates and displays the age in the Age field.
8. To save the record, click Save from the Tool bar, or select File > Save from the Menu.
The system displays the employee identification number that is created in the Identification field.
9. (Optional) To enter an address, click Address.
The Address window appears.
10. Enter the address number, street, city, state, and zip code.
11. Save your work.
12. Close the Address window.
13. (Optional) To enter an assignment, click Assignment on the People window.
The Assignment window appears.
14. Select the Organization, Group, and Job for the employee.
15. Select the Supervisor tab and select the Supervisor Name.
16. Save your work.

Guidelines

To synchronize modifications made to the employee data in Human Resources, you will need to run the Synchronize Employees concurrent program. The changes made in either Human Resources or Resource Manager are synchronized when they originate from the Human Resources application.

Creating an Applications User ID

Use this procedure to create an Application User ID for a field service technician employee or a dispatcher employee.

Steps

1. Navigate to the Users window, page A-1.
2. Enter the applications User Name and Password.
The password must be at least 5 characters long and you must enter it twice to verify.
3. Select the Direct Responsibilities tab.
4. Select the responsibility for the user.
 - For field service technicians select Field Service Representative.
 - For dispatchers select Field Service Dispatcher.
5. (Optional) Enter password expiration parameters and enter other information such as person name, email, and fax.
6. Save your work.

Creating Supplier Contacts (Non-Employee Resources)

When you are working with supplier contacts that aren't employees of the company use this procedure to create supplier contacts. The supplier contacts need to be defined as resources with the field service representative role assigned to appear in the Field Service Dispatch Center. The assignment of the field service representative role is performed when importing the supplier contact into the CRM Resource Manager.

For more information on creating a supplier with contacts, see the *Oracle iSupplier Portal User's Guide*.

Steps

1. Navigate to the Supplier page, page A-1.
The Suppliers page appears.

2. Click Create Supplier.
The Create Supplier page appears.
3. Select Standard supplier as the Supplier Type.
4. Enter the supplier name in the Organization Name field.
5. Enter any other pertinent information for the supplier and click Apply.
The Update: Quick Update page appears for that supplier.
6. Click the Address Book link in the left hand menu.
The Update: Address page appears.
7. Enter the Address Details and the Contact Details and Purpose for the supplier.
8. Click Continue.
The Create Address: Site Location page appears.
9. Select the Select check box next to the Site Name and click Apply.
The Update: Address Book page appears and displays a confirmation message that the address has been added to the address book. Plus, the address appears in the Address table.
10. Click the Contact Directory link in the left hand menu.
Update: Contact Directory page appears.
11. Click Create.
The Create Contact page appears.
12. Enter the contact name and telephone numbers.
13. In the Addresses for Contact region click Add Another Row.
14. Select an address name from the Address Name list of values.
15. Click Apply.
The Update: Contact Directory page appears and displays a confirmation message that the contact has been added. Plus, the contact appears in the Contact table.

Importing the Field Service Employee or Supplier Contact into the CRM Resource Manager

Use this procedure to create technician or dispatcher resources in Oracle Customer

Relationship Management by importing the Oracle Human Resources employee record created in the *Creating Human Resource Employee Records* procedure.

For supplier contacts you will import the supplier contacts created in the *Creating Supplier Contacts (Non-Employee Resources)* procedure.

Prerequisites

- For employee resources, set up the employee record in the Oracle Human Resources application.
- For supplier contacts, set up the supplier with contacts in the Oracle Purchasing application.

Steps

1. Navigate to the Select Resources to Import window, page A-1.
The Select Resources to Import window appears
2. Select the Resource Category you want to import.
For employee resources (technicians and dispatchers), select Employee from the list of values. Employee appears by default.
For supplier contact resources, select Supplier Contact from the list of values.
3. Enter the selection criteria and click Search.
For employees, enter the employee Name or Number.
For supplier contacts, enter Supplier name, Address, and supplier contact Name.
The employee name or supplier contact name displays in the Search Results table.
4. Select the check box corresponding to the employee or supplier contact record to be imported, and then click Start Import.
The Set Resource Attributes window appears.
5. Select the Role for the resource.
 - For technicians select Field Service Representative.
You will want to select this role for supplier contacts as well.
 - For dispatchers select Field Service Dispatcher.
6. Click OK.
The Review and Import Selected resources window appears, with the resource listed in a table.

7. Click Save Resource.

The Note window appears, with the message: The selected resources have been imported successfully.

8. Click OK.

Assigning the Resource to a Calendar

Use this procedure to assign field service technicians to a calendar:

Prerequisites

- A field service technician has already been created in the CRM Resource Manager.
From this point forward, a supplier contact or field service employee are now both considered field service technicians (resources).

- A calendar has already been created.

For information on creating a calendar, see Confirming Setup of Calendar in the *Oracle Field Service Implementation Guide*.

Steps

1. Navigate to the Assign Resources window, page A-1.
The Assign Resources window appears.
2. Query and find the calendar you want to associate with the field service technician.
3. Place the cursor in the Resources table and click the New icon (located in tool bar menu).
4. Enter this information:

Window Element	Description
Type	Select the resource Type from the list of values. Select Employee Resource for employee technicians. Select Supplier Contact for supplier contact technicians.
Name	Select the name of the field service technician resource.

Window Element	Description
Primary Calendar Flag	Select Yes to indicate this is the primary calendar for this technician.
From Effective Date	The current date appears by default.

5. Save your work.

Assigning Technician Resources to a Territory

Use this procedure to assign a field service technician resource to a territory:

Prerequisites

- A field service technician has already been created in the CRM Resource Manager.
- A territory has already been created.

For information on creating a territory, see *Confirming Setup of Territory Manager in the Oracle Field Service Implementation Guide and Creating Field Service Territories.*, page 6-4

Steps

1. Navigate to the Oracle Territory Manager, page A-1.
The Territory Manager appears displaying the Territories tab.
2. Select an Operating Unit, Usage, and whether you want to view all territories for the operating unit or only those territories active on a specific date. Then click Go.
All the territories matching the search criteria appear in a table in the lower portion of the page.
3. Expand the nodes until you locate the territory where you want to assign the field service technician.
4. Select the Select radio button next to the territory and click Update.
The Update Territory: Enter Details page appears.
5. Click Next.
The Update Territory: Define Role Access page appears.
6. Click Add Another Row under the Resource table.

7. Enter this information:

Page Element	Description
Resource Type	Select Individual as the resource type. You will select Individual for supplier contacts as well. For Field Service, only individual resources can be used, since Advanced Scheduler only recognizes this type of resource to assign a task.
Resource	Select the field service technician resource name.
Start Date	The current date appears by default.
End Date	The current date plus one year appears by default.
Service Request and Task	Select the access type from the list of values.
Service Request	Select the access type from the list of values.
Task	Select the access type from the list of values.

8. Click Finish.

After you modified a territory you will need to run the Synchronize Territory Assignment Rules concurrent program. Running this program updates the system with the changes.

Maintaining Technician Addresses and Sub-Inventories

A field service organization may have hundreds or thousands of field service technicians that require shipment of parts for either replenishment or task requirements. The Resource Addresses and Subinventories window provides an efficient method for creating, changing, and viewing field service technician trip start location, ship to addresses and sub-inventories.

- The address marked as the default trip start location will be honored by the Generate Trips concurrent program while generating trips for the technician.
- The addresses defined in this window appear in the list of values for the ship to

address when ordering parts in the Parts Requirement window.

- The subinventories defined in this window appear in the list of values for the field technicians subinventories when you order parts in the Parts Requirement window.
- The subinventories defined in this window appear in the list of values for the field technicians subinventories when you are entering a material transaction in Field Service Debrief.

You can assign an owner for the subinventory, if needed. This feature can be used when more than one field technician shares a subinventory and one person needs to be assigned as an owner to be responsible for managing excess parts. When an owner is assigned, an organization and subinventory for returning the excess parts is also assigned.

Prerequisites

- Field service technicians are set up as employees or supply contact resources.
- Sub-inventories are defined.
- Oracle Spares Management is installed and set up.

Steps

Defining Default Trip Start Locations, Resource Addresses, and Subinventories:

1. Navigate to the Resource Addresses and Subinventories window, page A-1.
2. Select the appropriate resource type from the Resource Type list of values.
Select Employee Resource for field service employees technicians or Supplier Contact for supplier contact technicians.
3. Select a field technician name from the Resource Name list of values. The list of values only displays the field technicians who have been assigned to the Resource Type you selected.

The Phone, Email, Start Date and End Date information for the field technician is displayed if these fields have been populated in Oracle HRMS.

The Addresses tab appears by default.
4. Select an address style for the appropriate country from the Address Style list of values.
5. Tab to the Address field to open the Location Address window. Enter the details for the ship to address and then click OK.

6. If you want this address to become the default address for this field technician, select the Primary Address check box. You can set only one address as the primary address and you must have one primary address.
7. You can define additional addresses for this field technician by adding more address lines.

You can optionally select one of the addresses as the default trip start location, by checking the corresponding check box.
8. Select the Subinventories tab to associate one or more subinventories to this field technician. The Scheduler uses the usable sub-inventory to determine technician parts availability.
9. Select an inventory organization from the Organization list of values.
10. Select a subinventory name from the Subinventory list of values. The list of values displays only those subinventories which have been defined for the organization you selected.
11. You can select a value of Usable or Defective in the Condition field if the condition has not been defined in the parts loop. If the condition for this subinventory has been defined in the parts loop, this condition defaults in this field and cannot be updated.
12. Select the Default check box if you want this subinventory to be used as the default subinventory for this field technician. Only one subinventory for each Condition Type can be designated as the default subinventory for this field technician. You must define one usable subinventory as the default.
13. The Start Date defaults to today's date. You can override this date with a future date, if needed.
14. The End Date field is used to inactivate a subinventory assignment.
15. If you select the Owner check box, the field technician name is assigned as the Owner Name for this subinventory. Each subinventory can have only one owner.
16. Assigning an owner enables the Organization and Subinventory fields in the Return region so you can specify the subinventory for returning excess parts. This location may or may not be the same location as the subinventory you are assigning the field technician. This subinventory must be of the same Condition Type as the source subinventory.
17. You can assign multiple subinventories to a field technician. You can assign subinventories from more than one organization to a field technician.

Note: Note that the address of the resource subinventory is not picked up from the resource address. You must enter this manually.

18. Save your work.

Viewing Technician Addresses and Sub-Inventories

1. Navigate to the Resource Addresses and Sub-inventories window, page A-1.
2. To query a new resource, from the tool bar, choose Query By Example > Enter, and then enter a partial value for the Resource Type or Resource Name.
3. Navigate to Query By Example, and select Run.

The window populates with the resource information. There are two tabs of information: Addresses and Sub-inventories.

Changing Technician Addresses and Sub-Inventories

You can add, delete, and update information.

4. In the Addresses tab, you can configure the Address style (by country) and create the address, the time zone, and whether this is the primary address. You can also make an existing address inactive.
5. In the Sub-inventories tab, you can select sub-inventories to assign to the resource. You can also select the start and end date and the condition for the sub-inventory.
 - The technician can have multiple sub-inventories assigned or the sub-inventory can have multiple technicians assigned. Normally a technician has two sub-inventories assigned. One for usable parts and one for defective parts.
 - The condition of the sub-inventory, usable or defective, can also be assigned if not previously defined.
 - The owner of the sub-inventory can also be defined. When the sub-inventory has more than one technician assigned, the owner administers the sub-inventory for excess returns processing.
 - The district the technician is assigned to can also be defined. The district is primarily used for DBI reporting.
 - The return to organization and sub-inventory can be defined

for both excess and defective returns. These fields are used in the excess and defective returns process to facilitate the creation of return orders.

6. Save your work.

Assigning Skills and Skill Levels to Technicians

If a task has skills assigned, Oracle Advanced Scheduler can take these skills into account when searching for resources to perform the job. Use this procedure to assign skills and skill levels to resources.

Prerequisites

Skills and skill levels have already been defined.

For information on defining skills and skill levels, see *Setting Up Skills*, page 6-10

Steps

1. Navigate to the Field Service Dispatch Center window, page A-1.
The Field Service Dispatch Center window appears.
2. Select either the Plan Board or Gantt view of the Dispatch Center window.
3. Right-click the Resource Name of the technician, and then select Resource Skills Management from the right-click menu.
The Skill Management window for the selected resource appears.
4. From the Skills block, select a skill such as Product, Product Category, or Language from the Type LOV.
5. Select the skill name from the Name LOV.
6. Select the skill level from the Skill LOV.
7. Save.

For more information refer to *Understanding Skills Management*, .

Assigning Role and Role Type to the Resource

After importing the employee record from Oracle Human Resources, use this procedure to add role type, role, and application user ID to the new dispatcher's or technician's record. You can configure roles for resources using the CRM Foundation Resource Manager.

Important: Use this procedure only if you did not specify the role and role type for the resource during the import process.

Prerequisites

- The dispatcher's and technician's user ID are set up. (Navigation path: System Administrator: Security > User > Define)
- The dispatcher's and technician's employee record has been imported from Human Resources.

Steps

1. Navigate to the Resource window, page A-1.
The Find Resources window appears
2. Query the Employee Resource Record. Choose Employee from the Category list of values. Enter the name, or a partial value in the Name field, and then click Find.
The Resource Search Results window appears.
3. Select the employee.
The Resource window header populates with information set up for this employee.
4. In the User Name field, enter the application user ID. This User ID is same as the prerequisite setup, which is created for this Field Service employee by the System Administrator (System Administrator: Security > User > Define).

Important: This association to the user ID is done explicitly (not automatically based on prerequisite setup by the System Administrator). When this dispatcher launches the Dispatch Center, the selected territories for this dispatcher are stored in a table against their user ID.

5. On the Roles tab, in the Role Type column, for dispatchers enter Field Service Dispatcher and for technicians enter Field Service Representative, or the equivalent role type set up during implementation.

Note: For third party administrators and technicians enter the role type of Third Party.

6. On the Roles tab, in the Role column, enter 'Field Service Dispatchers', or the equivalent role set up during implementation.

Note: For third party administrators and technicians, enter the role Third Party Administrator or Third Party Technician.

7. Save your work.

Adding the Dispatcher Resource Record to a Planner Group

Create field service planner (dispatcher) groups. These groups are use to assign territories of service technicians to a dispatcher or planner group.

After a territory of service technicians is assigned to a planner group it is displayed to the field service dispatcher in the Field Service Dispatch Center. A planner group can have one or more field service dispatchers.

Use these procedures to create a new planner group and to add the new dispatcher to that group or to retrieve an existing planner group and add a dispatcher to that group.

Prerequisites

The role type, role, and application user ID have been added to the dispatchers imported employee record.

Steps

Creating Planner Groups and Adding Dispatchers to that Group:

1. Navigate to the Define Groups window, page A-1.
The Define Groups window appears.
2. Enter a name for the planner (dispatcher) group you are creating.
3. Enter a Description for the planner group.
4. On the Members tab, select Employee from the Category list of values.
5. Enter the employee number for the field service dispatcher you want to add to this planner group.
For setup details please refer to Oracle Common Application Components Implementation Guide
6. Save your work.

Adding Dispatchers to an Existing Planner Group:

1. Navigate to the Define Groups window, page A-1.

The Define Groups window appears.

2. Use the Name field to query the planner group.

The Members tab populates with names of dispatchers.

3. Highlight a row, and then click the New record.

A blank row appears in the table.

4. Choose Employee from the Category list of values.

5. Enter the Employee number or Name. Press the tab key.

Information for the dispatcher displays in the remaining columns on the Members tab.

6. Click the Roles tab to verify previously set up role type and role.

7. Save your work.

Assigning Territories to Planner Groups

Use this procedure to assign territories to planner (dispatcher) groups. Planner groups are a group of resources (field service dispatchers) dedicated to planning and are set up in Resource Management. Territories consist of service technicians and are set up in Territory Management. After you assign territories to a planner group, this is the default group of territories that display for the planner group in the Field Service Dispatch Center.

Prerequisites

- Add the dispatcher resource record to a planner group.
- One or more territories with assigned service technicians set up in Territory Manager (Navigator path: CRM Administrator > Territory Manager > Territory Administration).

Steps

1. Navigate to the Assign Territories to Planner Groups window, page A-1.

The Select Planner Group window appears.

2. Use the Find functionality to select a planner group. For example, in the Find field, enter 'Dispatch%'. Click Find.

A list of planner groups that begin with 'Dispatch' appear.

3. Select a Planner Group, and then click OK.

The Assign Territories to Planner Groups window appears.

4. In the Territories area, place the cursor in an empty line. Select a Territory from the list of values, and then click OK.

The selected territory is added to the list.

5. Save your work.

Associating Territories to a Dispatcher

This procedure completes the required connections by associating one or more territories to each dispatcher. This connection is accomplished by selecting from the list of territories that were assigned to the planner group in the *Assigning Territories to Planner Groups* procedure.

When the dispatcher logs in, the technicians are populated from all the territories attached to the planner group the dispatcher is attached to. The Dispatch Center populates the Plan Board, Gantt, and Map views with information for technicians working in the selected territories.

Prerequisites

- Set up a user ID for each dispatcher. (Navigator path: System Administrator > Security > User > Define)
- Assign individual dispatchers to planner groups. See Adding the Dispatcher Resource Record to a Planner Group., page 6-28
- Assign territories to planner groups. See Assigning Territories to Planner Groups., page 6-29
- Assign technicians to service territories. See Assigning the Resource to a Territory., page 6-21

Steps

1. Navigate to the Field Service Dispatch Center window, page A-1.
The Tasks view appears by default.
2. From any dispatch center view, navigate to the Select Territories and Task Owners window, page A-1.
The Select Territories and Task Owners window appears.
3. The Territories region provides two columns titled: 'Unselected' and 'Selected'. The 'Unselected' column lists territories assigned to the dispatcher, but not currently selected for display of associated technicians in the Plan Board, Gantt, and Map

views. To populate the Plan Board, Gantt, and Map view with information about the technicians assigned to specific territories, move one or more territories to the 'Selected' column, and then click OK.

Note: To view all territories, including the ones not assigned to this dispatcher, select the Show All Territories check box.

Service technicians assigned to the selected territories display on the Plan Board, Gantt chart, and Map.

Note: After the initial selection of territories, the table that keeps the territory ids for the logged in User is updated. The selected configuration becomes the default view for this dispatcher going forward. The table is automatically updated, and the default view changed, whenever the dispatcher uses the Select Territories and Task Owners window to change the selection of territories.

Setting up Third Party Field Service Resources

Many original equipment manufacturers use third party service providers as part of their field service solutions for enhanced geographic coverage and faster customer service. In this case, although field service dispatchers may assign tasks to third party technicians, these tasks and these technicians are monitored and managed by third party administrators using the Field Service Third Party Portal or Dashboard.

To use third party service providers, you must set up resource groups of type Third Party and individual resources with the following roles:

- Third Party Service Provider – this is the third party organization that you are employing as part of your field service solution.
- Third Party Administrator – uses the Third Party Dashboard to manage tasks assigned to his third party organization.
- Third Party Technician – can use the Technician Dashboard to report on assigned tasks.

Note: Third Party resources can be employees that are not on the manufacturer's payroll or they can be supplier contacts.

The process of setting up these resources is as follows.

- Creating Third Party Resource Records, page 6-32
- Setting up Third Party Administrators, page 6-32

- Setting up Third Party Technicians, page 6-33

Creating Third Party Resource Records

Use these procedures to set up individual third party resource records for service providers, administrators and technicians.

1. Create an employee resource record in HRMS for a resource that is not on the manufacturer's payroll. When using the steps in the procedure Create an Employee Resource, page 6-15, you can enter an address for the resource but you do not need to enter an assignment, nor do you need to select organization, group, or job.

Alternatively, you can create a supplier contact in Oracle Purchasing. See Creating Supplier Contacts (Non-Employee Resources), page 6-17

Note: This record can be for a third party service provider or its administrator or technician.

2. Create an Applications User ID for a third party resource that is to be assigned the role of third party administrator or third party technician. See Creating an Applications User ID, page 6-17.
3. Import the third party record that you created into the CRM Resource Manager. While importing, assign the appropriate third party role type of third party, and the role of third party organization, administrator, or technician. See Importing the Field Service Employee or Supplier Contact Into the CRM Resource Manager, page 6-18.

Note: You can also assign the appropriate third party role to this resource after the import. See Assigning Role and Role Type to the Resource, page 6-26. For third party service providers, after you import the employee or supplier contact record into Resource Manager and assign the role of third party service provider, you can then assign it to one or more territories based on the location of this service provider organization.

Setting up Third Party Administrators

For resources that you imported with the role of third party administrators, you must perform the following tasks. This enables these administrators to view all the technicians assigned to them in their organization and territory and manage their schedules using the third party dashboard.

1. Assign the third party administrator to a calendar; see Assigning the Resource to a Calendar, page 6-20.

2. Assign the third party administrator to a territory, see *Associating Territories to a Dispatcher*, page 6-30.
3. Run the Synchronize Territory Assignment Rules program to update the modifications you made to the territory.

Setting up Third Party Technicians

After importing employee or supplier contact records and assigning them the role type of Third Party and role of Third Party Technicians, you must perform the following tasks to enable them for the scheduling and management of field service tasks

1. Assign the third party technician to a calendar, see *Assigning the Resource to a Calendar*, page 6-20.
2. Assign the third party technician to a territory, see *Assigning Technician Resources to a Territory*, page 6-21.
3. Run the Synchronize Territory Assignment Rules program to update the modifications you made to the territory.
4. Assign spares addresses and subinventories to these third party technicians, see *Maintaining Technician Addresses and Sub-Inventories*, page 6-22.
5. Assign skills to these technicians, see *Assigning Skills and Skill Levels to Technicians*, page 6-26.

Generating Field Service Trips

The Generate Field Service Trips concurrent program generates the departure and arrival tasks for the technicians that are internal resources and creates a placeholder for technicians trips. Trips are created and stored to enable Scheduler to perform the scheduling, optimizing, and recalculating operations with efficiency, consistency, and accuracy.

The Generate Field Service Trips concurrent program creates shift tasks (departure and arrival tasks) for each service technician in the regular and stand by shifts. Then Advanced Scheduler plans service tasks between the departure and arrival tasks and calculates the travel time and distance for the complete trip. These departure and arrival tasks are based on the work shifts defined for each service technician in the CRM Foundation calendar, and normally use the service technicians home address or default trip start location as flagged in the Resources Addresses and Sub-inventories page for departure and arrival location.

You can run this program to generate departure and arrival tasks for a period of time that spans several days, or choose to run it daily. This program should be scheduled to run periodically.

Note: The Generate Field Service Trips program uses the address source that is selected in the CSF: Shift Task Address Source profile. In addition, based on the value of the CSF: Location Finder Installed profile, it uses either loaded spatial dataset or eLocation service to resolve technician start and end addresses for a single work day. For more information on eLocation maps, see Setting Up the Map in the *Oracle Field Service Implementation Guide*.

Important: This is an essential step required for the Field Service Task Scheduling operation. This program should be run by the Dispatchers or Field Service Administrators, for the time horizon for which any type of scheduling is possible. This means that the program has to be run to cater the scheduling activity into a future period of time.

Note: For Customers upgrading from prior releases:

After upgrading to Release 12, run this program once, by selecting 'Upgrade' as the value for the 'Action' parameter. Make sure it ran successfully. Then, you can run this program any number of times, with 'Add' as value for 'Action' parameter, as mentioned in the procedure.

To create departure and arrival tasks and generate field service trips, see the procedure:Running the Generate Field Service Trips Concurrent Program, page 6-34.

Running the Generate Field Service Trips Concurrent Program

Use this procedure to create departure and arrival tasks and generate field service trips:

Prerequisites

Set up work shifts in the CRM Foundation calendar.

Steps

1. Navigate to the Generate Field Service Trips window, page A-1.
The Parameters window appears.
2. Select Add from the Action drop-down menu. Available actions are:
 - Add: Create trips based on the current work shift definitions in the CRM Foundation calendar.
 - Close: Starting from the given date or system date, whichever is earlier, close all prior dated trips.

- Delete: Remove existing trips.
 - Fix: Correct the existing trips by pulling in only task assignments that are valid for the trip.
 - Replace: Replace existing trips using the current work shift definitions in the CRM Foundation calendar.
 - Upgrade: Upgrade the previous version Generate Shift Tasks trips to the Generate Field Service Trips model.
3. If you want to run the program to generate trips for a specific period, enter the Start Date for the period. In the Number of Days field, enter the number of days that the period spans, beginning with the Start Date.
 4. If you want to run the program every night, clear the Start Date field. In the Number of Days field, enter the number of days in the future for which the daily tasks are to be created.

Example

For example, if today is Monday, and you want to create tasks for Thursday, enter "3" in the Number of Days field. The program runs Monday night, and generates trips for Thursday.

5. (Optional) Enter the Resource Type. Service technicians are usually set up for Resource Type: Employee Resource.
Seeded Resource Types include:
 - Employee Resource
 - Group Resource
 - Other Resource
 - Partner Resource
 - Party Resource
 - Supplier Contact
 - Team Resource
 - To be hired
6. If you want to generate a trip for a specific technician, enter the technician's name in the Resource name field.

7. Select the type of shift of the resource:

- Regular
- Regular and Standby
- Standby

If you select Standby, then the program instantiates stand by shifts. If you select Regular and Standby, then the program instantiates both the shifts.

8. Select the resource's shift address for costing and logistics purposes. You can select:

- Resource Default Trip Location
- Resource Home Address
- Resource Subinventory Address

9. Click OK.

The Parameters window closes to reveal the Generate Field Service Trips window. The Parameters field summarizes information entered in the Parameters window.

10. In the At these Times region, you can select to Run the Job (concurrent program) As Soon as Possible, or click Schedule.

11. On the Schedule window, you can select an option to Run the Job:

- As Soon as Possible.
- Once, at the time specified in the Run At field.
- Periodically, during the time period defined by Start At and End At fields, and at the frequency specified in the Re-run every field.
- On Specific Days, dates of the month, or days of the week, during a time period defined by Start At and End At fields.

Note: You can create a custom schedule, and then save, and apply the saved schedule from the Schedule window.

Click OK.

The Schedule window closes.

12. On the Generate Field Service Trips window, click Options.

The Upon Completion window appears.

13. From the Upon Completion window, you can select the check box to save all output files, select a Layout template, specify persons to notify, and select a printer. Click OK.
14. On the Generate Field Service Trips window, click Submit.
15. If the Generate Field Service Trips concurrent program does not execute, perform the following tasks:
 - Defining an Executable, page 6-37
 - Setting Up the Generate Field Service Tasks Concurrent Program, page 6-38

Defining an Executable

If the Generate Field Service Trips program does not run, follow this procedure to define an executable.

See Generating Field Service Trips, page 6-34 procedure.

Steps

1. Navigate to the Concurrent Program Executable window, page A-1.
The Concurrent Program Executable window appears.
2. Enter the following values into the fields:

Executable Setup Parameters

Field	Value
Executable	Generate Field Service Trips
Short Name	CSFVGST
Application	Field Service
Description	This window allows format free text entry. For example, Generates departure and arrival tasks and schedules tasks for field service representatives within a specified time frame.
Execution Method	PL/SQL Stored Procedure
Execution File Name	CSF_SHIFT_TASKS_PVT.Generate_Shift_Tasks

3. Save your work.
4. Proceed to Setting Up the Generate Field Service Tasks Concurrent Program, page 6-38.

Setting Up the Generate Field Service Trips Concurrent Program

If the Generate Field Service Trips program does not run, see Defining an Executable, page 6-37, and then follow this procedure to set up the Generate Field Service Trips concurrent program.

Prerequisites

Complete the Defining an Executable, page 6-37 procedure.

Steps

Steps:

1. Navigate to the Concurrent Programs window, page A-1.
The Concurrent Programs window appears.
2. Enter the following values into the fields:

Concurrent Program Setup Parameters

Field	Value
Program	Generate Field Service Trips
Short Name	CSFVGST
Application	Field Service
Description	This window allows format free text entry. For example: Generates departure and arrival tasks.
Executable Name	CSFVGST
Executable Output format	Text

3. Save your work.

Activating Automatic Commitment of Tasks

To commit tasks to service technicians without interference of a dispatcher, you can run the Auto Commit Tasks concurrent program at predefined intervals. In fact, you can automate the whole process of scheduling and committing tasks by creating a query to select such tasks. For more information on creating such queries and on automated scheduling, see Automating Scheduling and Commitment of Tasks in this guide.

Tasks that have parts associated with them are committed based on the lead time for the part (the number of days it takes to get the part to its destination). Before you can run the program, you must set up the required profile options.

If the program does not complete its run, you can define an executable and program parameters.

Setting up Prerequisite Profiles

These profile options determine the transition of the task status when the automatic commitment of schedules program is executed:

- The From task status is determined by the CSF: Default Planned task status profile option.
- The To task status is determined by the CSF: Default Commit task status profile option.

Running the Auto Commit Tasks Program

Use this procedure to execute the Auto Commit Tasks concurrent program.

1. Navigate to Auto Commit Schedule window, page A-1. The Parameters window appears.
2. Enter a Task List Query.
3. Click OK. The Auto Commit Schedule window appears.
4. The Parameters field contains the entered task list query.
5. Click Schedule. The Schedule window appears.
6. Define how often you want to commit the schedules for the time frame defined previously.
7. Click Apply a Saved Schedule to use the settings of a previous saved schedule.
8. Choose one of the options at Run the Job.

9. Click OK when finished.
10. Click Submit.

Defining the Program Executable

If for some reason the concurrent program doesn't seem to execute, use the following procedure to define an executable.

1. Navigate to Concurrent Program Executable window, page A-1.
2. Enter the following values into the fields:

Executable Parameters and Values

Field	Value
Executable	Auto Commit Schedule
Short Name	CSFVCMT
Description	Free, e.g. Commits schedules automatically from In Planning to Assigned status.
Execution Method	PL/SQL Stored Procedure
Execution File Name	CSF_AUTO_COMMIT_PVT.Update_Planne d_Task_Status

3. Click **Save**.

Defining Program Parameters

If the concurrent program doesn't seem to execute, you can use the following procedure to define parameter values for the program.

1. Navigate to Concurrent Programs window, page A-1.
2. Enter the following values into the fields:

Concurrent Program Parameters and Values

Field	Value
Program	Auto Commit Schedule
Short Name	CSFVCMT
Application	Field Service
Description	Free form text. For example, Commits schedules automatically from Planned to Assigned status.
Executable Name	CSFVCMT
Executable Output format	Text

3. Click Save.

Setting up the Technician and Administrator Portals

Defining Material Justification Codes

Material Justification codes are setup for Field Service Debrief. These justification codes are offered to the user from the Reason list of values when creating a material transaction line on the Field Service Debrief Materials tab.

Note: Be sure not to confuse this action with the Return Reason field on the Material tab from Field Service Debrief.

Steps

1. Navigate to the Define Material Justification Codes window, page A-1.
2. This navigation path opens the Application Object Library: CSF _MATERIAL_REASON Lookups window.

The Type field is defaulted. The User Name is displayed. It is used by loader programs. The Application is defaulted. In the Description field a description is given. You can modify this description.
3. In the Access Level region it is defined what changes are possible to a lookup type.

- User: You can change any lookup code.
 - Extensible: New lookup codes can be added. However, you cannot modify seeded lookup codes.
 - System: No changes to the lookup codes are allowed.
4. Create material justification lookup lines by entering the following information in the lower region on the window:

Material Justification Lookup Lines

Field	Value
Code	<p>Enter the code value for your Lookup. You can define a maximum of 250 Lookups for a single Lookup type. When you enter a valid Lookup meaning into a displayed window field, Lookups stores this code into a corresponding hidden field. For example, the Lookup "Y" displays the meaning "Yes" but stores the code value "Y" in a hidden field.</p> <p>You cannot change the values in this field after committing them. To remove an obsolete Lookup you can either disable the code, enter an end date, or change the meaning and description to match a replacement code.</p>
Meaning	<p>When you enter a valid Lookup meaning into a displayed window field, Lookups stores the corresponding code into a hidden field. Lookups automatically displays the meaning in your Lookups field whenever you query your window. For example, the Lookup "Y" displays the meaning "Yes" but stores the code value "Y" in a hidden field.</p>
Description	<p>You can display the description along with the meaning to give more information about your Lookup.</p>

Field	Value
Tag	Optionally, enter in a tag to describe your lookup. The tag can be used to categorize lookup values.
From and To	<p>Enter the dates between which this Lookup becomes active. If you do not enter a start date, your Lookup is valid immediately.</p> <p>Once a Lookup expires, users cannot insert additional records using the Lookup, but can query records that already use the Lookup. If you do not enter an end date, your Lookup is valid indefinitely.</p>

5. Check Enabled for each line you want to activate.
6. Click Save.

Defining Labor Justification Codes

Labor Justification codes are setup for Field Service Debrief. These justification codes are offered to the user from the Reason list of values when creating a labor transaction line on the Field Service Debrief Labor tab.

Steps

1. Navigate to the Define Labor Justification Codes window, page A-1.
2. This navigation path opens the Application Object Library: CSF _LABOR_REASON Lookups window.

The Type field is defaulted. The User Name is displayed. It is used by loader programs. The Application is defaulted. In the Description field a description is given. You can modify this description.
3. In the Access Level region it is defined what changes are possible to a lookup type.
 - User: You can change any lookup code.
 - Extensible: New lookup codes can be added. However, you cannot modify seeded lookup codes.
 - System: No changes to the lookup codes are allowed.
4. Create labor justification lookup lines by entering the following information in the

lower region on the window:

Labor Justification Code Table

Field	Value
Code	<p>Enter the code value for your Lookup. You can define a maximum of 250 Lookups for a single Lookup type. When you enter a valid Lookup meaning into a displayed window field, Lookups stores this code into a corresponding hidden field. For example, the Lookup "Y" displays the meaning "Yes" but stores the code value "Y" in a hidden field.</p> <p>You cannot change the values in this field after committing them. To remove an obsolete Lookup you can either disable the code, enter an end date, or change the meaning and description to match a replacement code.</p>
Meaning	<p>When you enter a valid Lookup meaning into a displayed window field, Lookups stores the corresponding code into a hidden field. Lookups automatically displays the meaning in your Lookups field whenever you query your window. For example, the Lookup "Y" displays the meaning "Yes" but stores the code value "Y" in a hidden field.</p>
Description	<p>You can display the description along with the meaning to give more information about your Lookup.</p>
Tag	<p>Optionally, enter in a tag to describe your lookup. The tag can be used to categorize lookup values.</p>

Field	Value
From and To	<p>Enter the dates between which this Lookup becomes active. If you do not enter a start date, your Lookup is valid immediately.</p> <p>Once a Lookup expires, users cannot insert additional records using the Lookup, but can query records that already use the Lookup. If you do not enter an end date, your Lookup is valid indefinitely.</p>

5. Check Enabled for each line you want to activate.
6. Click Save.

Defining Expense Justification Codes

Expense Justification codes are setup for Field Service Debrief. These justification codes are offered to the user from the Justification list of values when creating an expense transaction line on the Field Service Debrief Expense tab.

Steps

1. Navigate to the Define Expense Justification Codes window, page A-1.
2. From the Application Object Library: CSF _EXPENSE_REASON Lookups window, in the Description field a description is given. You can modify this description.

The Type field is defaulted, and the User Name is displayed. It is used by loader programs. The Application also is defaulted.
3. In the Access Level region it is defined what changes are possible to a lookup type.
 - User: You can change any lookup code.
 - Extensible: New lookup codes can be added. However, you cannot modify seeded lookup codes.
 - System: No changes to the lookup codes are allowed.
4. Create expense justification lookup lines by entering the following information in the lower region on the window:

Expense Justification Codes Table

Field	Value
Code	<p>Enter the code value for your Lookup. You can define a maximum of 250 Lookups for a single Lookup type. When you enter a valid Lookup meaning into a displayed window field, Lookups stores this code into a corresponding hidden field. For example, the Lookup "Y" displays the meaning "Yes" but stores the code value "Y" in a hidden field.</p> <p>You cannot change the values in this field after committing them. To remove an obsolete Lookup you can either disable the code, enter an end date, or change the meaning and description to match a replacement code.</p>
Meaning	<p>When you enter a valid Lookup meaning into a displayed window field, Lookups stores the corresponding code into a hidden field. Lookups automatically displays the meaning in your Lookups field whenever you query your window. For example, the Lookup "Y" displays the meaning "Yes" but stores the code value "Y" in a hidden field.</p>
Description	<p>You can display the description along with the meaning to give more information about your Lookup.</p>
Tag	<p>Optionally, enter in a tag to describe your lookup. The tag can be used to categorize lookup values.</p>
From and To	<p>Enter the dates between which this Lookup becomes active. If you do not enter a start date, your Lookup is valid immediately.</p> <p>Once a Lookup expires, users cannot insert additional records using the Lookup, but can query records that already use the Lookup. If you do not enter an end date, your Lookup is valid indefinitely.</p>

5. Check Enabled for each line you want to activate.
6. The double brackets ([]) identify a descriptive flexfield that you can use to add data fields to this window without programming.
7. Click Save.

Setting Up Billing Types and Service Activity Codes

Billing Categories exist in Service core that enable users to differentiate the billing types into categories of Material, Labor, and Expense. These billing categories, which are seeded, will be required along with billing type before the billing type is attached to a service activity code. As such, billing types are user extensible and can represent the various business needs that might arise in your enterprise. The billing categories also determine in which section of the Debrief page the item should appear: Expense, Labor, or Material.

For complete information on setting up Billing Types and Service Activity Codes, see the Implementing Charges chapter of the *Oracle TeleService Implementation and User Guide*.

These procedures are required to enable billing functionality to be used in Debrief and Spares Management:

- Define Billing Types , page 6-47
- Set Up Billing Type Attributes, page 6-48
- Set Up Service Activity Codes, page 6-49
- Set Up Material Service Activity Codes in Install Base, page 6-50
- Associate Service Activity Codes with a Business Process, page 6-51

Defining Billing Types

You can define billing types to fit your business needs, which you can then associate to billing categories and service activity codes. The three seeded billing types are Labor, Expense, and Material. Each of these billing types is associated with the related billing category of the same name.

When you create new billing types, they can be associated with either the Expense or the Material billing category. You cannot associate extensible user-defined billing types with the Labor category.

Billing types are associated with service activity codes and they are also associated with items, that you set up in Oracle Inventory.

Steps

1. Navigate to the Service Lookups window, page A-1.

2. At the Service Lookups window, select Find from the View menu and query the following lookup: MTL_SERVICE_BILLABLE_FLAG.
The Meaning, Application and Description fields appear by default. The Access Level is set at Extensible.
3. To create a new lookup, place your cursor in a blank Code field and enter a code for the new billing type in the Code field.
4. Enter the name of the billing type in the Meaning Field.
5. (Optional) Enter a Description.
6. Leave the Tag field blank. It is not used in this lookup for Field Service.
7. Enter an Effective From date. This is the date that the billing type becomes active.
8. (Optional) Enter an Effective To date.
If you want to deactivate a Billing Type, enter an end date that corresponds with the day you want the billing type to become inactive.
9. Select the Enabled check box.
10. Repeat steps 2-8 for each new billing type you want to create.
11. Save your work.

Setting Up Billing Type Attributes

When you create billing types, you must associate them with billing categories to ensure that the billing types appear in the appropriate section in the Debrief page. The new billing types you define will be categorized as Material, if you want them to appear in the Materials section, or Expense, if you want them to appear in the Expense section.

Note: You cannot create billing types for the Labor section in debrief. You must only use the seeded billing type Labor for Service Activity Codes associated with this billing type.

Spares Management also uses

Those billing types of category Material are also used by Spares Management and can be tracked in Install Base.

When you set up the billing types and associate them with the appropriate category, remember that these billing types will be associated with Service Activity Codes, that will appear as options in the Material or Expense section of Debrief.

Prerequisites

Billing types must be set up.

Steps

1. Navigate to the Billing Type Attributes window, page A-1.
2. In the Billing Type Attributes window, create a new record and in the Billing Type field, select a billing type from the list of values.
3. In the Billing Category field, select a category to associate with the billing type from the list of values.
The options are: Material or Expense.
4. Enter a Start Date.
5. (Optional) Enter an End Date. To keep the lookup active indefinitely, leave this field blank.
6. If you want to associate this Billing Type with a specific item in Inventory, select the item in the Rollup Item field.
7. Repeat steps 1-5 to associate each billing type you want with a billing category.
8. Save your work.

Setting Up Service Activity Codes

You must create the service activity codes that you want to appear in the lookups of the Material, Labor, and Expense sections of Field Service Debrief. All activities that a field service technician will log in Debrief must have a related service activity code.

You can define the service activity codes. The service activity codes are filtered by the billing type and associated category that you link to them. For example, a service activity code with a billing type of Material will only appear in the lookup of the Material section of the Debrief page.

You must categorize service activity codes to represent either *issued items*, or those items that are going to a customer, or as *returned items*, or those items that are being retrieved from the customer.

Prerequisites

Billing types and billing attributes must be set up.

Steps

1. Navigate to the Service Activities and Billing Types window, page A-1.
2. In the Service Activities region of the Service Activities and Billing Types window, create a new record (New icon).
3. Enter the name of the service activity code you want to create in the Service Activity field.

4. (Optional) Enter a Description for the service activity code.
5. In the Line Category field, select whether the service activity code is to be of type Order or type Return.
6. Enter a Start Date.
7. (Optional) Enter an End Date. To keep the service activity code active indefinitely leave this field blank.
8. In the Billing Types region, select the billing type Name that you want to associate with service activity code that you just created from the list of values.

The Description appears by default from the billing type and the current date appears by default in Start Date.
9. Repeat step 7 for each billing type you want to associate with the service activity code.
10. In the Order Management Header and Line Types region, select the Operating Unit you want to associate with the service activity code.
11. Select Mixed from the Order Type list of values.
12. Select Standard from the Line Type the list of values.

Note: The Order Type and Line Type settings are not restricted to the values noted above. You can use any type as long as it is set up correctly in Order Management. For more information, see the *Oracle Order Management User Guide*.

13. Save your work.

Guidelines

Within the Debrief page, service activity codes are filtered for each section based upon the billing category. It is important that you remember what billing category that you associated with each billing type that you created and attached to a service activity code.

Setting Up Material Service Activity Codes in Install Base

All service activity codes that are defined with a billing type and category of *Material* must be set up in Install Base. The reason for this is these service activity codes are related to items that are trackable in Install Base.

Service activity codes with both line types of Order and Return must be added to the Install Base.

Prerequisites

Service Activity Codes of type Material must be set up.

Steps

1. Navigate to the Transaction Sub Types window, page A-1.
2. When the Transaction Sub Types window appears, select the Service Type check box.

This check box will enable you to access only Service Transaction Types among the list of values in the Name field.
3. Query on the name of the service activity codes that you created and select one that you created with a billing category of Material.
4. In the Source Info region, select the Reference Req'd (required) check box if you want to include trackable items.
5. Select the Change Owner check box.
6. If the service activity code has a line type of Order, then select External in the Change Owner field. If the service activity code has a line type of Return, then select Internal in the Change Owner field.
7. Select a Status for the source.

Do not select a status that will reflect the source as inactive such as, Terminated or Expired.
8. In the Source Transaction Types region, you must set up lines for Field Service and Order Management application. Select each from the list of values in the Application Name field.
9. For the Field Service line, select a Transaction Name. The Transaction Type and Description fields will appear by default from the Transaction Name.
10. For the Order Management line, select Order Management Ship/Fulfill in the Transaction Name field.

The Transaction Type and Description fields appear by default.
11. For both lines, select the Update IB (Install Base) check box to include trackable items in the setup.
12. Save your work.

Associating Service Activity Codes with a Business Process

Within the Oracle E-Business Suite there are several applications that use the Service Activity Request functionality. You can map the same Service Activity Code to multiple

business processes through this process.

You must create new business processes and associate them with the appropriate Service Activity Code. See *Setting up Business Processes in the Oracle Field Service Implementation Guide* for details on setting up business processes.

Prerequisites

A Business Process and Service Activity Codes must be set up.

Steps

1. Navigate to the Service Business Process window, page A-1.
2. From the Service Business Process window, switch to query mode and search for the business process you want to associate with the service activity code in the Name Field.

For example, Field Service.
3. Select the Field Service check box.

The Service Request check box appears selected by default. If you want to enable Depot Repair you can select the Depot Repair check box as well.
4. (Optional) Enter an Effective Date range. If you leave these fields blank, the mapping will remain open indefinitely.
5. In the Service Activities region, select the service activity code you want to map to the field service business process from the list of values in the Service Activity field.
6. Repeat step 4 for each service activity code you want to map to the business process.
7. Save your work.

Setting Up Oracle E-Records and E-Signatures for Field Service

The Field Service Administrator and Field Service Technician Portals have the ability to capture and approve electronic records. In this application, *approval* of electronic records means an internal procedural sign off, and not the customer approval of work completion. This feature provides you with the ability to store electronic records of key application transactions and retrieve them during the audits.

See the 21 CFR Part 11 Compliance appendix in the *Oracle Field Service Implementation Guide*.

For the Field Service Administrator Portal and Technician Portal, this entails creation of e-Records and capturing the appropriate ID and password of the approver when the technician completes debrief on the work assigned.

To set up this feature in the Field Service Administrator Portal and the Field Service Technician Portal these key setups are required:

- Set the profile: EDR: E-records and E-Signatures value to Yes.
- Set the Transaction variables: eRecord Required and eSignature Required values as Yes.
- The ERES work flow business event subscription should be Enabled and should be in Synchronous mode.
- The Approval Management Engine should have one rule defined.

To view e-records and e-signatures, click the Search Erecord Evidence Store quick link from the Field Service Support Dashboard, or from the Field Service Technician Dashboard.



Setting the EDR: E-records and E-signatures Profile

Use these steps to set the value of this profile and enable this feature.

1. Navigate to the Oracle Applications Administration: Cores Services - Profiles page, page A-1.
2. Search for the EDR: E-records and E-signatures profile.
Enter EDR:% in the Name field.
Based on the level for which the profile needs to be set, provide the value in the Access Level region.
Click Go.
3. Highlight the search result row for the EDR: E-records and E-Signatures profile. Select the desired level, and then click the Update icon.
4. Select Yes from the list of values for the desired access level.
5. Click Update.

Setting the Transaction Variables

Use these steps to set the values for the eRecord Required and eSignature Required transaction variables.

1. Navigate to the Setup page, page A-1.

2. Search for the Transaction Name: ERES Debrief Report Event.
3. In the search result, click the Update icon against the variable name E Record Required.
4. Set the value field to Y, and then click Apply.
5. Repeat steps 1 through 4. However in Step 3, click the Update icon against the variable name E Signature Required.

Enabling the ERES Workflow Business Event Subscription

User these steps to enable subscription to this business event.

1. Navigate to the Business Events page, page A-1.
2. Search for the Business Event: oracle.apps.csf.dbrf.approve.
Click the Update icon.
3. Select the Enabled status in the Status drop down list.
Click Apply.
At this time a warning popup message appears.
4. Click Yes.

Defining a Rule for the Approval Management Engine

The Approval Management Engine should have one rule defined. When the task assignment status is changed to Completed, Rejected, or Closed, the approval process will proceed with the approval process displaying the list of approvers matching the defined Approval Management Engine rule.

To complete the setup steps, Attributes, Condition, Action types, and Approver groups should also be defined.

Defining New Attributes

1. **Note:** You can reuse an existing attribute present in the transaction type: ERES Debrief Report Event or define a new attribute and use it in the selected transaction type: ERES Debrief Report Event.

Navigate to the Business Analyst Dashboard, page A-1.

2. Click the Setup icon against the Transaction type: ERES Debrief Report Event.
3. Click Create.

4. Enter the Item Name and Description. Header appears by default in Item Class.
5. Select a Data type from the drop down list of values.
6. Select an Approver type from the drop down list of values.
This field is enabled when the Data type is: Number.
7. Enter the Value Set value.
This field is enabled when the Data type is either: Number or String.
8. Select the Usage Type from the drop down list of values.
9. Define the value of the attribute in the Value field, depending on the Data type chosen and the Usage Type: Static.
For example, for the Data type: Boolean and Usage Type: Static, in the Value field you can enter *false*.
10. When the Usage Type is: Dynamic, enter the SQL query in the Value field. Click Validate.
11. Click Apply.
12. **Including Existing and Newly Defined Attributes**
 1. Click Use Existing Attribute.
 2. Select the radio button against the existing attribute or newly defined attribute that you need to add to the Transaction type: ERES Debrief Report Event.
 3. Click Continue.
The Existing attribute-modify usage page launches.
 4. Modify the details, if required. Click Finish.

Defining Conditions

1. Navigate to the Business Analyst Dashboard, page A-1.
2. Click the Setup icon against the Transaction type: ERES Debrief Report Event.
3. Click Create.
4. Select the Condition type from the drop down list of values.
5. Provide the Attribute on which this condition is based. You can enter or search and select the attribute by clicking the Lens icon.
6. Click Apply.

Defining New Action Types

1. **Note:** You can use an existing Action type in the selected Transaction type: ERES Debrief Report Event, or define a new Action type and include the newly defined action type in the selected Transaction type: ERES Debrief Report Event.

Navigate to the Action Types page, page A-1.

2. Click Use Existing Action Types.
3. Click Create.
4. Define the Action Description Query when the dynamic action description is chosen as Query Generated.
5. Define Name, Handler, and Description.
6. Select the Rule type from the drop down list of values.
7. Enable the desired check box for the Allowed Approver Types.
8. Select the Dynamic Action Description from the drop down list of values.
9. You can also add attributes that the Action type defined requires when it is calculating the required approvers for a transaction.
10. Click Apply.

11. Using Newly Defined or Existing Action Types

1. Select the ERES Debrief Report Event transaction type.
2. Click Use Existing Action Type.
3. Select the check box against the existing Action type or the newly defined Action type to add to the Transaction type: ERES Debrief Report Event.
4. Click Continue.
5. Review the action type details.
6. To add the selected attribute to the Transaction type, click Finish.

Defining New Approver Groups

1. **Note:** You can use an existing Approver Group in the selected Transaction type: ERES Debrief Report Event, or define a new

Approver Group and include the newly defined Approver Group in the selected Transaction type: ERES Debrief Report Event.

Navigate to the Approver Groups page, page A-1.

2. Click Create.
3. Define the Name, Description, and Order Number.
4. Select the Voting Method and Usage Type from the drop down list of values.
5. Define the Query if the Usage Type is chosen as Dynamic.
6. Define the group members by clicking Add Another Row.
7. Select the Approver Type from the drop down list of values.
8. Define the Approver and Order Number.
9. Click Apply.
10. **Using Existing Approver Group**
 1. Select the ERES Debrief Report Event transaction type.
 2. Click Use Existing Approver Group.
 3. Select the check box against the existing Approver Group which needs to be added to the Transaction type: ERES Debrief Report Event.
 4. Click Add.

Defining a Rule

1. You can define a *new* rule for the selected Transaction type: ERES Debrief Report Event, or use an *existing* rule in another Transaction type, or use an *inactive* rule in the existing Transaction type: ERES Debrief Report Event.

Using an Existing Rule

1. Navigate to the Rules page, page A-1.
2. Click Use Existing Rule.
3. Search by providing the Transaction type value in the search criteria.
4. Select the radio button against the desired Transaction type. Click Continue.
5. Define the start and end date.

6. Click Finish.

Creating a New Rule

1. Navigate to the Rules page, page A-1.
2. Click Create.
3. Define the Name of the Rule.
4. Select the Rule Type from the drop down list of values.
5. Define the start and end date of the rule, and then click Next.
6. To add conditions to this rule, click Add Condition.
7. Select the desired conditions by selecting the check box against the conditions, and then click Continue.
8. To add actions to this rule, click Next.
9. Select the Action Type from the drop down list of values.
10. Define the Action for the Action Type chosen by search and select, or by entering the value.
11. To review the details of the rule, click on the Next.
12. To create a new rule, click Finish.

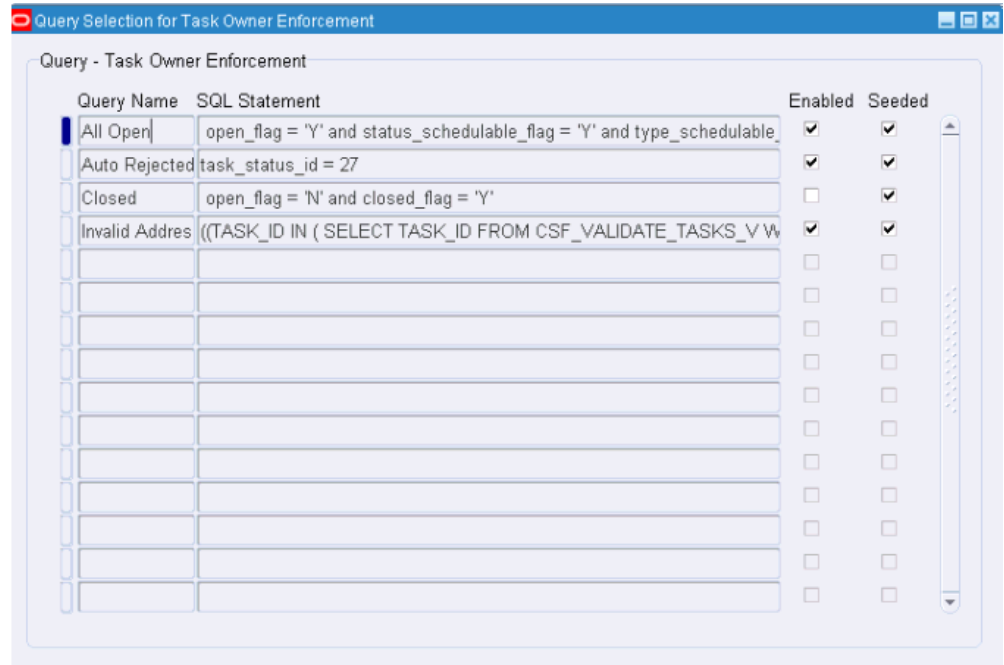
Setting up the Field Service Dispatch Center

You can configure the dispatch center task, plan board, and gantt chart views. In addition, you can configure the dispatch center to view and manage the tasks of a different dispatcher.

Setting Up Query Selection for Task Owner Context Enforcement

Dispatchers sometimes oversee tasks owned by other dispatchers (schedule technicians, manage exceptions, and so on) to assume the responsibilities of dispatchers who are on leave. The Dispatch Center window enables dispatchers to select the task owners dynamically, and then view and manage tasks owned by other dispatchers. Dispatchers can interactively select multiple task owners.

1. Navigate to the Query Selection for Task Owner Enforcement window, page A-1.



Task List Queries can be flagged to enable, or activate, the enforcement of task owner selections. Task Queries set up with the 'Enabled' check box selected are candidates for enforcing the task owner selection. All Queries, both seeded and custom queries, are available for task owner selection enforcement, except the 'My Inbox' query. The seeded 'My Inbox' query already enforces and implies the task owner as the current Dispatcher logged-in and hence, is not available for selection in the user interface.

2. Select Navigate from the Dispatch Center window menu bar, and then choose Select Territories and Task Owners from the Navigate menu.
3. The Task Owner region has several check boxes for selecting the 'Candidate Owner':
 - My Self: The Dispatcher currently logged in.
 - My Groups: All the Resource Groups the dispatcher is a member of.
 - My Group Members: All members in the Resource Groups that the dispatcher is a member of.
 - All Groups: Displays all resource groups set up, no restrictions applied.

You can select or unselect Task Owners by using the shuttle buttons provided between the 'Unselected' and 'Selected' regions.

- Click OK to save your work.

Configuring Tasks List Table Attribute Display

You can use the Spreadtable Meta Data Administration window to customize the order in which task attributes are listed in the tasks list table of the Dispatch Center. You can also hide attributes that you do not want displayed in the tasks list table.

You can navigate to this window from Field Service Setup > CRM Foundation > Spreadtable.

Setting Up Task Custom Color Coding

Color coding tasks that can be viewed in the Field Service Dispatch Center enables a dispatcher to quickly identify a multitude of situations, such as high priority tasks, escalated tasks that need immediate rescheduling, tasks "in jeopardy," and tasks that have been committed to a customer and cannot be rescheduled.

By default, only a limited number of colors are used in Field service. In the Plan Board, yellow is attached to a task with actual times, and red is used when a task is escalated. In the Gantt chart, yellow and red have the same use, and blue is used when a task has scheduled times. Furthermore, green is used in the Scheduling Advice window to identify a plan option.

You can enhance this color-coding functionality greatly through a custom setup. There are 36 colors, of which 35 are available for custom coding. (Green is a reserved color.) The following properties relating to tasks are available to use in determining the color-coding scheme:

- Task Type
- Task Priority
- Task Status

Plan option will automatically be assigned Green, the reserved color just as it is in the standard configuration. Using the custom color coding configuration will greatly enhance a dispatcher or planners ability to effectively manage the day-to-day field service operations.

You can set up any number of color configurations by simply changing any one of the determining factors (Type, Priority, Status, or Escalated).

Use the following steps to set up custom color coding:

Prerequisites

- The profile option CSF: Use Custom Color Coding Scheme must be set to Yes to set up custom color coding.
- Task Types, Task Statuses, and Task Priorities must be set up.

Steps

1. Navigate to the Task's Custom Color Setup window, page A-1.

2. Enter a Color Determination Priority number.

In the case of a conflict between two color coding schemes, the color with the lowest priority number will prevail.

3. In the Type field, select the Task Type that you want to associate with this color configuration from the list of values.

4. In the Priority field, select the Task Priority to be associated with this color configuration.

5. In the Priority field, select the Task Assignment Status that you want to associate with the color configuration from the list of values.

To distinguish between tasks by status, for example, you could choose Blue to represent all tasks of a certain type (say "Repair at Site") with the status of "Approved," and you could set up an orange color configuration for tasks of type "Repair at Site" without distinguishing the status. To ensure that the Approved status takes precedence, you would have to set the Color Determination Priority number lower for the first color configuration. In this scenario, tasks of type Repair at Site with a status of Approved would appear in blue, and all other tasks of type Repair at Site would appear as orange.

6. Select the Color for the color configuration.

The Custom Colors palette is displayed where you can select from the available colors. The characteristics of the color you select will be displayed in the Background Color Value section in the RGB Value and Decimal Value fields.

7. If you want the color to apply only to those situations where the task has been escalated, select the Escalated? check box.

You will need to enter the same configuration twice, once with the Escalated check box selected and once without to distinguish between the two situations.

8. If you want the custom color configuration to be usable in Field Service, select the Active check box.

9. Save your work.

Setting Up the Scheduling Chart View

The Scheduling Chart or Gantt view of tasks enables the dispatcher to view tasks scheduled across technicians and days. The Gantt chart features icons on the task bar for accessing additional task details and text that displays important task attributes on the task bars such as task number, task priority, and customer name. You can rank icons

in importance during set up. These icons then appear in the Gantt cell accordingly; only a maximum of three icons per task bar.

You can also setup and prioritize the attributes that are displayed on the Task bar in the Scheduling Chart. You can choose to turn on the display for each attribute by checking the Active check box against it. Actual text displayed depends on the space available on the Task Bar

The following business functions have related Gantt icons:

- Access Hours
- After Hours
- Customer Confirmation Required
- Customer Confirmation Received
- Parts Requirement
- Task Dependencies

The following attributes are critical for display.

- Task Number
- Task Name
- Customer (Name)
- City
- Task Priority
- Site Name
- Postal Code

Setting Up the Map

Oracle Field Service provides eLocation map services to enable dispatchers to view and track technicians, task status, and task incident address locations. This map is available to the user as part of the Field Service Dispatch Center functionality. Map display is supported by the MapViewer which is part of Oracle 10g. For information on the installation and setup of the Oracle 10g MapViewer, see the *Oracle 10g User Guide*.

Plan and setup of the Oracle 10g MapViewer as described in the *Oracle 10g User Guide*:

- Verify MapViewer Availability, page 6-63

- Check the eLocation Map Profile Options, page 6-63

The eLocation service has its own spatial dataset. However, for wider and more detailed geocoding and time and distance calculations, you can load and use multiple spatial datasets into a single global instance. For more information on this, see the Setting Up Spatial Data section below. For more information on geocoding and time and distance calculations see the appropriate subsections under Setting Up Oracle Advanced Scheduler in this guide.

Note: If you have registered with Google Inc. and have a registration key, you can use the interactive map services provided by Google Maps. For more information, see Setting Up Google Maps in this guide.

Verify MapViewer Availability

Use this procedure to make sure the MapViewer has been installed and is running.

Prerequisites

Oracle 10g is installed and setup.

Steps

- Open a browser and check the mapviewer availability with the following url:
http://<server name>:<port number>/mapviewer/omsserver

Check the eLocation Map Profile Options

Set the profile options specific to the eLocation Map.

Steps

1. Navigate to System Profile Values window, page A-1. The Find System Profile window appears.
2. Check Site.
3. At Profile enter CSF%eLoc%.
4. Click Find.

You can set the profile options described in the following table in any sequence. All profile options have been provided with default values.

eLocation Map Profile Options

Profile Option	Description
CSF: eLocation Map JDBC driver type	The JDBC driver type used to make a connection to the data source for the eLocation map, default set to 'thin'.
CSF: eLocation Map data source name	The unique name that is given to the collection of data source parameters for the eLocation map, e.g. csfmap. The name must be modified if any of the data source profile options change and the map server cannot be restarted.
CSF: eLocation Map enable java debugging	Optionally enable additional debugging output to the Java console for the eLocation map.
CSF: eLocation Map high latitude coordinate	Do not change, high latitude coordinate of the last view area of the eLocation map.
CSF: eLocation Map high longitude coordinate	Do not change, high longitude coordinate of the last view area of the eLocation map.
CSF: eLocation Map last used service area number	Do not change, the identification number of the last viewed area on the eLocation map.
CSF: eLocation Map last used spatial dataset	This profile stores the last used spatial dataset name in the Map View.
CSF: eLocation Map low latitude coordinate	Do not change, low latitude coordinate of the last view area of the eLocation map.
CSF: eLocation Map low longitude coordinate	Do not change, low longitude coordinate of the last view area of the eLocation map.
CSF: eLocation Map move factor (between 0.1 and 1)	The fraction of the width or height by which the eLocation map view should be moved when using the navigate buttons on the Map tab in the Field Service Dispatch Center.

Profile Option	Description
CSF: eLocation MapViewer URL	Gives the mapviewer URL that is used for the eLocation map server.
CSF: Enable Multi Dataset	Because elocation provides spatial data, set this profile to No.
CSF: Google Map Key	If you are not registered with Google maps, set this profile value to Null.
CSF: Location Finder Installed	Set this profile to No.
CSF: Skip eLocation	Set this profile to No.
CSF: Use eLocation Map	Indicates that you are using the eLocation map.

Setting Up Spatial Data

Spatial data is used for Map Display in the Dispatch Center, and to enable certain Oracle Advanced Scheduler functionality, such as route calculation in the Time Distance Server and for location finding (geographical coding). Dispatchers can alternatively use Oracle Field Service's eLocation Maps to calculate route and use the same for finding and validation customer addresses from the Geotester page.

For more information on eLocation maps, see Setting up the Map in this guide. For more information on using eLocation services for geocoding, see Setting up Additional Scheduler Features in this guide.

Customers can load the spatial data into the schema only in an Oracle specified format. Even though they have a choice of loading data from any source, Oracle Advanced Scheduler is certified with the spatial data provided by Navigation Technologies (Navteq). Navteq supplies spatial data standardized to be used with Oracle applications by conforming to the Geographic Data Format (GDF). For installation instructions please refer to the installation documentation supplied with the Spatial Data bought from Navteq and also refer to *Metalink Note #565980.1 R12.1 - Field Service Spatial Upgrading Document*.

To dynamically load multiple spatial datasets in one single global instance, set the CSF: Enable Multi Dataset profile to Yes at the site level. Then, select the required dataset in the Map view and select the required country from the countries for this dataset. This loads the selected dataset into the instance for map display and map-related functions such as locating technicians and calculating routes. In addition, these selections are stored in the CSF: eLocation Map Last Used Spatial Dataset profile option for the user's

next Map view visit.

After installation of the spatial data check the following:

- Check Map Display, page 6-66

Check Map Display

After installation, perform a quick check to see if the data is really there and the map displays.

1. Navigate to the Field Service Dispatch Center, page A-1 in the Field Service application.
2. Click the Map icon.
3. Make a selection from the list of values to select the map of your choice. The Map displays.

When the map doesn't display at all, the data isn't there.

Setting Up Google Maps

The Oracle Field Service application provides customers with an option to view and track information about technicians, task status, and task incident address locations in a more interactive way through Google Maps. Dispatchers can visualize key business information on maps. With Google map integration, customers can have a pictorial view of the tasks, task status, and technicians location details with or without spatial data information. Google Maps provide a high performance, visually appealing, and interactive map viewing experience, with all the capabilities built-in such as, zooming in and out, panning or scrolling, and printing maps.

Alternatively, you can use eLocation Maps provided by Oracle Field Service for the same views without the need to separately register for this service. For more information, see Setting up the Map in this guide.

Prerequisites

Rendering technician trips, task location, tasks within a region, and tasks fetched by executing the task query onto Google maps requires that the addresses and locations be geo-coded. For more information, see Geo-Coding in the *Oracle Field Service Implementation Guide*.

To use Google Maps with the Field Service application you need to have a Registration Key from Google, Inc. You are responsible for signing up and obtaining the Registration Key for Google Maps from Google, Inc., which can be obtained through this URL: <http://www.google.com/apis/maps/signup.html>.

After your Google map registration is complete, enter the Registration KEY in the profile **CSF: Google Map Key** to implement and use Google Maps.

Steps for Google Maps Setup

1. Switch to the System Administrator Responsibility and invoke the Profile System values.
2. Enter the value CSF: Google Map Key and click Find.
3. Enter the Registration KEY and save the data.

Now the application is set to invoke Google Maps from the Field Service applications.

You can invoke Google Maps from the Field Service Dispatch Center and also from the Field Service Technician Portal user interfaces.

For more information on Google Maps integration with the Field Service Dispatch Center, see Understanding the Google Maps Integration, *Oracle Field Service User Guide*.

For more information on Google Maps integration with the Field Service Technician Portal, see Viewing Tasks on Google Maps, *Oracle Field Service User Guide*.

Purging Field Service Data

Database size increases with the number of transactional records. As the database size increases, system performance and the time required for backup are adversely impacted. To address these adverse effects, the Field Service Administrator should periodically run the Service Request Purge Program to:

- Validate whether the service requests can be purged.
- If yes, then delete service request and task data based upon parameter values specified for the concurrent manager program..
 - *Purge* refers to the action of deleting a record from the database. Purged records cannot be accessed or viewed in the future.
 - *Archive* refers to storing deleted data in non-transactional tables that can then be retrieved through a backup mechanism. Archiving deleted service request records is not within the scope for this release.
 - After the Debrief header, lines, notes, and task part requirements have been successfully purged, a 'Success' message is returned to the Service Management API. If unable to purge, an appropriate error message is returned.
 - Purge of service requests with tasks other than Type: Dispatch, and their related and dependent objects is handled by the Oracle Customer Support (TeleService) application.

Caution: Electronic Signatures created as part of the ERES enabled process for CFR Part 11 Compliance should not be purged. The software does not prevent the purging of these records.

This concurrent request is set up to delete Field Service tasks of type: Dispatch that are Closed, Completed, or Canceled, along with their task assignment records, task notes, task access hours, and task dependencies.

Use the following steps to execute the purge.

1. Navigate to the Submit a New request window, page A-1.
2. Click the Single Request radio button, and then click OK.
The Submit Request window appears.
3. In the Name field, enter the concurrent request name: Service Request Data Purge.
4. Click the Parameters field.
The Parameters window appears.
5. Complete the following parameter values to specify criteria for purging records:
 - Number: Service Request number
 - Status: Closed, Canceled, or Completed
 - Type: Dispatch
 - Created From – To (dates)
 - Updated From – To (dates)
 - Not Updated Since [LOV]
 - Customer Number [LOV]
 - Customer Account [LOV]
 - Item Category [LOV]
 - Item Number [LOV]
 - Retain Customer Requests [Yes/No]
 - Number of Workers: [LOV] (4 recommended)
 - Purge Batch Size [LOV] (1000 recommended)

- Non Field Service Tasks [LOV]
 - Maintain Purge Audit [LOV]
6. Click OK.
The Parameters window closes.
 7. On the Submit Request window, click Submit.

Setting Up GPS

Oracle Field Service enables you to use Global Positioning System (GPS) technology along with spatial data and Google or eLocation map integration to enable dispatchers to track resources, tasks and other scheduling requirements real time. Dispatchers can use GPS data to accurately calculate travel times for dispatching or re-routing technicians in an emergency break-fix situation. With Advanced Scheduler, dispatchers can identify optimal scheduling options.

Setting up GPS enables you to perform the following tasks.

- Register and maintain GPS vendor information.
- Setup, register, and assign GPS devices to technician resources.
- Track and monitor technician locations and traveling statuses.
- Accurately plot and calculate distances and traveling time between technician current location and customer site.
- Purge GPS resource and task history as required by territory, resource type, vendor, device, resource, and given period, and monitor purge requests.

Implementing and Managing GPS Vendors and Devices

Oracle Field Service enables you to register GPS service providers or vendors and their GPS devices before assigning them to resources for use in the field. Dispatchers can then track the performance of vendors and individual devices against cost of operation and decide on device preferences and terms and conditions of deployment.

Implementing GPS for Field Service enables you to track the current location of the resource that has been assigned the GPS device. You can ping the provider for the latest location information. Oracle Field Service provides predefined location tracking statuses for resources. Because vendor statuses can be different, you must map vendor location tracking statuses to these internal statuses when registering vendors. This ensures that status codes are consistent across vendors

Starting GPS and Registering Vendors and Devices

Before you can use GPS devices in the field, you must perform the following tasks using the GPS Administration page.

- Start the GPS services using the On/Off button in the GPS Configuration region. Only after you start the GPS service, Field Service can validate the vendor registration details that you enter.
- Enter vendor registration details such as name, site, class, package, your login information as provided by the vendor, and usage or device pinging interval. The class must exist within the package. The usage interval is usually greater than the metering restriction imposed by the vendor; big enough for system performance and small enough to track resources effectively.

If the GPS service is on, the system validates these details.

- Enable the vendor that you registered.
- After you enable the vendor, you can download all the GPS device details of this vendor. Alternatively, you can manually enter these details on the GPS Devices page.
- Map vendor location tracking statuses to seeded statuses and save this mapping.

Oracle Field Service supports the vendors, Onboard and Trimble, and provides default implementation for them as described in the following table.

Vendor Name	Onboard	Trimble
Implementing Class	OnboardGPSVendor	TrimbleGPSVendor
Implementing Package	oracle.apps.csf.spatials.gps.server	oracle.apps.csf.spatials.gps.server
Service Provider URL	http://xml.fleettraks.com	https://www.demo.road.com/apps/API
User Name	oracle	api21463
Password	testaccount	4nCWq2tR
Usage Interval	0	120

Registering and Assigning GPS Devices

After you register and enable the vendors, you can either download all the devices for a vendor using the GPS Administration page or manually enter device tags or identifiers, active period, and vendor on the GPS Devices page. Downloading automatically enters device details. If required, you can enter a user-defined tag for each of these devices.

You can then select the device you just registered and click on the Ping Device icon to fetch and display the current location inline and on the map. If you click on the marker in the map, the tool tip displays the device tag, the exact location co-ordinates, and the date and time of the last known activity.

In the Device Details region of this page, you can use the Add Assignee button to add the selected device to a resource of a selected resource type. You can also change the assignee for a device and save your changes.

Tracking GPS Path of Resource

You can use the Path Tracker link in GPS Setup to check the performance of a device by plotting the GPS path of a selected resource and resource type for a given period. When you click on the Plot GPS Path button, the path taken by the resource over the given period is displayed on the map.

Purging GPS Data

Tasks and technician information in Field Service is constantly changing. Although Field Service maintains GPS data history, to improve application performance, it is recommended that you periodically purge accumulated GPS data.

You can schedule to run the Purge GPS Location Feeds program from the Concurrent Manager. Alternatively, you can click on the Purge icon in the GPS setup pages to remove GPS data for selected vendors, devices, and device assignees, one at a time.

Scheduling the Purge GPS Location Feeds Program

Oracle Field Service provides the Purge GPS Location Feeds concurrent program to purge stored GPS history and improve application performance.

This program has the following parameters.

- Territory - Select a territory to purge GPS data for all resources in the selected territory.
- Resource Type - Select a resource type to purge GPS data for all the resources of the selected resource type.
- Resource - If you selected a resource type, you can select a resource of this resource type to limit the purge to that for the named resource.
- Start Date - Enter a start date to purge GPS data across resources and territories

from the specified start date. If you do not specify an end date, the program considers all GPS data from the start date till date.

- **End Date** - Enter an end date to purge GPS data across resources and territories till this date. If you do not specify a start date, the program considers all GPS data from the time of creation till the specified end date.
- **Days into History** - Enter the number of days back from the current day that denotes the start date of the period for which the program must purge GPS data. The end date of this period is the current date.

You can enter one or more parameters to limit the scope of the purge.

To view the status, details, and outputs of submitted requests, navigate to the Purge Monitor link on GPS Setup. For more information, see Monitoring Submitted Purge Jobs, page 6-72.

Monitoring Submitted Purge Jobs

Oracle Field Service provides this page to enable you to monitor the progress of the concurrent jobs that you submitted. You can view these requests by request ID and submission date. For information on parameter and notification details on these submissions, click on the Details icon.

You can click on the Output icon to view the report for a completed concurrent request.

Spares Management Implementation Tasks

This chapter documents setup for Oracle Spares Management, External Repair Execution, and Warehouse Replenishment Planning.

This chapter covers the following topics:

- Setting Up Oracle Spares Management
- Defining Forecast Rules
- Setting Up a Forecast Rule
- Selecting a Forecast Rule
- Defining Calculation Rules
- Defining Excess Rules
- Defining Excess Reject Reasons
- Creating Business Rules to Automate Warehouse Notifications
- Defining Manual Override Reasons
- Defining Task Parts
- Defining Parts Priorities
- Defining Delivery Times
- Setting up Reschedule Rules
- Setting Up Warehouse Replenishment Planning
- Defining Excess and Defective Warehouses and Repair Suppliers
- Defining Excess Warehouses and Assigning to the Warehouse Being Planned
- Defining Defective Warehouse Organizations
- Defining and Assigning Internal Repair Suppliers
- Defining and Assigning Planned Order Release Automation Business Rules
- Setting Up Other Warehouse Planning Parameters

- Defining Planning Parameters to Create Min-Max levels for a Warehouse or Technician
- Setting Up Lead Times for Warehouse Replenishment Planning
- Setting Up External Repair Execution
- Setting Up Repair Parameters
- Setting Profile Options for External Repair Execution
- Setting Up Parts Search and Ordering Profile Options

Setting Up Oracle Spares Management

To set up the Oracle Spares Management module (Spares Management) in Oracle Field Service, perform the steps listed in the following table:

Spares Management Setup Steps

1. Define Forecast Rules, page 7-3

Forecast rules are used to determine how the demand forecasts for service parts are calculated.

2. Define Calculation Rules, page 7-7

Calculation rules are used to determine which availability elements are to be included when calculating the Actual Available quantity for the purpose of producing replenishment notifications for the planner.

3. Define Excess Rules, page 7-9

Excess Rules can be used to filter out excess parts that have been recently received or that do not have a significant impact on excess value.

4. Define Excess Reject Reasons, page 7-11

Excess reject reasons can be applied when an excess recommendation is rejected. The Reject Reason activity can be used for analysis of the excess recovery process to determine why the excess was not executed.

5. Define Manual Override Reasons, page 7-14

Manual override reasons can be applied when the planner overrides a Min-Max recommendation. The Manual Override activity can be used to determine why the planner is changing or not implementing the recommendations.

6. Define Task Parts, page 7-15

Define a list of parts that are typically required for a specific product and task template.

7. Define Parts Priorities, page 7-17

Part priorities are used in Field Service Advanced Scheduler to determine which parts, based on priority, are to be used in assigning and scheduling technicians.

8. Define Delivery Times, page 7-18

Specify the delivery times for shipment methods that have been defined in Oracle Inventory. Used by Scheduler to determine when a technician could be scheduled based on the delivery time of the parts.

9. Set Up Warehouse Replenishment Planning, page 7-22

Define and assign excess and defective warehouses and internal repair suppliers. Define warehouse planning parameters, set up reschedule rules, specify plan methods, and set up lead times.

10. Set Up External Repair Execution, page 7-43.

Define and assign external repair suppliers. Set up Repair Parameters and Profile Options.

Defining Forecast Rules

Forecast rules are used to determine how forecasts are calculated. Forecasts are used in Parts Loops, Min-Max Recommendations, and Warehouse Replenishment Planning.

See Setting Up a Forecast Rule, page 7-3 and Selecting a Forecast Rule, page 7-6.

Setting Up a Forecast Rule

The forecast rule is used to generate the usage forecast for total requirements and the returns forecast for defectives in Warehouse Replenishment Planning (WRP). The forecast rule is also used to generate forecasts for Min-Max recommendations for warehouses or technicians and Parts Loops in the Planner's Desktop.

You create forecast rules using the Forecast Rules tab of the Business Rules window.

Business Rules

Forecast Rules | Excess Rules | Recommendation Rules | Notification Rules | Reschedule Rules | Order Automation Rules

Rule Name: Warehouse Rule

Description: Average rule for the central warehouses

Forecast Method: Simple Average

Forecast Parameters

Period Size: 7

Forecast Periods: 13

History Periods: 26

Tracking Signal Cycle: 1

Alpha:

Beta:

Transaction Types

Name	Description
Field Service Usage	Field Service Usage

Weighted Average

Period Index	1	2	3	4	5	6	7	8	9	10	11	12

Forecast Parameters

This list details the parameters that are defined for forecast rules:

- The Rule Name is the name of the forecast rule.
- The Description field contains a description of the forecast rule.
- The Period Size is expressed in days. If you want to set up a weekly period, for example, you would enter 7.
- The Forecast Periods field indicates the number of forecast periods.
- The History Periods field indicates the number of historical periods to include in the forecast calculation.
- The Tracking Signal Cycle field is used to determine the number of history periods used to calculate the Tracking Signal. Each cycle is equal to the number of history periods.

The Tracking Signal is used to measure forecast error.

- The Alpha field is used in the Exponential Smoothing and Trend Enhanced methods. In exponential smoothing, alpha determines how much weight to apply to the current period usage. In the Trend Enhanced method, alpha is used to determine the constant for the trend line.
- The Beta field is used in the Trend Enhanced method and is used to determine the slope of the trend line.

- The Weighted Average Period Index fields are used to specify weights for individual periods. For example, you can assign higher weights to more recent periods if that is desired. The total of the period values must equal 1 and each value must be greater than zero and less than one.

Forecast Methods

Spares Management provides the following four forecast methods:

- **Simple Average** is an average based on the number of history periods selected.
- **Weighted Average** is based on the number of history periods, and the different weights for each period.
- **Exponential Smoothing** provides a simplified version of the weighted average. The smoothing constant Alpha is used to define the weight given to the current history period. (1 - Alpha) is used to determine the weight given to prior periods (other than the most current). This method does not produce a positive or negative trend forecast.
- **Trend Enhanced** produces a trend forecast. Beta is a smoothing factor for the slope of the trend and is used to define the weight given to the trend in the current period. (1 - Beta) is used to determine the weight given to the previous trend. Alpha is a smoothing factor for the constant and is used to define the weight given to the current history period.

To Create a Forecast Rule:

1. Navigate to the Forecast Rules window, page A-1.
The Business Rules window appears displaying the Forecast Rules tab.
2. In the Forecast Rules window, enter a rule name in the Name field.
3. (Optional) Enter a description in the Description field.
4. Select a forecast method from the Forecast Method list of values.
The values are Simple Average, Weighted Average, Exponential Smoothing and Trend Enhanced.
5. In the Period Size field, enter the number of days.
Example
For a period size of weekly, you would enter 7.
6. In the Forecast Periods field, enter the number of periods for the forecast.
7. In the History Periods field, enter the number of periods of history to use in

generating the forecast.

8. In the Tracking Signal Cycle field, enter the number of cycles to use when calculating the Tracking Signal. Each cycle is equal to the number of history periods.
9. If you are using the Exponential Smoothing or Trend Enhanced method, enter the factor in the Alpha field.

This number is expressed as a decimal. Alpha would be greater than 0, and equal to or less than 1.

Tip: In most cases, the alpha factor should be set in the range of 0.15 - 0.25.

10. If you are using the Trend Enhanced method, enter the factor in the Beta field.
This number is expressed as a decimal. Beta should be greater than 0, and equal to or less than 1.

Tip: In most cases, the beta factor would be set in the range of 0.15 - 0.25.

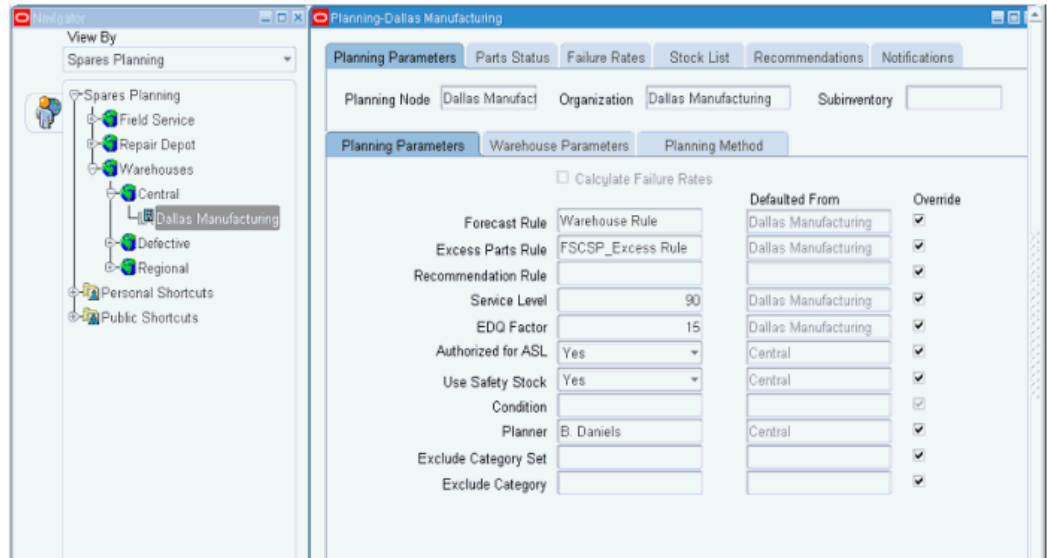
11. In the Transactions Types fields, enter the transaction types from Inventory that are used to create the transaction history used to generate the forecast.
12. Save your work.

Selecting a Forecast Rule

The Forecast rule is used to generate:

- Usage forecast for total requirements in Warehouse Replenishment Planning.
- Forecasts for use in Min-Max recommendations for warehouses or technicians and Parts Loops.
- WRP returns forecast for the defective warehouse.

You assign the forecast rule to a warehouse (organization) or a technician (sub inventory) in the Planning Tree of the Planner's Desktop.



To select a Forecast Rule:

Steps:

1. Navigate to the Planner's Desktop, page A-1.

The Planner's Desktop appears displaying the Planning Parameters tab, and Planning Parameters sub tab.

2. From the Tree in the Planner's Desktop, select a warehouse, technician, or node.

Note: The warehouse can either be the warehouse being planned or the defective warehouse.

Note: If you select a node other than an organization (warehouse) or sub inventory (technician), then the Forecast Rule (or other parameters) default to lower level nodes underneath the node where the Forecast Rule was selected.

3. In the Forecast Rule field of the Planning Parameters sub tab, select a Forecast Rule from the list of values.
4. Save your work.

Defining Calculation Rules

Calculation rules are used to define the actual available quantity to produce notifications in Parts Loops.

The calculation rule includes a tolerance percentage to be used in loop planning to generate parts loop notifications. A notification is created whenever the parts quantity is over or under the loop quantity by the percentage specified.

The calculation rule also includes a value called the Time Fence that represents the number of days in the future to be used when considering the availability elements.

A calculation rule is required before setting up Parts Loops.

Example of a Calculation Rule

Suppose you want the planner to be notified when the loop quantity exceeds 110% of the desired loop quantity. You also want to consider all orders due in the next twenty days when calculating the available quantity that is compared to the desired loop quantity. Here are suggested parameter settings of the calculation rule for this scenario:

- The Rule Name is Twenty Days.
- The Description is Include Availability Elements for 20 Days.
- All Availability Elements are checked.
- The Tolerance Percent is 10.
- The Time Fence is 20.

Use this procedure to define calculation rules:

Steps:

1. Navigate to the Define Calculation Rule window, page A-1.

The Define Calculation Rule window appears.

2. Enter a rule name in the Name field.
3. (Optional) Enter a description in the Description field.
4. Select the availability elements.

The choices are:

- Usable on-hand
- Defective on-hand
- Purchase orders (use this only if Oracle Purchasing is installed)
- Open WIP orders (use this only if Oracle Work in Process is installed)
- Open Requisitions (use this only if Oracle Purchasing is installed)

- Sales Orders (use this only if Oracle Order Management is installed)
 - Move Orders
 - Inter Organization transfers
 - In-transit Move Orders
5. Enter a Tolerance Percent.

This is used in loop planning to filter notifications that are within the tolerance percent. For example, if a 10 is entered, a notification will be sent whenever the quantity is plus or minus 10% of the desired quantity.
 6. Enter the Time Fence, in days.

This is used in loop planning to filter incoming and outgoing orders scheduled beyond a specified time period.
 7. Save your work.

Defining Excess Rules

Excess rules are used to filter out excess parts that do not have a significant impact on excess value. This enables the field technician or warehouse planner to focus excess recovery on the few items that have a high value impact.

If you do not use excess rules, available quantities that are greater than the maximum level in the Authorized Stock List (ASL) are considered to be excess and would then appear in the Excess List window for return.

You assign excess rules to either the technician or the warehouse in the Planner's Desktop.

Use the following procedure to create excess rules:

Steps:

1. Navigate to the Excess Rules window, page A-1.

The Excess Rules window appears.
2. Enter a unique name for the excess rule in the Excess Rule Name field.
3. Enter a Description for the excess rule.
4. Enter a value in the Total Max Excess field to represent a maximum allowable percentage of the total Maximum value.

Example

For example, if you enter 10 in this field, then excess parts are considered for return only if their total excess value is greater than 10% of the total Maximum value. If this field is left blank, a zero is assumed and all excesses are considered.

This rule is designed to bypass the technician or warehouse for excess recovery when the overall excess value is within acceptable limits.

5. Enter a value in the Line Max Excess field to represent a maximum allowable percentage of the total excess quantity for a line.

Example

For example, suppose you enter a 10 in this field. If the maximum quantity is 20 and the on-hand quantity is 21, this part would not appear on the excess list because the excess quantity is less than 10% of the maximum quantity. If this field is left blank, a zero is assumed and all excesses are considered.

This rule is designed to filter out excess parts that have relatively high Max levels where the excess would be consumed fairly quickly.

6. Enter a value in the Days Since Receipt field to represent the number of days you want to exclude when calculating the excess quantity.

This enables you to exclude recently received parts from the excess list. For example, if you enter a 10 in this field, then all of the parts received within the last ten days are ignored. If this field is left blank, a zero is assumed and all receipts are included in the excess calculation.

Note: This rule would primarily apply to technicians and would prevent parts received for a task from being declared as excess until a reasonable period of time had passed.

7. You can enter a value in either the Total Excess Value field *or* the Top Excess Lines field.

Enter a value in the Total Excess Value field to represent the percentage of total excess value that you want to see on the excess list. For example, if you enter an 80 in this field, the excess list will display the excess lines that comprise the top 80% of the total excess value.

Alternatively, you can enter a value in the Total Excess Lines field to represent the number of lines that you want to see on the excess list. For example, if you enter 50 in this field, the excess list will contain the 50 highest value lines.

8. Select a value for Category Set if you want to exclude an item category from return, such as supplies.

A category set is a feature in Inventory where you can define your own group of categories.

If you enter a value for Category Set, the Category field is enabled.

9. Select a specific category in the Category field to exclude just this category.
A category is a code used in Inventory to group items with similar characteristics.
10. Save your work.

Note: You assign excess rules in the Planner's Desktop by selecting the technician or warehouse from the Planning Tree, and then selecting the Excess Rule from the list of values in the Planning Parameters tab.

Defining Excess Reject Reasons

During the review of excess recommendations, a planner or technician might reject a particular excess line recommendation. You can define excess reject reasons, which will facilitate better analysis of the rejected excess recommendation activity.

The list of lookups available to your Field Service operation is user definable and can be modified throughout the life cycle of the application.

Use this procedure to define excess reject reasons:

Steps:

1. Navigate to Excess Reject Reason Codes Lookup window, page A-1.

The Application Object Library: Excess Reject Reason Codes Lookup window appears.

You cannot modify the lookup Type, Application, and Access Level fields in the header region. You can add values in the table below those fields.

2. Enter a code in the Code field.

This code is for internal purposes only and is not visible in the Spares Management application.

3. In the Meaning field, enter the name of the excess reject reason. This value will appear in the list of values for Excess Reject Reasons.

Note: The Meaning should represent the excess reject reason. For example, if the excess reason is because the parts are hazardous, enter the word Hazardous in the Meaning field.

4. (Optional) Enter a description in the Description field.

5. For an Excess Reject Reason, leave the Tag field blank.
6. (Optional) The current date appears by default in the Effective From Date field. You can change the Effective From date, and can add an Effective To date.
7. Repeat steps 2 -7 for each additional Excess Reject Reason you want to create.
8. Save your work.

Note: To remove an obsolete excess reject reason Lookup, you can:

- Disable the code by clearing the Enabled check box next to the lookup value.
- Enter an end date.
- Change the meaning and description to match a replacement code.

Creating Business Rules to Automate Warehouse Notifications

Warehouse notifications are used for warehouse replenishment. The functionality which includes visibility to excess inventories and defectives for repair is found in the Notifications tab of the Planner's Desktop.

Automating warehouse notifications is beneficial when planners have a large number of warehouse notifications to execute and when the cycles need to be processed frequently to insure timely replenishment. These rules are set up to automate notifications that have a low notification value combined with a good forecast reliability. You can create automation rules for these new-buy notification types:

- Internal Order: This represents transfer orders between warehouses.
- WIP Order: This is used when manufacturing is required.
- Requisition: This is used when purchasing is required.

In each of the above cases, you can enter Excess Value, Repair Value, Notification Value, and Min-Max Values for Tracking Signals.

- Excess value: This is the value of excess inventory that can be used to satisfy the notification.

Note: This should be set low so that automation would not occur when a significant amount of excess is available to utilize.

- Repair value: This is the value of defective inventory that, when repaired, can be used to satisfied the notification.

Note: This should be also be set low so that automation would not occur when a significant amount of defective inventory is available for repair.

- Notification value: This is the value of the notification recommendation.

Note: This should also be set low so that the planner can review the notifications with larger values.

- Tracking Signal Min: This measures the forecast error when actual usage on a cumulative basis is running less than forecast.
- Tracking Signal Max: This measures the forecast error when actual usage on a cumulative basis is running more than forecast.

Note: You can set values for all or none of the parameters. But for the automated process to be activated, ALL parameters that have been set must be met.

For all parameters with the exception of the Tracking Signal Min, the automation is triggered when the actual value is less than the parameter value. In the case of the Tracking Signal Min, the automation is triggered when the actual value is greater than the parameter value.

Note: You can set up multiple notification rules for a warehouse but only one can be assigned at a time.

Use this procedure to set up automated notification rules:

Steps:

1. Navigate to the Notification Rules window, page A-1.
2. From the Business Rules window, select the Notification Rules tab.
3. Enter the Name of the rule.
4. (Optional) Enter a Description.
5. For the Internal Order Line, enter an Excess Value parameter.

6. Enter a Repair Value parameter.
7. Enter a Notification Value parameter.
8. Enter Tracking Signal Min and Max parameters.
9. Repeat steps 5 - 8 for Requisition and WIP Order lines.
10. Save your work.

Defining Manual Override Reasons

You can define reasons that a planner may have for overriding the stock list recommendations or for manually creating a Min-Max. When the planner overrides a recommendation or manually enters a Min-Max, a reason, for future reference, can be entered.

Use this procedure to define the manual override reasons:

Steps:

1. Navigate to the Manual Override Reason Lookups window, page A-1.
The Application Object Library: ASL Reason Code Lookups window appears.
You cannot modify the lookup Type, Application, and Access Level fields in the header region. You can add values in the table below those fields.
2. Enter a code for the Override Reason.
This code is for internal purposes only and is not visible in the Spares Management application.
3. In the Meaning field, enter the name of the Override Reason that you want to have appear in the list of values for manual override reasons. Manual Override Reasons appear in the Planner's Desktop and are used when an Authorized Stock List is manually created.

Note: The Meaning should be word that makes sense in relation to the manual override reason you are trying to represent.
4. (Optional) Enter a Description for the Override Reason.
5. When defining Override Reasons, leave the Tag field blank.
6. The current date appears by default in the Effective From date field.
(Optional) You can change the Effective From date, and enter an Effective To date.

7. Repeat steps 1-6 for each additional Override Reason that you are defining.
8. Save your work.

Note: To remove an obsolete Lookup you can:

- Disable the code by clearing the Enabled check box next to the lookup value.
- Enter an end date.
- Change the meaning and description to match a replacement code.

Defining Task Parts

You can define a list of parts that are typically required for a specific product and task template. This task parts definition provides an efficient method for creating a parts requirement for a task. Task parts saves time because there is no need to manually enter which parts are needed for tasks that are frequently executed. When using task parts, you can override the predefined list of parts, if necessary.

You define Tasks Parts for combinations of products and task templates using the Define Task Parts window.

Parts can be defined automatically by running the Create Task Parts History concurrent program, which collects usage information from the Debrief process in Field Service and populates the calculated fields based on the usage history associated with the product and task template over the time period specified in the Forecast Rule.

The Manual region of the window enables the manual entry of items used on the product and task template. The manual entries will always override the calculated entries. The Roll up region summarizes the usage information for supersessions, if applicable. The usage is rolled to the top part in the supersession chain.

Use this procedure to manually create Task Parts:

Prerequisites

- ☐ Define a Task Template.
- ☐ Define products and items.

Steps:

1. Navigate to the Define Tasks Parts window, page A-1.

2. Click the New button on the Find Product Task window.
The Define Task Parts window appears.
3. In the Product field, select a product from the list of values.
The product description appears on the right. The product represents the machine on which the service task is performed.
4. Enter a Task Template name or select one from the list of values.
5. The Auto or Manual default value is Manual. The default value is set when you save your work.
6. Skip the Times Used field. It will be populated with the number of times this task template has been used for this product, after running the Create Task Parts History concurrent program.
7. Skip the Task % field. It will be populated with a number representing the percentage of times this task template was used for this product, after running the Create Task Parts History concurrent program.
8. In the Define Parts section, choose the first part number in the Item field that you want to associate with this task and product from the list of values.
The item default Unit of Measure appears in the UOM field.
9. Enter a revision number in the Rev field, if applicable for this part.
10. Enter the quantity of parts required.
11. Enter a value in the % (percentage) field to represent how likely this part is expected to be used in this task template and product combination.
This percentage value is used to define the Priority.
Example
For example, if you expect this part to be used about 50% of the time when this task is executed on the product, then enter 50 in this field.
12. (Optional) Enter the Start Date or End Date to enable or disable this parts task definition on a specific day.
13. Repeat steps 8-12 for each additional part.
14. Save your work.

Defining Parts Priorities

Parts Priorities are used to assign a priority classification for each of the parts defined in a Task Parts definition. The Parts Priority is based on a range of likelihood or probability that a part will be used on a product and task based on the definition in the Task Parts.

The Oracle Advanced Scheduler uses the priorities when assigning and scheduling technicians to a task that requires parts.

Field Service provides two seeded priorities: All Parts and No Parts. These values, along with those defined by the user, are available for scheduling purposes, either through Advanced Scheduler functionality, or manually through the Advise button on the Field Service Dispatch Center.

Use this procedure to define parts priorities:

Steps:

1. Navigate to the Parts Priorities window, page A-1.
2. Enter the Lower and Upper Range.
3. Enter a code for the Priority of the part.

This code can be alphanumeric, but it should be meaningful for an end user. For example, if the priority is high, you can enter P1 as the priority designation. If it were low, you can enter P4.

Example

For example, if you enter a Lower Range = 75, Upper Range = 100 and Priority = P1, this means that a part with a likelihood of being used on a product and task in Task Parts Requirement window between 75% and 100% of the time would be classified as P1

4. In the Meaning field, enter a meaning for the Priority that will appear in the list of values in Advanced Scheduler.

Note: The Meaning should be text that represents the part priority you are defining. A high percentage priority range, for example, should be reflected by a similar meaning, in other words, High range = 100: Meaning = P1.

5. (Optional) Enter a description of the priority in the Description field.

Example

For example, for a Priority = P1, then the description could be *Highest Priority*.

6. Repeat steps 2-5 for each additional priority you want to create.
7. Save your work.

Note: The Parts Priority interacts with Task Parts to assign a priority to each of the parts defined in a Task Parts definition. The priority assignment is made based on the likelihood (percent) that a part will be used as defined in Task Parts.

Example

For example, in Task Parts if the Percent for a part = 80%, then based on the example noted in Step 2 the priority assignment would be P1.

The percent, or likelihood of being needed, can be manually or automatically defined.

Defining Delivery Times

Spares Management provides a method for defining the specific delivery times for shipment methods that are defined in Oracle Inventory.

Example

If your Shipment Method is *next day delivery*, in Delivery Times, the specific time, for example, 10:30 AM can be defined for that Shipment Method. If the technician needs to receive a part required for a task, Advanced Scheduler could not schedule the technician to the task before the delivery time based on the Shipment Method.

A Comfort Zone can also be used to provide buffer time between the receipt of the part and the schedule for the task. In the previous example, a Comfort Zone of two hours would keep the task from being scheduled by Scheduler before 12:30 PM.

Use this procedure to define delivery times:

Prerequisites

- ☐ Define Shipment methods in Oracle Inventory.
- ☐ Define Freight Carriers in Oracle Inventory.

Steps:

1. Navigate to the Define Delivery Time window, page A-1.
The Define Delivery Time window appears.
2. From the Define Delivery Time window, execute a query for the organization you want to update.

You can do this either by using the Find All menu option, or if you know the organization you want to update, you can Query By Example.

The window displays the shipping methods and freight codes that have been defined in Oracle Inventory for each inventory organization.

3. Enter a value in the Lead Time field for the number of time units this freight carrier commits to make a delivery.

Example

For example, for an overnight delivery, enter a 1 in this field and then choose Day in the UOM field.

4. In the UOM field, enter the unit of time that corresponds to the previous field, Lead Time.

5. Enter the carrier's expected delivery time in the Delivery Time field.

This value is expressed in military time. For example, if you enter a 1, the window displays 01:00, or one o'clock in the morning.

6. Enter any time value between 0100 and 2400 in the Cutoff Time field.

The Cutoff Time is the time for which the order must be entered to achieve the lead time and delivery time. For example, if the order is entered by 16:00 hours, then the part can be delivered by the next day (Lead Time = 1) by 10:30 (delivery time).

Otherwise, if the order is entered after 16:00 hours, then the cutoff is missed for that method of shipment and the part would be delivered in two days where the intransit time is set to 1 for the method of shipment.

7. The Time Zone field will default to the time zone associated with the organization that you choose.

8. Enter a number of hours in the Comfort Zone field.

The Comfort Zone (Hours) is the time to allow between the expected delivery time of the part and the schedule of the field technician when the receipt of a part is required.

9. Save your work.

Setting up Reschedule Rules

The *Reschedule In* Rule defines gaps in the schedule where parts are on-order but the projected on-hand balance is tracking too low ahead of the scheduled delivery. The current order may need to be repositioned earlier in the schedule to eliminate gaps or situations where the projected on-hand balance is potentially putting service at risk.

Reschedule Out defines schedule segments where parts are on-order and are due to

arrive well before they are needed causing the projected on-hand balance to track too high. The current order may need to be repositioned later in the schedule to avoid an inventory level that is higher than needed.

An exception condition exists when the projected balance is out of the range defined by the reschedule rules. Reschedule Rules are used in Warehouse Replenishment Planning (WRP) to capture reschedule recommendations for the planner.

Use this procedure to set up Reschedule Rules:

Steps:

1. Navigate to the Reschedule Rules window, page A-1.

The Business Rules window opens to the Forecast Rules tab.

2. Select the Reschedule Rules tab.

The screenshot shows the 'Business Rules' window with the 'Reschedule Rules' tab selected. The window has a title bar and several tabs: 'Forecast Rules', 'Excess Rules', 'Recommendation Rules', 'Notification Rules', 'Reschedule Rules' (active), and 'Order Automation Rules'. The main area contains the following fields:

- Name:** Warehouse Rule
- Description:** Reschedule rule for the warehouse
- Reschedule In:**
 - Onhand Balance Type: Current Balance
 - Start Day: 1
 - End Day: 30
 - Onhand Balance Less Than: Safety Stock
 - Number of Periods: 2
- Reschedule Out:**
 - Onhand Balance Type: Current Balance
 - Start Day: 15
 - End Day: 45
 - Onhand Balance Value: 1000
 - EDQ Multiple: 2
 - Number of Periods: 3

3. Enter the Reschedule Rule Name, and optionally, a Description.
4. In the Reschedule In region, select the On Hand Balance Type for the Reschedule In Rule to monitor.

The Current Balance option projects the on-hand balance period by period using Requirements, Current On-hand, and Current On-order. The Planned Balance option includes Planned Orders and the Repairable Returns forecast.

Normally, the rescheduling would be based on the Current Balance.

5. Enter the Start Day and End Day to define the period applicable for the Reschedule In Rule to monitor.

6. Select the On Hand Balance Less Than condition for Reschedule In.
7. Enter the Number of Periods. This specifies the number of occurrences that the Projected On Hand Balance falls below the On Hand Balance condition (within the range of days defined by the Start Day and the End Day) to qualify for Reschedule In.

Example

For example, if the On Hand Balance Less Than condition is *Safety Stock*, the Start Day is 1, the End Day is 30, and the Number of Periods value is set to 2. If the On Hand Balance falls below the Safety Stock on two or more occasions during the next thirty days, then the Reschedule In rule creates a recommendation.

8. In the Reschedule Out region, select the On Hand Balance Type for the Reschedule Out Rule to monitor.
9. Enter the Start Day and End Day to define the range of days for the Reschedule Out Rule to monitor.
10. Select the On Hand Balance Value for the Reschedule Out exception condition.

The On-hand Balance Value defines the value that the projected balance must exceed the upper limit by to qualify as a Reschedule-Out.
11. Enter the EDQ (Economic Delivery Quantity) Multiple used to define the reschedule upper limit.

The EDQ Multiple along with the Reorder Point (ROP) is used to define the Upper Limit. The Upper Limit is equal to the ROP plus the EDQ Multiple times the EDQ.
12. Enter the Number of Periods. This specifies the number of periods the On Hand Balance must track above the On Hand Balance value parameter (within the range of days defined by the Start Day and the End Day) to qualify for Reschedule Out.

Example

For example, the On Hand Balance value is 1000, the Start Day is 15, the End Day is 45, and the Number of Periods value is set to 3. If the On Hand Balance exceeds the Upper Limit by 1000 USD on at least three consecutive periods during the thirty-day period that starts 15 days from now, then the Reschedule Out rule creates an exception message.

13. Save your work.

Note: The Reschedule Rules are assigned to the warehouse being planned in the Warehouse Parameters tab.

See Setting Up Other Warehouse Planning Parameters, page 7-36.

Setting Up Warehouse Replenishment Planning

Planners use Warehouse Replenishment Planning (WRP) to plan warehouse inventories and to execute replenishment in the field service supply chain. WRP is specifically designed to incorporate the unique features and functionality needed to manage the inventory at a warehouse in field service.

To set up Oracle Spares Management Warehouse Replenishment Planning complete the following steps:

Prerequisites

- ☐ Set up the warehouse being planned as an inventory organization.
- ☐ Set up the excess warehouses as inventory organizations.
- ☐ Set up the defective warehouses as inventory organizations.

Steps:

1. Set up Forecast Rules and assign them to the warehouse being planned. See
 - Setting Up a Forecast Rule, page 7-3.
 - Selecting a Forecast Rule, page 7-6.
2. Define Excess and Defective Warehouses and assign them to the warehouse being planned. See
 - Defining Excess Warehouses and Assigning Them to the Warehouse Being Planned, page 7-23.
 - Defining Defective Warehouse Organizations, page 7-26.
3. Define Repair Suppliers and Assign to the warehouse. See Defining and Assigning Internal Repair Suppliers, page 7-30.
4. Set up Reschedule Rules and assign them to warehouses. See Setting Up Reschedule Rules, page 7-19.
5. (Optional) Define Order Automation rules and assign them to a warehouse. See Defining and Assigning Planned Order Release Automation Business Rules, page 7-33.
6. Set up Other Warehouse Planning Parameters for the warehouse. See Setting Up Other Warehouse Planning Parameters, page 7-36.

7. Set up Lead Times for excess, repair, and new-buy. See Setting Up Lead Times, page 7-39.
8. Set up External Repair Execution, if required. See Setting Up External Repair Execution, page 7-43.

Defining Excess and Defective Warehouses and Repair Suppliers

When planning the field service warehouse other warehouses need to be defined for the utilization of excess and defective inventory. Repair suppliers also need to be defined that are to be used in the repair and replenishment of parts for the primary warehouse being planned.

All warehouses: primary, excess, and defective need to be set up as inventory organizations. Repair Suppliers also need to be set up as inventory organizations and repair suppliers in Purchasing.

Defining Excess Warehouses and Assigning to the Warehouse Being Planned

When planning the field warehouse there might be other warehouses whose excess needs to be incorporated into the planning of that warehouse. You define the specific excess warehouses using Sourcing Rules and then link them to the warehouse being planned in WRP in Assignment Sets. *Excess*, for the purpose of planning at the primary warehouse, is defined as available inventory in excess of the Maximum level.

Excess warehouses are used in the Warehouse Replenishment Planning module. They are also used in the basic replenishment functionality found in the Notifications tab of the Planner's Desktop.

This section covers creating the Sourcing Rule and Assignment Set and linking the Assignment Set to the warehouse that is being planned in WRP.

Use this procedure to set up excess warehouses for usable excess parts:

Prerequisites

- ☐ Set up the warehouse that is being planned as an inventory organization.
- ☐ Set up the excess warehouses as inventory organizations.

To Create A Sourcing Rule:

1. Navigate to the Sourcing Rule window, page A-1.
The Sourcing Rule window appears.

Note: You would create the Sourcing Rule for the organization representing the warehouse that is being planned.

Sourcing Rule (M3)

Name: ○ All Orgs ☐ Planning Active

Description: [] • Org Copy From...

Effective Date

From Date: To Date:

Shipping Organization

Type	Org	Supplier	Supplier Site	Allocation % Rank	Shipping Method	Intransit Time
Transfer From	S1			100 1		
Transfer From	M2			100 1		

View Purge Copy Shipping Orgs From... Assignment Set...

2. Enter a Sourcing Rule name.
3. (Optional) Enter a Description.
4. In the Shipping Organization region enter *Transfer From* as the Type. Enter the organization representing the excess warehouse where excess inventory will be utilized in the Org field.

See Defining Sourcing Rules, in the *Oracle Purchasing User's Guide*

5. Save your work.

In this example organizations S1 and M2 have been defined in the Sourcing Rule as excess warehouses that will be used in the replenishment planning for another warehouse.

To Create an Assignment Set and Assign the Sourcing Rule to the Primary Warehouse Being Planned:

1. Navigate to the Sourcing Rule / Bill of Distribution Assignments window, page A-1.

The Sourcing Rule / Bill of Distribution Assignments window appears.

Assignment Set: FS Excess

Description:

Assignments

Assigned To	Organization	Customer	Customer Site	Item / Category
Organization	M3			
Organization	P1			

View Sourcing Rule/BOD View Supply Chain Bill

The Assignment Set is the link between the Sourcing Rule that defines the excess warehouses and the warehouse being planned.

2. Enter the Assignment Set name and Description.
3. Enter Organization in the Assigned To field from the list of values.
4. Enter the organization (warehouse being planned) in the Organization field.
5. Enter Sourcing Rule in the Type field and the name of the Sourcing Rule in the Sourcing Rule/BOD field.

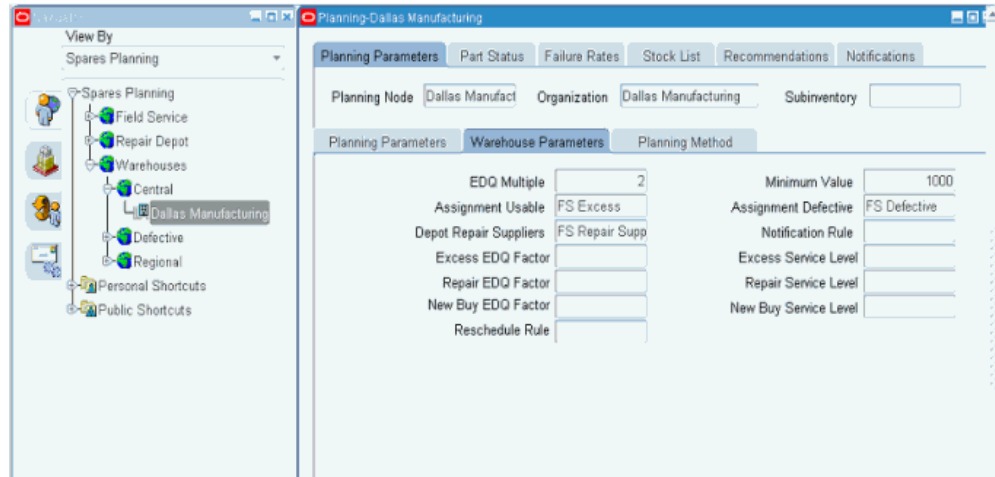
See Assigning Sourcing Rules and Bills of Distribution, *Oracle Purchasing User's Guide*.

6. Navigate to the Planner's Desktop, page A-1.

The Planner's Desktop window appears displaying the Planning Parameters tab, and Planning Parameters sub tab.

7. In the Spares Planning tree of the Planner's Desktop select the warehouse being planned.
8. Select the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.

The Warehouse Parameters sub tab appears.



9. Enter the Assignment Set for the excess warehouses in the Assignment Usable field of the Warehouse Parameters tab.
10. Save your work.

In this example through the use of Sourcing Rules and Assignment Sets two organizations, S1 and M2, have been designated as warehouses where excess will be utilized in the planning and replenishment of organization Dallas Manufacturing.

In WRP this enables the excess warehouses defined in the Sourcing Rule to be incorporated into the warehouse planning.

In the Notifications tab of the Planner's Desktop this also enables excess inventories from the excess warehouses defined in the Sourcing Rule to be visible in the warehouse replenishment notification.

Defining Defective Warehouse Organizations

When planning the field service warehouse there might be other warehouses whose defective inventory needs to be incorporated into the planning of that warehouse. The defective inventory would be repaired and used for the replenishment of inventory in the warehouse being planned. You define the specific defective warehouses using Sourcing Rules and then link them to the warehouse being planned in Assignment Sets.

This section covers creating the Sourcing Rule and Assignment Set and linking the Assignment Set to the warehouse being planned.

Defective warehouses are used in the Warehouse Replenishment Planning module. They are also used in the replenishment functionality found in the Notifications tab of the Planner's Desktop.

Note: Defective inventory for the purpose of planning at the primary warehouse is defined as all available inventory.

Use this procedure to set up warehouses for defective parts and then assign them to the warehouse being planned:

Prerequisites

- ☐ Set up the warehouse that is being planned as an inventory organization.
- ☐ Set up the defective warehouses as inventory organizations.

To Create a Sourcing Rule:

1. Navigate to the Sourcing Rule window, page A-1.

The Sourcing Rule window appears.

Note: You would create the Sourcing Rule for the organization representing the warehouse that is being planned.

Sourcing Rule (M3)

Name: **FS Defective**

Description:

☐ All Orgs ☐ Planning Active

☒ Org: **M3** **Copy From...**

Effective Date

From Date: **07-FEB-2003** To Date:

Shipping Organization

Type	Org	Supplier	Supplier Site	Allocation % Rank	Shipping Method	Intransit Time
Transfer From	DWH			100 1		
Transfer From	M6			100 1		

View **Purge** **Copy Shipping Orgs From...** **Assignment Set...**

2. Enter a Sourcing Rule name.
3. (Optional) Enter a Description.
4. In the Shipping Organization region enter *Transfer From* as the Type. Enter the organization representing the defective warehouse where defective inventory will be utilized in the Org field.

See Defining Sourcing Rules, *Oracle Purchasing User's Guide*

In this example organizations DWH and M6 have been defined in the Sourcing Rule as defective parts warehouses that will be used in the replenishment planning for the warehouse.

To Create an Assignment Set and Assign the Sourcing Rule to the Primary Warehouse Being Planned:

1. Navigate to the Sourcing Rule / Bill of Distribution Assignments window, page A-1.

The Sourcing Rule / Bill of Distribution Assignments window appears.

The Assignment Set is the link between the Sourcing Rule that defines the defective warehouses and the warehouse being planned.

2. Enter the Sourcing Rule name in the Assignment Set field.
3. (Optional) Enter a Description.
4. Enter Organization in the Assigned To field from the list of values.
5. Enter the organization (warehouse being planned) in the Organization field.
6. Enter Sourcing Rule in the Type field and the name of the Sourcing Rule in the Sourcing Rule/BOD field.
See Assigning Sourcing Rules and Bills of Distribution, *Oracle Purchasing User's Guide*.
7. Navigate to the Planner's Desktop, page A-1.
The Planner's Desktop appears displaying the Planning Parameters tab, and Planning Parameters sub tab.
8. In the Spares Planning tree of the Planner's Desktop, select the warehouse being planned.
9. Select the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.

The Warehouse Parameters sub tab appears.

10. Enter the Assignment Set for the defective warehouses in the Assignment Defective field of the Warehouse Parameters tab.
11. Save your work.

In this example through the use of Sourcing Rules and Assignment Sets two organizations, DWH and M6, have been designated as warehouses where defective parts will be utilized in the planning and replenishment of organization M3.

In WRP this enables the defective warehouses defined in the Sourcing Rule to be incorporated into the warehouse planning.

In the Notifications tab of the Planner's Desktop this also enables excess inventories from the defective warehouses defined in the Sourcing Rule to be visible in the warehouse replenishment notification.

Defining and Assigning Internal Repair Suppliers

Repair Suppliers in the field service supply chain can be both internal and external. For internal repair suppliers that are using Oracle Depot Repair there is integration with WRP and the Notifications tab in the Planner's Desktop. That integration consists of automated execution that creates two internal orders: one into the repair depot, and one out of the depot to the warehouse being planned, and the Repair Order in Depot Repair. You define the internal repair suppliers using Sourcing Rules and then link them to the warehouse being planned in Assignment Sets.

This section covers creating the Sourcing Rule and Assignment Set and linking the Assignment Set to the warehouse being planned.

Use this procedure to set up internal depot repair suppliers:

Prerequisites

- ☐ Set up the warehouse that is being planned as an inventory organization.
- ☐ Set up the internal repair supplier as an inventory organization.

To Create a Sourcing Rule:

1. Navigate to the Sourcing Rule window, page A-1.

The Sourcing Rule window appears.

Note: You would create the Sourcing Rule for the organization representing the warehouse being planned.

Sourcing Rule (M3)

Name: ○ All Orgs ☒ Planning Active

Description: [] ○ Org Copy From...

Effective Date

From Date: To Date:

Shipping Organization

Type	Org	Supplier	Supplier Site	Allocation % Rank	Shipping Method	Intransit Time
Transfer From	M1			100 1		

View Purge Copy Shipping Orgs From... Assignment Set...

2. Enter a Sourcing Rule Name.
3. (Optional) Enter a Description.
4. In the Shipping Organization region enter *Transfer From* as the Type. Enter the organization representing the internal repair depot where defective inventory will be repaired and used as replenishment in the Org field.

See Defining Sourcing Rules, in the *Oracle Purchasing User's Guide*

In this example organization M1 has been defined in the Sourcing Rule as an internal repair supplier that will be used in the replenishment planning for the warehouse M3.

To Create an Assignment Set and Assign the Sourcing Rule:

1. Navigate to the Sourcing Rule / Bill of Distribution Assignments window, page A-1.

Assignment Set: FS Repair Supplier

Description:

Assignments

Assigned To	Organization	Customer	Customer Site	Item / Category
Organization	M3			
Item-Organization	M3			FS18947

View Sourcing Rule/BOD View Supply Chain Bill

The Assignment Set is the link between the Sourcing Rule that defines the internal repair suppliers and the warehouse being planned.

Note: You can use the same Assignment Set for other Sourcing rules that define sourcing for external repair. For information on external repair, see Setting Up External Repair Execution, page 7-43.

In this example the Sourcing Rule has been assigned to the organization M3 and also specifically to the item FS18947 at M3.

See Assigning Sourcing Rules and Bills of Distribution, *Oracle Purchasing User's Guide*.

2. Navigate to the Planner's Desktop, page A-1.
The Planner's Desktop appears displaying the Planning Parameters tab, and Planning Parameters sub tab.
3. In the Planner's Desktop, select the warehouse being planned in the Planning Tree.
4. Click the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.
The Warehouse Parameters sub tab appears.
5. Enter the Assignment Set for the repair sourcing in the Depot Repair Suppliers field of the Warehouse Parameters tab.

6. Save your work.

In this example organization M1 has been defined in the Sourcing Rule as an internal repair supplier that will be used to repair defective parts in the replenishment planning for the warehouse M3.

In WRP this enables the Repair Suppliers defined in the Sourcing Rule to be incorporated into the warehouse planning.

In the Notifications tab of the Planner's Desktop this also enables execution automation for internal repair suppliers.

Defining and Assigning Planned Order Release Automation Business Rules

Planned Order Release Automation business rules are used by Warehouse Replenishment Planning in Spares Management to automate the creation of actual orders from planned orders without user intervention.

Warehouses in the Field Service supply chain are in a constant need of replenishment. Large numbers of planned orders from the planning system are often required in the replenishment process. Planned Order Release Automation business rules enable planners to automate the more routine planned orders giving them more time to focus on the exceptions.

The Create Warehouse Replenishment Data concurrent program uses the Order Automation business rules defined for each supply type to create the actual orders from the planned orders.

The Order Automation business rules should be used to automate the lower value planned orders that have a good forecast. The business rule parameters are based on planned order value and the tracking signal that measures forecast error.

To understand more details of the automation process, see Overview: Planned Order Release Automation, *Oracle Spares Management User Guide*

Order Automation Business Rule Parameters

For each Order Automation business rule, parameters for each supply type (excess, repair, and new-buy) can be defined. All applicable parameters must be met for the planned order to be automated. For example, if the value limit was met but the tracking signal or lead time parameter was not met, then the planned order will not be automated by the system.

This table describes the different parameters:

Parameter	Description
Value Limits	<p>Dollar value of a planned order.</p> <p>If the actual value of the planned order is less than the Value Limit, then the planned order will be a candidate for automation based on that parameter.</p> <p>Define this parameter by internal and external for each supply type.</p> <p><i>(Actual value = Planned Order Quantity x Cost)</i></p> <p>Parts with zero cost will be excluded from automation.</p>
Tracking Signal	<p>Measure of forecast error for the part being planned. If the actual tracking signal fell within the minimum and maximum parameters, then the planned order would be a candidate for automation based on that parameter.</p> <p>Define this parameter by internal and external for each supply type.</p>
Lead Time	<p>The Need date of a planned order falls inside of the lead time or outside of the lead time.</p> <p>Using the lead time parameter, the planner could select for automation only those orders inside of lead time or outside of lead time or both.</p> <p>Define this parameter by internal and external for each supply type.</p>

To Set Up Order Automation Business Rules:

Use this procedure to set up Order Automation business rules:

1. Navigate to the Order Automation Rules window, page A-1.
The Business Rules window appears displaying the Forecast Rules tab.
2. Select the Order Automation Rules tab.

Business Rules

Forecast Rules | Excess Rules | Recommendation Rules | Notification Rules | Reschedule Rules | **Order Automation Rules**

Name: Automation Rule 1

Description: Automation Rule 1

	Value Limit	Tracking Signal Minimum	Tracking Signal Maximum	Leadtime
Excess	1000	-100	100	Inside and...
Internal Repair	1000000	-100	100	Inside and...
External Repair	0	-100	100	Inside and...
Internal New Buy	100000	-100	100	Inside and...
External New Buy	100000	-100	100	Inside and...

The Business Rules window appears displaying the Order Automation Rules tab.

3. Enter a rule name in the Name field.
4. (Optional) Enter a description in the Description field.
5. (Optional) Enter the Internal and External Value Limit for the Repair and New-Buy supply types, and the Value Limit for the Excess supply type.

Excess External Value Limit is not applicable.

The Value Limit must be a whole positive number and can be up to 12 characters long.

6. (Optional) Enter the Minimum and Maximum Tracking Signal values for the Excess, Repair, and New-Buy supply types.

The Minimum Tracking Signal value must be a negative number and can be up to 8 characters long.

The Maximum Tracking Signal value must be a positive number and can be up to 8 characters long.

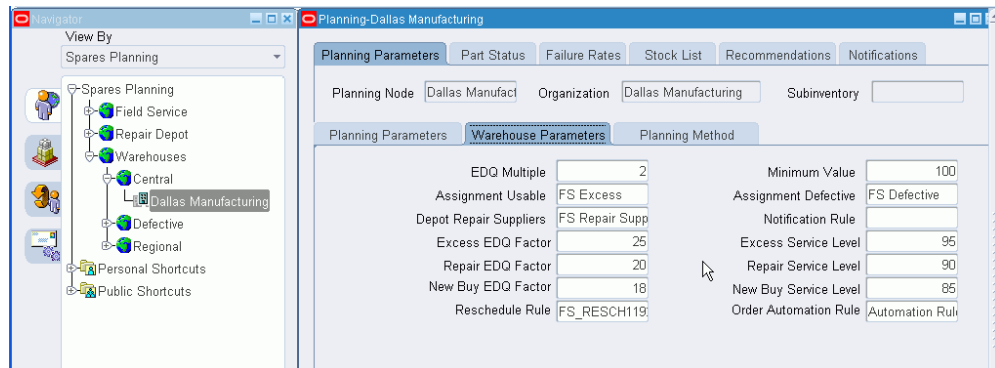
7. (Optional) Select the lead time parameter for the Excess, Repair, and New-Buy supply types. Values are Inside, Outside, or Inside and Outside.
8. Save your work.

To Assign an Order Automation Business Rule to a Warehouse Being Planned:

After the Order Automation business rule has been created, it can be assigned to a warehouse that will be planned in Warehouse Replenishment Planning. When the Create Warehouse Replenishment Data concurrent program is run it will use the business rule to create the actual orders from the planned orders.

Use this procedure to assign an Order Automation business rule to a warehouse:

1. Navigate to the Planner's Desktop, page A-1.
The Planner's Desktop appears displaying the Planning Parameters tab, and Planning Parameters sub tab.
2. In the Spares Planning tree select the warehouse being planned.
3. Select the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.



The Warehouse Parameters sub tab appears.

4. Select the order automation business rule in the Order Automation Rule field.
5. Save your work.

Setting Up Other Warehouse Planning Parameters

Other warehouse planning parameters include Economic Delivery Quantity (EDQ) Factor and Service Level parameters by supply type. Planning parameters by supply type enable the planner to adjust the planning result depending on the supply type being used: excess, repair, or new-buy. Other parameters also include parameters for defining Excess On-order: EDQ Multiple and Minimum Value.

The planning parameters covered in this section act as Warehouse Replenishment Planning (WRP) defaults. In the WRP window, the planner can set unique parameters at the part and warehouse level if necessary.

To set up the Reschedule Rule, see Setting Up Reschedule Rules, page 7-19.

See also, Specifying Planning Parameters for a Warehouse Organization, *Oracle Spares Management User Guide*.

Use this procedure to set up other warehouse planning parameters:

Steps:

1. Navigate to the Planner's Desktop, page A-1.

The Planner's Desktop window appears.

2. From the Spares Planning Tree, select the warehouse organization.

The adjacent Planning Parameters and Warehouse Parameters windows provide details of the planning tree node (warehouse) that you selected.

3. Select the Warehouse Parameters sub tab.

The Warehouse Parameters tab displays fields for the EDQ Multiple and Minimum Value for excess on order. Also included are Service Level, and EDQ Factor by Supply Type.

- **EDQ Multiple:** This value is used to define the Excess Limit in the excess on-order recommendation in WRP and the Notifications Tab in the Planner's Desktop. The Excess On-Order Limit is equal to the Reorder Point (ROP) plus the EDQ Multiple times the EDQ.
- **Minimum Value:** Excess on-order recommendations are created when on-hand plus on-order quantities exceed the excess on-order limit, and the value of the excess on-order is in excess of the Minimum Value which is expressed in the currency value.

The Minimum Value is used in WRP and the Notifications tab of the Planner's Desktop.

- **Service Level by Supply Type:** Expressed as a percentage, the service level is used along with the EDQ to calculate the safety stock quantity. The service level defines on a planned basis the desired percent of demand filled when needed.

Service Level by supply type is only used in WRP.

- **EDQ Factor by Supply Type:** This factor is used in calculating the EDQ. The EDQ Factor combines both ordering costs and carrying costs in the EDQ calculation to determine the delivery quantity.

EDQ Factor by supply type is only used in WRP.

EDQ varies directly with the EDQ Factor. Increasing the EDQ Factor produces a larger calculated EDQ and vice versa.

4. To change any of these values, enter a different number in the appropriate field for the supply type.
5. Save your work.

Defining Planning Parameters to Create Min-Max levels for a Warehouse or Technician

Service Level, Economic Delivery Quantity (EDQ) Factor, Forecast Method, and Forecast Rules are required to create Min-Max level recommendations for the technician or warehouse in the Planner's Desktop. A recommendation rule is optional, but can be used to identify and automate the more routine Min-Max recommendations.

Use this procedure to specify planning parameters for a warehouse or technician:

Steps:

1. Navigate to the Planner's Desktop, page A-1.

The Planner's Desktop window appears.

2. Select a technician (sub-inventory) or warehouse (organization) from the Spares Planning Tree and select the Planning Method sub tab.

3. Select a Planning Method.

Personal Usage: For a technician, this is the activity history based on the Forecast Rule for the sub-inventory assigned to the technician. For a warehouse, this is the activity history based on the Forecast Rule rolled up from the technicians sourced to the warehouse and the activity at the warehouse. The activity history and Forecast Rule will be used to create a forecast that is used to create the Min-Max levels.

Territory Norm: Used for a new or transferred technician. The activity forecast is based on a consolidation of the activity for all technicians tiering into a node in the Planning Tree. Territory Norm is not used to plan warehouses.

Product Norm: Based on product populations and failure rates defined in the Failure Rates tab. Product Norm is used for new product introductions or to plan for a product population change.

Personal Usage and Product Norm: A combination method with weighting factors to determine the blend from each method.

Personal Usage and Territory Norm: A combination method with weighting factors to determine the blend from each method.

4. Select the Planning Parameters sub tab and enter Forecast Rule, Recommendation Rule, Service Level, and EDQ Factor.

- See Setting Up Other Warehouse Planning Parameters, page 7-36 for an understanding of Service Level and EDQ.
- See Defining Forecast Rules, page 7-3 for a better understanding of forecasting.

5. Save your work.

Setting Up Lead Times for Warehouse Replenishment Planning

Lead Time is the period of time between recognizing that an order needs to be created and receiving the order at the warehouse being replenished. Warehouse Replenishment Planning (WRP) uses different lead times to plan each of the three supply types: Excess, Repair, and New-Buy.

Excess Lead Time

You define lead times for the Excess supply type using the Intransit Time column for the Shipment Methods listed in the Inter-Org Shipping Network window.

To Define Excess Lead Time:

1. Navigate to the Shipping Networks window, page A-1.

The Shipping Network is defined by the organization representing the Excess Warehouse as the *Ship From* and the organization representing the warehouse being planned as the *Ship To*.

Shipping Networks (M3)

Organization M3 Dallas Manufacturing Find

Scope To Organization:

Shipping Networks

Main Transfer, Distance Primary Accounts Secondary Accounts Other Accounts SHIKYU Transfer Price

From	To	Transfer Type	Elemental Visibility Enabled	Manual Receipt at Expense Destination	Receipt Routing	Internal Order Required
FST	M3	Intransit	Receipt	<input type="checkbox"/>	Direct	<input type="checkbox"/>
H1	M3	Intransit	Receipt	<input checked="" type="checkbox"/>	Direct	<input type="checkbox"/>
ID1	M3	Intransit	Receipt	<input type="checkbox"/>	Standard	<input type="checkbox"/>
ID3	M3	Intransit	Receipt	<input type="checkbox"/>	Standard	<input type="checkbox"/>
M1	M3	Intransit	Receipt	<input type="checkbox"/>	Direct	<input checked="" type="checkbox"/>
M2	M3	Intransit	Receipt	<input type="checkbox"/>	Direct	<input checked="" type="checkbox"/>
M6	M3	Direct		<input type="checkbox"/>		<input type="checkbox"/>

Organization Name

From Boston Manufacturing

To Dallas Manufacturing

New Open

2. Select a row for an Organization from-to combination.
 3. Navigate to the Inter-Org Shipping Networks window, page A-1.
- The Inter-Org Shipping Networks window appears.

Inter-Org Shipping Networks (M3)

From

Org M2 Boston Manufacturing

Location M2- Boston

To

Org M3 Dallas Manufacturing

Location M3- Dallas

Shipping Method	Intransit Time	Daily Capacity	Load Weight UOM	Cost Per Unit	
DHL-Air-Door to Door	14				<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

4. Enter the Intransit Time (lead time) expressed in days for the Shipping Method.

Note: Make sure one of the Shipping Methods is designated as the default. WRP uses the lead time from the default Shipping Method to define the lead time for Excess planning.

In this example the lead time from the excess warehouse or M2 to the warehouse being replenished or M3 is 14 days.

New Buy Lead Time

You define the lead times for the New-Buy supply type for the item and organization in the Lead Times tab of the Organization Item window, page A-1.

Organization Item (M3)

Organization: M3 Dallas Manufacturing

Item: FS18947

Description: Sentinel Deluxe Desktop

Display Attributes: ☐ Master ☒ Org ☐ All

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

Preprocessing	10
Processing	25
Postprocessing	0
Fixed	0
Variable	0
Cumulative Manufacturing	
Cumulative Total	
Lead Time Lot Size	1

The new-buy lead time, expressed in days, is equal to the sum of pre-processing, processing, and post-processing or 35 days in the example shown above.

Repair Lead Time

The lead times for the Repair supply type are divided into three legs. These legs are:

- Leg 1: In-transit time for defective parts from the defective warehouse to the depot repair supplier.
- Leg 2: The period of time from the receipt of defective parts at the depot repair supplier to the shipment from the depot repair supplier.
- Leg 3: In-transit time for repaired parts from the depot repair supplier to the Field Service warehouse being replenished.

You define Leg 1 and Leg 3 lead times in the Intransit Time column for the Shipment Method row on the Inter-Org Shipping Network window, page A-1.

This process is identical to defining the Excess Lead Time. See Defining Excess Lead Time, page 7-39.

Note: Make sure you designate one of the Shipping Methods as the default. WRP uses the lead time from the default Shipping Method.

You define Leg 2 lead times for the item and organization in the Repair Lead-time field within the Repair region of the MPS/MRP Planning tab of the Organization Item

window, page A-1. The Organization is the Repair Supplier organization.

The screenshot shows the 'Organization Item (M3)' window. At the top, the Organization is 'M3 Dallas Manufacturing', Item is 'FS18947', and Description is 'Sentinel Deluxe Desktop'. The 'Display Attributes' section has 'Master' selected. The 'MPS/MRP Planning' tab is active, showing 'Acceptable Rate' as 0. Below this are 'Planning Time Fence' (User-Defined), 'Demand Time Fence', 'Release Time Fence', and 'Substitution Window', each with a 'Days' field. The 'Incremental Supply Pattern' section includes 'Continuous Inter-Org Transfers', 'Convergence Pattern', and 'Divergence Pattern'. The 'Distribution Planning' section has a 'DRP Planned' checkbox and 'Days Of Supply Window' fields for 'Maximum Inventory' and 'Target Inventory'. The 'Repair' section shows 'Repair Program' as 'Repair Return', 'Repair Yield', 'Repair Lead-time' as 25, and a 'Preposition Point' checkbox.

Setting Up External Repair Execution

Repair suppliers in the field service supply chain can be both internal and external. External Repair Execution (ERE) is integrated into Warehouse Replenishment Planning (WRP) and provides automated functionality to execute repair at an external repair supplier and replenish the field service warehouse with repaired parts based on need.

You define the specific external repair suppliers using Sourcing Rules and then link them to the warehouse being planned in WRP in Assignment Sets.

This section covers creating the Sourcing Rule and Assignment Set and linking the Assignment Set to the warehouse being planned in WRP.

Repair Suppliers and Inventory Organizations

In External Repair Execution each repair supplier needs to be modeled as an inventory organization in Inventory and a Supplier in Purchasing. The supplier is assigned to the organization in Oracle Inventory.

To set up inventory organizations and assign the supplier to the organization, see the Inventory Structure chapter in the *Oracle Inventory User's Guide*.

To set up suppliers in purchasing, see the Supply Base Management chapter in the *Oracle Purchasing User's Guide*.

Sourcing Rules and Assignment Sets

Create a Sourcing Rule for organizations where external repair suppliers will be used for the replenishment of the warehouse being planned.

Navigate to the Sourcing Rule window, page A-1 for the organization used for the warehouse being planned by WRP.

Sourcing Rule (M3)

NameFS External Repair

Description

All Orgs

Org

Planning Active

Copy From...

Effective Date

From Date

To Date

02-FEB-2006

Shipping Organization

Type	Org	Supplier	Supplier Site	Allocation %	Rank	Shipping Method	Intransit Time
Buy From		AccessMicron		100	1		

View

Purge

Copy Shipping Orgs From...

Assignment Set...

See Defining Sourcing Rules, *Oracle Purchasing User's Guide*.

Note: Use the same Assignment Set used for Sourcing Rules that define sourcing for internal repair.

See Defining and Assigning Internal Repair Suppliers, page 7-30.

Defective Warehouses

When planning the field service warehouse there may be other warehouses whose defective inventory needs to be incorporated into the planning of that warehouse. The specific defective warehouses are defined using Sourcing Rules and linked to the warehouse in Assignment Sets. Defective inventory for the purpose of planning at the primary warehouse is defined as all available inventory.

See Defining and Assigning Excess and Defective Warehouses and Repair Suppliers, page 7-23.

Shipping Networks and Shipping Methods

External Repair Execution (ERE) utilizes both shipping networks and shipping methods.

Shipping Networks

ERE requires that a shipping network be defined for the defective warehouse to the repair supplier. This shipping network is a prerequisite to processing an internal order between the two organizations.

Another shipping network is required between the repair supplier and the field service warehouse being replenished in WRP. This shipping network along with the method of shipment is used to create the in-transit lead time from the repair supplier to the warehouse.

Navigation: Inventory > Setup > Organizations > Shipping Networks

Shipping Networks (M3)

Organization: M3 Dallas Manufacturing Find

Scope: To Organization:

Shipping Networks

Main Transfer, Distance Primary Accounts Secondary Accounts Other Accounts SHIKYU Transfer Price

Organization	From	To	Transfer Type	FOB	Receipt Routing	Manual Receipt at Expense Destination	Internal Order Required
	FST	M3	Intransit	Receipt	Direct	<input type="checkbox"/>	<input type="checkbox"/>
	H1	M3	Intransit	Receipt	Direct	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ID1	M3	Intransit	Receipt	Standard	<input type="checkbox"/>	<input type="checkbox"/>
	ID3	M3	Intransit	Receipt	Standard	<input type="checkbox"/>	<input type="checkbox"/>
	M1	M3	Intransit	Receipt	Direct	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	M2	M3	Intransit	Receipt	Direct	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	M6	M3	Direct			<input type="checkbox"/>	<input type="checkbox"/>

Organization Name

From: Boston Manufacturing

To: Dallas Manufacturing

New Open

See Defining Inter-Organization Shipping Networks, *Oracle Inventory User's Guide*.

Shipping Methods

ERE requires that at least one shipping method is defined for the defective warehouse to the repair supplier. When more than one method is defined, ERE will use the default to determine the in-transit time to the repair supplier from the defective warehouse.

Another shipping method is required between the repair supplier and the field service warehouse being replenished. When more than one method is defined ERE will use the

default to determine the in-transit time to the repair supplier from the defective warehouse.

Navigation: Inventory > Setup > Organizations > Shipping Networks > (M) Tools > Shipping Method

Shipping Method	Intransit Time	Daily Capacity	Load Weight UOM	Cost Per Unit	
DHL-Air-Door to Door	14				<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

See Defining Shipping Methods, *Oracle Inventory User's Guide*.

Repair Parameters

Repair parameters for a particular item appear on the MPS/MRP Planning tab of the Inventory Organization Item window. The parameters define the repair program name, the repair yield percentage, the repair lead time in days, and indicate whether an inventory of defective parts is pre-positioned at the repair supplier to reduce in-transit time.

See Setting Up Repair Parameters, page 7-47.

Profiles

The values set in the CSP: Repair Supplier Organization's Defective Subinventory profile option and the CSP: Repair Supplier Organization's Usable Subinventory profile option define the names used for those subinventories.

See Setting Profile Options for External Repair Execution, page 7-49.

See also the Profile Options Appendix in the *Oracle Field Service Implementation Guide*.

Setting Up Repair Parameters

Use this procedure to set up repair parameters for the inventory item:

Prerequisites

- ☐ Set up the item in Inventory for the repair part.

Steps:

1. Navigate to the Organization Item window, page A-1.
The Organizations window appears.
2. In the Organizations window, select the repair supplier organization. Click OK.
The Find Organization Items <Org> window appears.
3. Select the item in the Find Organization Items window.
The Organization Item <Org> window appears.
4. Select the MPS/MRP Planning tab.
The MPS/MRP Planning tab appears. Scroll down to the Repair region.

Organization Item (M3)

Organization: M3 Dallas Manufacturing

Item: FS54888

Description: Sentinel Standard Desktop

Display Attributes: Master Org All

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

Acceptable Rate - 0

Planning Time Fence: User-Defined Days: 1

Demand Time Fence: Days:

Release Time Fence: Days:

Substitution Window: Days:

Incremental Supply Pattern

Continuous Inter-Org Transfers:

Convergence Pattern:

Divergence Pattern:

Distribution Planning

☐ DRP Planned

Days Of Supply Window

Maximum Inventory:

Target Inventory:

Repair

Repair Program: Repair Return

Repair Yield: 85

Repair Lead-time: 25

☐ Preposition Point

5. In the Repair region:

- Select the Repair Program from the list of values.

The repair program will appear on the repair purchase requisition. The repair program will determine the process used to execute the repair activity at the repair supplier.

Example

For example: Repair and Return, Exchange, or Advance Exchange.

- Enter the Repair Yield. This is the average percentage of defectives sent to the repair supplier that can actually be repaired.

- Specify the Repair Lead Time, in days.

This lead time represents the internal processing time at the repair supplier. This lead time, along with the in-transit time to the repair supplier and the in-transit time from the repair supplier determines the total repair lead time for planning purposes. Repair lead time is used to determine the release date for the planned repair order.

For information on setting up repair lead times, see *Setting Up Lead Times for Warehouse Replenishment Planning*, page 7-39.

- Optionally, select the Preposition Point check box to indicate whether the defective parts will be pre-positioned in inventory at the repair supplier.

6. Save your work.

Setting Profile Options for External Repair Execution

External Repair Execution requires the set up of two sub-inventories for each external repair supplier organization. The sub-inventories are used for automation of transactions at the repair supplier. The first sub-inventory is used to receive defective parts at the external repair supplier from the defective warehouse. The second sub-inventory is used to receive the repaired parts after the WIP order has been completed.

See also the Profile Options Appendix in the *Oracle Field Service Implementation Guide*.

Use this procedure to set up site profile options for External Repair Execution:

Steps:

1. Navigate to the System Profile Values window, page A-1.

The Find System Profile Values window appears.

2. In the Profile field enter CSP:%. Click Find.

The System Profile Values window appears displaying the CSP: profile options in alphabetical order.

3. Scroll to the CSP: Repair Supplier Organization's Defective Subinventory profile option. In the Site column, enter the name for the defective sub-inventory at the repair supplier organization.

The screenshot shows a window titled "System Profile Values" with a table of profile options. The table has five columns: "Profile Option Name", "Site", "Application", "Responsibility", and "Us". The "Site" column contains values like "Never", "Always", "Order Only", "100", "DEFECT_SUB", and "USABLE_SUB".

Profile Option Name	Site	Application	Responsibility	Us
CSP : Cancel Reason				
CSP: Excess Parts Order Type				
CSP: Include Alternates	Never			
CSP: Include Car Stock	Always			
CSP: Order Type	Order Only			
CSP: Product Task History Threshold	100			
CSP: Purchasing Line Type				
CSP: Repair Supplier Organization's Defect	DEFECT_SUB			
CSP: Repair Supplier Organization's Usable	USABLE_SUB			
CSP: Ship Complete				

4. At the CSP: Repair Supplier Organization's Usable Subinventory profile option, in the Site column, enter the name for the usable sub-inventory.
5. Save your work.

Setting Up Parts Search and Ordering Profile Options

To use Parts Search and Ordering, set the following profile options in Spares Management:

- CSP: Part Sourcing Method
- CSP: Part Sourcing Method for Scheduler

Setting Up Oracle Advanced Scheduler

This chapter documents tasks for implementing Oracle Advanced Scheduler.

This chapter covers the following topics:

- Oracle Advanced Scheduler Implementation Task Sequence
- Setting Up Oracle Advanced Scheduler
- Setting up Additional Scheduler Features

Oracle Advanced Scheduler Implementation Task Sequence

This section describes the implementation tasks in the recommended order. Please refer to the following implementation tasks for details:

Advanced Scheduler Implementation Task Sequence

1. Confirm Implementation of Field Service, page 8-1
 2. Confirming Setup of Spares Management, page 8-3
 3. Confirming Setup and Loading Spatial Data, page 8-3
 4. Advanced Scheduler Setup Tasks , page 8-3
-

Confirming Implementation of Field Service

Before implementing Oracle Advanced Scheduler, install, implement, and set up the Oracle Field Service core application. See Field Service Implementation Task Summary, page 6-1.

Note: All Oracle Applications required for Field Service are also required to run Oracle Advanced Scheduler.

Ensure that the following implementation steps have been reviewed and completed as necessary:

- Confirming set up of Territories
- Confirming set up of Calendar
- Setting Up Field Service
 - Set up field service technicians and dispatchers.
 - Generate Field Service Trips

For more information on E-Business suite implementation tasks, see Summary of E-Business Suite Implementation Tasks., page 5-1

Set the following Scheduler parameters to determine default values for the scheduling scenarios.

Parameters for Oracle Advanced Scheduler

Parameter Name	Description
Spares Mandatory	Default likelihood value of spare parts availability used for automatic scheduling.
Spares Source	Using the parameter value, the Scheduler searches for spare parts for the task in the technicians' trunk stock or the manned stock locations available in the supply chain or in both the locations.
Default Travel Duration (in minutes)	Used as the default travel time between two tasks when Default Time Distance Server is being used or when one or both of the addresses is invalid or could not be resolved against the spatial data set being used through the Location Finder.
Default Travel Distance (in kms)	Used as the default travel distance between two tasks when the Default Time Distance Server is being used or when one or both of the addresses is invalid or could not be resolved against the spatial data set being used through the Location Finder.

Confirming Setup of Spares Management

If the Oracle Spares Management module is enabled, Oracle Advanced Scheduler can take resource spare parts availability into account when scheduling a task. The information from Spares Management is expressed in both time and cost.

Availability conditions defined in Spares Management represent the urgency for a part to be available to resolve the task, based on the likelihood that part is used to resolve a task.

In Spares Management, a relation between the problem definition of a task, and the parts that are likely to be used to resolve the task, is established. For each of these parts, Spares Management calculates which are used the most. Then the parts used most are mapped to a high likelihood percentage to resolve the task.

For scheduling, you must indicate the availability condition by setting up the Spares Mandatory parameter.

For more information, see the Setting Up Spares Management section of the *Oracle Field Service Implementation Guide*.

Confirming Setup and Loading Spatial Data

Spatial data is used for map display in the Field Service Dispatch Center module, and for Oracle Advanced Scheduler functionality, such as finding address locations and route calculation.

Spatial data is required if you implement street-level routing travel time and distance optimization. If you choose not to use street-level routing, you can still gain benefits from other Advanced Scheduler features by setting default values for the time and distance profile options. See Using Default Values for Travel Time and Distance Calculations, page 8-38 and Field Service Profile Options, page B-1 in the Profile Options Appendix of the *Oracle Field Service Implementation Guide*.

You can upload spatial data from any source as long as the data is correctly formatted and uploaded into the Advanced Scheduler schema. Oracle Advanced Scheduler is certified with spatial data provided by NAVTEQ. Customers have the option to purchase the spatial data provided by NAVTEQ. NAVTEQ supplies spatial data covering the entire North America and the United Kingdom standardized in the Oracle suggested format to be used with Oracle applications.

Setting Up Oracle Advanced Scheduler

Before setting up Oracle Advanced Scheduler, you must install and fully implement several Oracle applications and components. See the *Oracle Field Service Implementation Guide*

Oracle Advanced Scheduler application setup includes these steps:

1. Activating Oracle Advanced Scheduler, page 8-4
Set the profile option to enable Oracle Advanced Scheduler functionality
2. Configuring Scheduler Rules, page 8-4
Use the Scheduler Rules Configuration dashboard to set up scheduler rules that include router configurations, and scheduler, cost, and window to promise (WTP) parameters, to help efficiently schedule tasks for technicians.

Note: When considering third party resources, Scheduler only considers resource availability, planned dates, and if spares availability is mandatory for the task, then spares availability. Scheduler ignores all other scheduler parameters such as task duration vis-a-vis shift timings, resource capability, trip availability and optimization, resource preference other than that for third party resources, overtime, router mode, commute time, plan scope, access hours and cost.
3. Setting Up the Time Distance Server (TDS), page 8-33
The Time Distance Server provides three methods to calculate travel time and distance to task locations.
4. Setting Up the Autonomous Scheduler, page 8-41
Start the Autonomous Scheduler concurrent program to activate automatic scheduling.

Activating Oracle Advanced Scheduler

Use this procedure to enable Oracle Advanced Scheduler functionality:

1. Navigate to the System Profile Values window, page A-1.
The Find System Profile Values window appears.
2. Enter CSF% in the Profile field. Click Find.
CSF profile options appear in alphabetical order.
3. Scroll to the CSF: Scheduler Active profile option. Select Yes from the list of values.
4. Save your work.

Configuring Scheduler Rules

Oracle Advanced Scheduler uses scheduler rules in place of profile values and cost factors to schedule the tasks of the field service technicians. You must set up the

scheduler rules prior to scheduling tasks for the technicians. A scheduler rule is a single configuration document containing all configurations including scheduler parameters, cost parameters, window to promise (WTP) parameters, and router configurations. Oracle Advanced Scheduler generates the schedule plan options and cost values for a task based on the scheduler, router, and cost parameters defined in the applicable rules.

Note: For existing Advanced Scheduler customers, the application runs a migration script to convert the FND profiles into scheduler rules. For every existing level in the application that has atleast one of the scheduler profiles (now termed parameters) set, the migration script will create a scheduler rule.

Use the Scheduler Rules Configuration dashboard to create scheduler rules in a single user interface. While creating scheduler rules, you can configure scheduler parameters at the following levels:

- Site
- Application
- Responsibility
- User

In addition to the above levels, some parameters are enabled at the following levels for setting up the values at much granular level. Only parameters that can be logically defined at these levels are enabled:

- Territory
- Technician

Additionally, you have the flexibility to configure the scheduler parameters with the combination of these levels. Technician level parameter has a higher precedence to territory level (and follows the precedence hierarchy of user, responsibility, application and site, in that order).

Using the Scheduler Rules Dashboard

Use the dashboard as the launch pad for the entire Scheduler Configuration portal and navigate to other aspects of configuration. When you navigate to the dashboard, it displays the rules applicable to you. The applicable rules are:

- All rules created with the Application that is applicable to you.
- All rules created with the Responsibilities assigned to you.
- All rules created with your logged in User name.

- All rules created on the territories selected or assigned to you.
- All rules created on the resources selected or assigned to the territories selected or assigned to you.
- All rules that you created.

Using the dashboard, you can:

- View all the rules applicable to you and navigate to other aspects of the scheduler configuration process.
- Search for rules.
- Create and update rules.
- View the rules hierarchy.
- Merge and analyze rules.
- View similar rules.
- Export and import rule definitions.

Viewing Rules

To view the configuration details of a rule in a single page, click the applicable rule name. The Scheduler Rule Configurator page displays the entire configuration with details under different tabs.

Searching Rules

Use the Scheduler Rules Search page to search for rules created in the application. You can search on the following criteria names:

- Rule
- Application
- Responsibility
- User
- Territory
- Resource

Additionally, you can select the Include Site Rule check box to retrieve the Site level rules as the site level rules do not have any qualifiers attached to them. You can search

for rules based on the existence of parameters.

Creating Rules

Use the Scheduler Rule Configurator page to create new scheduling rules. Note: You cannot create rules at site level, as a predefined Site rule is available with all the default site level values defined in the application.

To create a rule, complete the following steps:

1. Enter the rule name and description.
2. Optionally, select a base rule while creating a new rule.

Note: When a rule Y is created on top of rule X such that Y contains the entire definition of rule X also, then rule X is called as the base rule of rule Y. Base rules are very effective in establishing the parent child hierarchy.

Oracle Advanced Scheduler uses the base rule in certain process flows when a base rule is inevitable based on the eligibility levels given for the new rule. In those cases, if the relevant base rule does not exist in the system, they are created automatically by the application and these base rules are called System Generated rules.

Additionally, you can copy the parameters from an existing rule using the Copy functionality provided within the Similar Rules section.

3. Specify the eligibility level for the rule.

Note: You can specify a single eligibility level or a combination of multiple eligibility levels. The Scheduler Rules Configurator page enables the parameters applicable for the specified level or combination of levels. If you specify multiple eligibility levels, then the Scheduler uses the parameters from the rule with the highest eligibility criteria. The eligibility levels are placed in the following order: Technician > Territory > User > Responsibility > Application > Site. For example, if you have selected the technician and territory level, then the Scheduler uses the parameters from the technician level.

4. Enter values for the enabled parameters.
5. Click Finish.

Options on the Scheduler Rule Configurator page

Option	Description
Rule Name field	Must be alpha numeric.
Description field	Must be alpha numeric.
Base Rule field	All rules existing in the system. Based on the selected eligibility type criteria, the base rule field would be either enabled or disabled.
Application field	All application names present in the system.
Responsibility field	All responsibility names present in the system.
User field	All FND user names present in the system.
Territory field	All territories present under 'service' usage.
Resource Type field	Employee Resource, Group Resource, Partner Resource, Party Resource, Supplier Contact, Other Resource, Team Resource, To be Hired
Resource Name field	If territory is selected, then the field displays all resource names present in the selected territory. If territory is not selected, then the field displays all resource names present in the system.
Enabled check box	If selected, then it enables the specified eligibility levels for a rule.
Similar Rules region	Displays all the rules that could be useful to be compared against the current rule. When no eligibility level is given, the Similar Rules section will display all the rules corresponding to the current logged in Application / Responsibility / User. Based on the Eligibility Criteria selected data in the Similar Rules section gets refreshed.

Option	Description
Copy icon	Copies the existing rule parameters to the to-be-created rule. The base rule of the to-be-created rule would be the selected rule to copy.
Cancel button	This action aborts the creation/update of the rule and returns to the previous page.
Finish button	Finish button involves completing the rule creation. It also propagates the parameter values to all the child rules down the hierarchy, provided the parameter is not overridden in the child rule.
Finish and Propagate Forcefully button	Finish and Propagate Forcefully is same as the Finish button except for the fact that the parameter values are propagated to child rules even if the child rule has overridden the parameter value.

Updating Rules

To update the configuration details of a rule, complete the following steps:

1. Search for the rule using the Search page.
2. Click the applicable rule. The Scheduler Rule Configurator page displays the rule details.
3. Click Update on the Scheduler Rule Configurator page. The Scheduler Rules Configurator page displays the parameters for updates.

Note: Parameters are open for update based on the selected rule's eligibility criteria.

4. Update the parameter values and click Finish.

Alternatively, you can update a Rule from the Dashboard by clicking on the Update icon.

Viewing Rules Hierarchy

Use the Scheduler Rules Hierarchy View page to view all the rules created in the

application in a hierarchical manner.

Merging and Analyzing Rules

Oracle Advanced Scheduler enables you to define few parameters while creating rules at territory and technician levels. When you define a rule at territory or technician level, all required parameters are not available in the selected rule. The Scheduler merges the current level rule with previous level rules in order to make the configuration complete for use by the Scheduler engine. The Scheduler identifies the plan options for a task after the configuration is complete.

Use the Rules Analyzer link on the Scheduler Rules Dashboard to visualize the complete set of Scheduler / Cost / Router Parameters when the Scheduler engine operates on the rule after merging a particular level rule with the previous level rules. The Rules Analyzer functionality enables you to view the merged rule and from which rule the parameter came when the rule was merged.

You can simulate the application of a rule on a task and view the plan options for a task. Additionally, you can merge and analyze rules having different eligibility levels.

To simulate the application of a rule on a task, complete the following steps:

1. Click the Rules Analyzer link on the dashboard. The Scheduler Rules – Scheduler Simulation page opens. Optionally, you can use the Scheduler Simulation link in the Available Analyzers region of the Scheduler pages to access the Scheduler Rules – Scheduler Simulation page.
2. Enter a task number.
3. Optionally, enter application, responsibility, and user details in the Choose Context region.
4. Click Run Simulation.

The Scheduler applies the user level rule to get the qualified resources and then uses the resource to determine what resource level rules should be used. The Scheduler Rules – Scheduler Simulation page displays the task details, the rules applicable, and the resources considered for scheduling (after identifying them using the territories setup).

Note: The page initially displays the rule for the current session namely the current Application, Responsibility and User triplet. You can change the session values in addition to restricting to territory or technician to see the merged rule.

To merge and analyze rules having different eligibility levels, complete the following steps:

1. Click the Merge Analyzer link in the Available Analyzers region. The Scheduler

Rules – Merge Analyzer page opens.

Note: The page initially displays the rule for the current session namely the current Application, Responsibility and User triplet. You can change the session values in addition to restricting to territory or technician to see the merged rule.

2. Select the applicable options in the Choose Context region to get the merged rule for any eligibility level.
3. Click Run Simulation.

Viewing Similar Rules

The Similar Rules contextual region displays all the rules that are similar to the currently selected rule in the results table of the Search page. For example, if you click on a Responsibility Level rule, then the Similar Rules section renders all the rules that are of other Responsibilities so that the user can quickly look at what other responsibility level rules exists in the system. Suppose you click on a Territory Level Rule, the Similar Rules region will render all the Rules where the Territory name is one of the eligibility criteria. As the Scheduler Rule Configurator page does not have any eligibility level specified initially, the Similar Rules section displays all the rules corresponding to the current logged in Application, Responsibility, and User.

Exporting and Importing Rule Definitions

Oracle Advanced Scheduler enables you to export and import rule definitions using the Export All Selected rules only, Export selected rule and its immediate children, or Export selected rule's entire hierarchy buttons available on the Scheduler Rules pages. You can import rule definitions using the Import Rules feature from the Wed ADI's Excel interface.

Scheduler Parameters

The following parameters are available:

Autonomous Scheduler Default Query

This parameter defines the query that must be used to select the tasks for the Autonomous Scheduler. Default query for the Autonomous Scheduler program.

Values	Default Value	Where Used	Supported Levels
Query Name	Auto Scheduling	Autonomous Scheduler concurrent program	S/A/R/U

Auto Reject Status - Others

Default status tasks are set to when they can't be scheduled by the Autonomous Scheduler program. If Autonomous Scheduler cannot schedule a task, it will derive the status from this parameter and assign it to the task.

Values	Default Value	Where Used	Supported Levels
Task Statuses	AutoReject	Autonomous Scheduler concurrent program	S/A/R/U

Auto Reject Status - Spares Unavailability

When Autonomous Scheduler rejects a task due to parts unavailability, it updates the task status to the status value present in this parameter value.

Values	Default Value	Where Used	Supported Levels
All valid task statuses	Auto Reject	Scheduler	S/A/R/U

Calculation Type

Set the calculation type of the Time Distance Server (TDS): Fastest, Shortest, Cost Based. Used during street level routing. Not used in point-to-point estimates.

Values	Default Value	Where Used	Supported Levels
Fastest, Shortest, Cost Based	Fastest	Scheduler/TD Server	S/Territory

Commutes Position in Shift

When scheduling a task, the scheduler will decide whether the travel time to the first or from the last task in the trip is included in the shift or out side the shift. If you want to

include a technician's travel time to and from a customer site in the shift, then you must set this parameter to 'Yes'. If you want to include only a certain amount of travel time within the shift duration, then you can set the parameter to 'Partial'

Values	Default Value	Where Used	Supported Levels
Yes, No, Partial	Yes	Scheduler	S/A/R/U/Territory

Consider Standby Shifts

This parameter provides flexibility to the service providers to configure the behavior of the Advanced Scheduler logic while scheduling tasks.

Values	Default Value	Where Used	Supported Levels
Never/Always/Day by Day/Regular and then Stand By	Regular and then Stand By	Scheduler	S/A/U/R/Territory

Consider Toll Roads with Penalty

This parameter decides whether TDS should consider a penalty for toll roads. TDS considers toll roads or highways with a penalty during route calculation and it gives higher priority to the route, which does not have toll roads or highways.

Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Scheduler/TD Server	S/Territory

Default Travel Distance (in kms)

Used as the default travel distance between two tasks when the Default Time Distance Server is being used or when one or both of the addresses is invalid or could not be resolved against the spatial data set being used through the Location Finder.

Values	Default Value	Where Used	Supported Levels
Number	25	Scheduler	S/A/R/U/Territory

Default Travel Duration (in minutes)

Used as the default travel time between two tasks when Default Time Distance Server is being used or when one or both of the addresses is invalid or could not be resolved against the spatial data set being used through the Location Finder.

Values	Default Value	Where Used	Supported Levels
Number	30	Scheduler	S/A/R/U/Territory

Distribute Last Child Effort

If the parameter is set to 'Yes', the last task effort will be added to the previous child task, if the last task effort is smaller than the Maximum Overtime (in minutes) parameter. Used to decide how to handle the last child task if it is small and less than the overtime.

Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Scheduler	S/A/R/U

Effort for determining Tasks longer than Shift (in minutes)

The effort to determine whether a task is longer than a shift or shorter than a shift (regular task). Used to identify the task to be broken into child tasks for scheduling.

Values	Default Value	Where Used	Supported Levels
Number (minutes)	480	Scheduler	S/A/R/U

Enforce Planned Dates

This profile enables or disables the enforcement of planned window constraints to derive plan options by Scheduler.

Values	Default Value	Where Used	Supported Levels
Begin Within Plan Window, End Within Plan Window, None	None	Scheduler	S/A/R/U/Territory

Extra Travel Time (in minutes)

Set the travel time, in minutes, added to all calculated travel times by the TDS. For example, time for parking, walking, and so on. This value is not applied when using the default travel time.

Values	Default Value	Where Used	Supported Levels
Number (minutes)	10	Scheduler	S/A/R/U/Territory

First Average Speed

Set the value for average speed used in the first part of the travel distance set by the first boundary for Location TDS. Used to calculate the travel time for the first location.

Values	Default Value	Where Used	Supported Levels
Number (Kilometers/Hour)	30	Used in Travel Time calculations by the Scheduler	S/Territory

First Boundary

This boundary defines the maximum travel distance for which the first average speed value is used. Used with the First Average Speed parameter to calculate travel time for the first portion of the travel distance.

Values	Default Value	Where Used	Supported Levels
Number (Kilometers)	7.6	Used in Travel Time calculations by the Scheduler	S/Territory

Force Optimizer to Group

If you set this parameter value to Yes, the Advanced Schedulers Autonomous Scheduler and Optimization Across Trips programs will prefer grouping of tasks and will override the cost model, so that these tasks can be scheduled to a single technician. If the parameter value is set to No, the cost model dictated by the cost parameters will prevail.

For more information on the optimization across trips functionality, see *Optimizing Technician Schedules Across Trips*, *Oracle Advanced Scheduler User Guide*

Values	Default Value	Where Used	Supported Levels
Yes or No	No	<ul style="list-style-type: none"> Scheduling Optimization Across Trips functionality 	S/A/R/U

Functional Delay Class 0 Factor

The calculated travel time on roads with functional class: 0 is multiplied with the functional class 0 delay factor. Used to adjust the speeds of all segments with this classification.

Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/Territory

Functional Delay Class 1 Factor

The calculated travel time on roads with functional class: 1 is multiplied with the functional class 1 delay factor. Used to adjust the speeds of all segments with this classification.

Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/Territory

Functional Delay Class 2 Factor

The calculated travel time on roads with functional class: 2 is multiplied with the functional class 2 delay factor. Used to adjust the speeds of all segments with this classification.

Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/Territory

Functional Delay Class 3 Factor

The calculated travel time on roads with functional class: 3 is multiplied with the functional class 3 delay factor. Used to adjust the speeds of all segments with this classification.

Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/Territory

Functional Delay Class 4 Factor

The calculated travel time on roads with functional class: 4 is multiplied with the functional class 4 delay factor. Used to adjust the speeds of all segments with this classification.

Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/Territory

Include Cost to commute Home for Empty Trip

This profile decides if Scheduler needs to compute the cost of travel back home while scheduling the first task in a resource trip.

Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Scheduler	S/A/R/U/Territory

Maximum Calculation Time (in ms)

The maximum number of milliseconds Oracle Advanced Scheduler is allowed to calculate schedule advice. Scheduler will restrict the calculation time to this value for schedule advice.

Values	Default Value	Where Used	Supported Levels
Number (milliseconds)	30000	Scheduling	S/A/R/U

Maximum no. of Plan Options

The maximum number of plan options returned for regular tasks. Lowest cost options are always returned.

Advanced Scheduler uses this parameter to determine the number of plan options that will display in the Schedule Tasks window accessed from the Field Service Dispatch Center or the Schedule Task page accessed from the Field Service Technician Dashboard.

Values	Default Value	Where Used	Supported Levels
Number	50	Scheduling	S/A/R/U

Maximum Overtime (in minutes)

The maximum number of minutes a resource can be scheduled for working overtime. Beyond this time, Advanced Scheduler will not add tasks to the respective resources trip schedule.

Values	Default Value	Where Used	Supported Levels
Number (minutes)	120	Scheduling	S/A/R/U/Territory/Technician

Max Distance to skip Actuals (in kms)

Scheduler skips computing the actual travel time between two locations if the travel distance is greater than the parameter value entered. Scheduler then returns the estimated travel time between the two locations.

Values	Default Value	Where Used	Supported Levels
Number	500	Scheduler/TD Server	S/A/R/U/Territory

Maximum no. of Resources

The maximum number of resources considered for creating plan options. Resources that are closest to the task are always considered.

Values	Default Value	Where Used	Supported Levels
Number	10	Scheduling	S/A/R/U

Minimum Child Task Duration (in minutes)

The minimum effort for the first child task. When splitting a long task into smaller child tasks, this is used as a threshold for the first child task.

Values	Default Value	Where Used	Supported Levels
Number (minutes)	240	Scheduler	S/A/R/U

Max Distance in a Group (in kms)

This parameter value dictates the upper limit for the travel distance between two tasks, in order for the Optimizer to consider grouping of these tasks. This will enable the Autonomous Scheduler or Optimization Across Trips programs to group as many eligible tasks (dictated by the travel distance between tasks) as possible in the formed group and schedule this group of tasks to a single technician, if possible.

For more information on the optimization across trips functionality, see *Optimizing Technician Schedules Across Trips*, *Oracle Advanced Scheduler User Guide*

Values	Default Value	Where Used	Supported Levels
Any integer number	5	<ul style="list-style-type: none"> Scheduling Optimization Across Trips functionality 	S/A/R/U

Optimizer Minimum Success Percentage

The Optimization Across Trips concurrent program commits the processed transactions only at the end of its operation upon successful processing. Using this parameter, you will define the criteria for the successful run of the optimization process. The Optimize Across Trips program decides whether to commit or abort its operation by the value set for this profile option. If the percentage of tasks optimized (based on the number of tasks submitted for optimization) is greater than or equal to the profile value the optimizer will commit the operation. Otherwise, it will abort as soon as the threshold (set by the profile value) is exceeded.

For more information on the optimization across trips functionality, see *Optimizing Technician Schedules Across Trips*, *Oracle Advanced Scheduler User Guide*

Values	Default Value	Where Used	Supported Levels
Any percentage	75	Optimization Across Trips program	S/A/R/U

Personal Commute Time (in minutes)

The Scheduler deducts this time value from the required travel time to commute from departure location to the first task and from the last task to arrival location within a trip, only if the Commutes Position in Shift parameter is set to Partial.

Values	Default Value	Where Used	Supported Levels
Number	0	Scheduler	S/A/R/U/Territory/Technician

Plan Scope (in days)

Default number of days in the schedule planning horizon. When the Scheduler cannot find an option, it will add this value to the current date or planned end date in an attempt to find scheduling options.

Values	Default Value	Where Used	Supported Levels
Number (days)	5	Scheduling	S/A/R/U

Prefer Contract Resources

If set to 'YES' contracts based preferred resources are taken into account by auto-schedule and the Autonomous Scheduler program. This parameter has the same function as the Contracts check box in the Schedule Task window - Preferences tab when using Intelligent mode.

Note: Make sure that either 'Yes' or 'No' is used.

Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

Prefer IB Resources

If set to 'YES' installed base resources are taken into account by auto-schedule and the Autonomous Scheduler. This profile has the same function as the Installed Base check box in the Schedule Task window - Preferences tab when using Intelligent mode.

Note: Make sure that either 'Yes' or 'No' is used.

Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

Prefer Skilled Resources

If set to 'YES' skill based resources are taken into account by auto schedule and the Autonomous Scheduler program. This parameter has the same function as the Skills check box in the Schedule Task window - Preferences tab when using Intelligent mode.

Note: Make sure that either 'Yes' or 'No' is used.

Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

Prefer Territory Resources

If set to 'YES' territory based resources are taken into account by auto schedule and the Autonomous Scheduler program. This parameter has the same function as the Territories check box in the Schedule Task window - Preferences tab when using Intelligent mode.

Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Autonomous Scheduler concurrent program	S/A/R/U

Resource Preference

This parameter enables you to choose to ignore third party organizations when scheduling, prefer third party organizations, or prefer internal resources.

Values	Default Value	Where Used	Supported Levels
<ul style="list-style-type: none"> Ignore Third Party Organizations Prefer Third Party Organizations Prefer Internal Resources 	Ignore Third Party Organizations	When scheduling tasks using Scheduler	S/A/R/U/ Territory level

If the value is left to the default value, the Scheduler only considers internal Resources and Resource Groups. If the value is set to Prefer Third Party Organizations, the Scheduler first considers third party resources and only if it cannot find any third party scheduling option, only then does it consider internal resources. If the value is set to Prefer Internal Resources, Scheduler first considers these resources and only if it cannot find any internal resource to schedule the task to, does it then consider other third party resources.

Router Mode

This parameter enables Route Calculation alternatives. Each mode represents a different way of using the TDS types for the scheduling actions. Values include: Route, Estimate, Only Route, Only Estimate, or Off.

- Off: Scheduler uses the default travel time for all task scheduling.
- Estimate: Point-to-point communication (as the crow flies).
- Only Estimate: Scheduler uses point-to-point distance to calculate travel time, all of the time, even for scheduling.

- Route: Point-to-point (as the crow flies) for plan options.
- Only Route: Scheduler uses street level routing to calculate travel time, all of the time.

Values	Default Value	Where Used	Supported Levels
Off, Estimate, Only Estimate, Route, and Only Route	Off	Scheduler	S/A/R/U/Territory

Second Average Speed

This average speed is used for the second travel distance interval, defined by the first and second boundaries for Location TDS. Used to calculate the travel time for the second segment.

Values	Default Value	Where Used	Supported Levels
Number (Kilometers/Hour)	65	Used in Travel Time calculations by Scheduler	S/Territory

Second Boundary

This boundary defines before which travel distance the second average speed is used, and after which the third average speed is used. Used with the Second Average Speed parameter for Location TDS, to calculate travel time for the second portion of the travel distance.

Values	Default Value	Where Used	Supported Levels
Number (Kilometers)	25.3	Used in Travel Time calculations by Scheduler	S/Territory

Spares Mandatory

If set to 'Yes', then the Autonomous Scheduler considers the plan options of only technicians with availability of all the required parts to perform the task, Advanced Scheduler considers the plan options for the technicians, even if they do not have all the required parts to perform the task, if the profile is set to 'No'.

Values	Default Value	Where Used	Supported Levels
Yes/No	No	Scheduler	S/A/R/U

Spares Source

Using the parameter value, the Scheduler searches for spare parts for the task in the technicians' trunk stock or the manned stock locations available in the supply chain or in both the locations.

Values	Default Value	Where Used	Supported Levels
Technician Trunk Stock /Warehouses /Trunk and Warehouses	Technician Trunk Stock	Scheduler	S/A/R/U

Third Average Speed

Set the average speed value used for the third travel distance interval, defined as the travel distance after the second boundary for Location TDS. Used to calculate the travel time for the third segment.

Values	Default Value	Where Used	Supported Levels
Number (Kilometers/Hour)	95	Used in Travel Time calculations by Scheduler	S/Territory

Use Default Values for Invalid Addresses

Determines whether to use Default Travel Time and Distance when the route cannot be calculated because of Invalid Address. Used to determine whether to schedule a task with an invalid address, by using the default travel time and distance.

During the Optimization Across Trips process, if a task has been submitted for optimization but it has an invalid address and the Autonomous Scheduler is not able to geo-code the geometry, then the task will be auto rejected. This will occur if the Use Default Values for Invalid Addresses parameter is set to No. Otherwise, the task will be processed successfully.

Plus, if one of the technicians trips included for optimization has an invalid address then that technicians trip is ignored and other technicians trips are considered for

optimization.

For more information on the optimization across trips functionality, see *Optimizing Technician Schedules Across Trips*, *Oracle Advanced Scheduler User Guide*

Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	<ul style="list-style-type: none">SchedulerOptimization Across Trips functionality	S/A/R/U/Territory

WTP Threshold

This sets the threshold value for your Window-to-Promise functionality. Scheduler stops evaluating options for a Window to Promise window after one is found with costs within this threshold. When set to 0 or null, the threshold is not used.

Values	Default Value	Where Used	Supported Levels
Number	0	Scheduler: WTP mode	S/A/R/U

Setting up Additional Scheduler Features

Additional scheduler features include the creation of parent and child tasks when scheduling tasks that are longer than standard shifts, catering to customer requirements for confirmation, access hours, and after hours, and factoring in traveling costs.

Note that for tasks scheduled to third party resources, third party administrators handle customer confirmation requirements and access hours and after hours constraints.

Setting Up Tasks Longer Than a Standard Shift

This feature provides the ability to handle complex tasks that require technicians to work for multiple work days. This situation is common for planned work tasks such as field inspections and preventive maintenance. Advanced Scheduler splits the original, or "parent" task into multiple "child" tasks each with duration of one shift, or less. Advanced Scheduler then identifies a single technician with available contiguous time slots, having the necessary skills, and possessing the required spare parts, and schedules all child tasks pertaining to the one parent, to this technician.

Use the Scheduler rules Dashboard to set up Advanced Scheduler parameters to work

with tasks longer than one shift. See: Configuring Scheduler Rules , page 8-4

Set the following scheduler parameters:

- Effort for determining Tasks longer than Shift (in minutes)

The value set here, in minutes, determines whether a given task has a duration that is longer than a shift or is processed as a regular task having a duration that is shorter than a shift. The default value is 480 (minutes).

- It is recommended that you set this value to be equal to or greater than the standard shift duration.
 - Any Field Service task with effort greater than or equal to this value will be identified by the Advanced Scheduler as a candidate to split into parent and child tasks.
 - Any task with effort less than this set profile value will not be considered to split into child tasks.
- Minimum Child Task Duration (in minutes)

The value set here, in minutes, determines the minimum duration scheduled for the first child task of a parent task. The default value is 240 (minutes).

 - This profile avoids selecting a first child task with a small or insignificant effort.
 - It is recommended that you set this value to be equal to or less than the standard shift duration.
 - Any Field Service task identified by the Advanced Scheduler as a candidate to split into parent and child tasks, will be split in such a way that the first child task option selected will have an effort equal to or greater than this profile value.
 - Any plan option with effort less than this profile value will not be considered for the first child task.
- Maximum Overtime (in minutes)

The value set here, in minutes, determines the maximum time a resource can be scheduled for working overtime. Beyond this amount of time, Advanced Scheduler will not add tasks to the respective resource's trip schedule. The default is 120 (minutes).
- Distribute Last Child Effort

You can set this parameter to avoid another day of travel when the last child task has a short duration. If this parameter is set to Yes, and if the last child task effort is smaller than or equal to the value set in the Maximum Overtime (in minutes) parameter, then the effort for the last child task is added to all the prior child tasks. In effect, the technician works overtime instead of extending the work to the next day. The default value is Yes.

- If the value is set as Yes, Scheduler attempts to distribute the effort of the last task amongst the other child tasks, duly considering the overtime and other cost factors related to overtime hours.

For Example:

- Standard Work Shift is 8 Hours with 1 hour of overtime allowed.

- Task is of 24 hours 30 minutes or 1470 minutes

This (Parent) task will be split by the scheduler into the following children tasks:

- Child Task#1: 480 Minutes (8 Hours)

- Child Task#2: 480 Minutes (8 Hours)

- Child Task#3: 480 Minutes (8 Hours)

- Child Task#4: 30 Minutes

As overtime is allowed for 1 hour, the scheduler will try to eliminate Child Task#4 by distributing the effort of Child Task#4 (30 Minutes) amongst the other child tasks going backwards. The scheduler offers the following option:

- Child Task#1: 490 Mins (8 Hours 10 Minutes)

- Child Task#2: 490 Mins (8 Hours 10 Minutes)

- Child Task#3: 490 Mins (8 Hours 10 Minutes)

This option avoids one visit to the customer site, including travel time and related costs, to perform the remaining task of 30 Minutes.

It improves customer satisfaction and is beneficial to the service organization as well.

While distributing the effort of the last child task, the scheduler considers all other costs derived from the cost factor setups.

Note: You can set the scheduler parameters in any sequence.

Setting Up Access Hours and After Hours Constraints

Some customers restrict access to their site to times when work on a task would not intrude on their normal business operations. To facilitate this scenario, Oracle Field Service enables you to define periods when a technician can arrive and accomplish the task. When access hours are identified, Oracle Advanced Scheduler automatically considers this constraint when it is identifying schedule options except when scheduling to available third party resources.

Alternatively, you can indicate that a task needs to be scheduled after hours. The After Hours constraint is treated as 'Special Instructions for field visit' and is entered as free format text. When the After Hours requirement is invoked, the task must be scheduled interactively. Dispatchers can view and schedule After Hours tasks by making a query in the task list that identifies those tasks carrying the After Hours attribute.

Note: When scheduling to available third party resources, dispatchers can ignore after hours and access hours constraints. These are handled by third party administrators when rescheduling tasks assigned to their third party organization and territory.

For a specific task:

From the Dispatch Center, you can define an Access Hours requirement for a specific task, and then honor that requirement while scheduling the task to a technician.

Definition of Access Hours requirements and After Hours constraints for a specific task are mutually exclusive. If After Hours constraints are entered after defining Access Hours requirements, the After Hours constraints go into effect. The defined Access Hours remain visible, but are disabled. Advanced Scheduler does not automatically schedule tasks with After Hours requirements. Such tasks are made available for the Dispatcher to schedule interactively.

Task

Corporate Time Zone: America/Los_Angeles (GMT-08:00)

Name: Preventive Maintenance
 Number: 37296
 Type: Dispatch
 Status: In Planning
 Priority: Medium

Customer: Business World
 Planned Start: 06-SEP-2006 15:07:1
 Planned End: 09-SEP-2006 15:07:1
 Scheduled Start:
 Scheduled End:

Assignee:
 Respond By:
 Planned Effort: 12 Hour
 Actual Start:
 Actual End:
 Actual Effort:

☐ Customer Confirmation Required ☐ Dependency ☐ Parts

Access Hours

Day	11:00	14:00		
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

☒ Active Access Hours
☐ After Hours

Incident Address Time Zone: America/Los_Angeles (GMT-08:00)

☐ Active Access Hours
☒ After Hours: Obtain Keys and Visitor's Pass from Security

Incident Address Time Zone: America/Los_Angeles (GMT-08:00)

Use this procedure to create access hours and after hours for a particular task.

Setting up Access Hours

1. Navigate to the Access Hours window, page A-1 from the Dispatch Center.

The Access Hours window appears. Task details for the selected task appear. Boxes appear in rows representing each day of the week. There are four boxes in each row. This enables you to define up to two access hour time slots per day.

2. To create Access Hours, click the Active Access Hours check box.

This disables the After Hours check box. The two actions are mutually exclusive.

3. Fill in the access hours that are available for scheduling service tasks. For example, Monday 17:00-21:00.

Note: Hours must be entered in military time.

4. Save your work.

Setting up After Hours

1. To define After Hours requirements, select the After Hours check box.
This disables the Access Hours check box.
2. In the text box to the right of the check box, enter instructions regarding the after hours scheduling that you want the dispatcher to consider.
3. Save your work.

Note: Although you can *change* Access Hours, for planned and scheduled tasks including tasks in Working status, you cannot remove Access Hours once the task status changes to Working or Completed.

If you change the access hours for a scheduled task, you must reschedule the task for the updates to take effect. For information on rescheduling tasks, see Overview: Rescheduling Tasks in the *Oracle Field Service User Guide*.

For a customer, customer site, or site location:

You can set up access hours or after hours for a customer, site, location, or a combination of these. The constraint applies when a task address matches the constraint definition.

ORACLE

Diagnostics Preferences Pe

Update Access Hours

Customer **Business World**

Site **95 Fulton Street/SAN FRANCISCO, CA**

Location

☒ Access Hours

☐ After Hours

Access Hours

✓ **TIP** Please enter Access Hour values in HH:MM format (Example : 00:45, 12:30, 23:45)

	From	To	From	To
Monday	13:00	16:00		
Tuesday	11:30	15:00	18:00	23:00
Wednesday	12:30	17:00		
Thursday	10:00	12:30	15:00	19:00
Friday	11:00	17:00		
Saturday	08:00	20:00		
Sunday	10:30	22:00		

After Hours

Definition

Diagnostics Preferences Personalize Page Close Window

About this Page Privacy Statement

Use this procedure to set up access hours or after hours for a customer, site, location, or combination of these:

1. Navigate to the Update Access Hours page, page A-1.
2. Complete the Customer, Site, and Location fields in the header area to specify where the constraint applies. You can set up access hours or after hours requirements for a customer, customer site, customer location, or customer site location.

Setting Up Access Hours

1. Click the Access Hours radio button.

Note: Setting up access hours and after hours requirements for the same destination are mutually exclusive.

In the Access Hours region, boxes appear in rows representing each day of the week. There are four boxes in each row. This enables you to define up to two access hour time slots per day.

2. Fill in the access hours that are available for scheduling service tasks. For example, Monday 17:00-21:00.

Hours must be entered in military time.

3. Save your work.

Setting Up After Hours

1. Click the After Hours radio button.
2. Enter instructions regarding the after hours scheduling that you want the dispatcher to consider in the Definition text box.
3. Save your work.

Marking a Task to Indicate Customer Confirmation Requirement

You can define the confirmation requirement constraint for a task by using the Dispatch Center user interface. The customer confirmation requirement can also be set up for preventive maintenance programs and activities in the Service Contract application, See the *Oracle Service Contracts User Guide*, or while creating a service request and task in the TeleService application, see the *Oracle TeleService User Guide*.

Use this procedure to set up a confirmation requirement from the Dispatch Center:

1. From the Dispatch Center, navigate to the Customer Confirmation window, page A-1.

The Customer Confirmation window appears. Details for the selected task appear.

2. In the Customer Confirmation region, click the Confirmation Required button.

The confirmation requirement is recorded.

3. Close the Customer Confirmation window to return to the Dispatch Center.

The field next to the Customer Confirmation label is set to Required. The Set to Received button is enabled only if the task is scheduled or it is yet to be committed to a technician.

4. To record the receipt of a customer confirmation, the Dispatcher clicks the Set to Received button.

The label on the button changes. The dispatcher can now proceed with interactively committing the task to a technician.

Note: When scheduling tasks to third party resources, the dispatcher can commit the task without waiting on the receipt of required customer confirmation. The responsible third party administrator can later record the receipt of customer confirmation in the Third Party Portal and manually reschedule the task, if required.

Setting Up Advanced Scheduler and Time and Distance Calculations

When a task is to be scheduled to any available technician, Advanced Scheduler will take into consideration the current location of the technician and the location of the incident/site where the task has to be performed. Customers can use fixed values for travel times and travel distances between tasks or load geo-spatial data into the field service schema. Oracle Advanced Scheduler has already been certified with the geo-spatial dataset provided by NAVTEQ.

Advanced Scheduler is shipped with various Spatial Components among which the following two Spatial Components are used for Scheduling purposes (if the geo-spatial data is used for the calculation of travel times and distances). They are:

- Geocoder: Geocoding of an address into longitudes and latitudes.
- Router: Travel Distance Calculation between two addresses.

Advanced Scheduler is equipped with Spatial functions that can determine either the actual distance or the estimated distance from the current location of the technician to the location where the next task to be performed. Advanced Scheduler uses the Time Distance Server component of Oracle Advanced Scheduler and also road network data (spatial data provided by NAVTEQ) to determine the required distance.

Advanced Scheduler supports three types of routers. The choice of router depends on the customers requirements and spatial data availability to enable the correct router.

The Time Distance Server (TDS) is used to calculate travel time and distance in between two tasks. You can use the Time Distance Server to calculate the travel time and distance in the three methods documented in the following three procedures.

- Calculating the Actual Travel Time and Distance, page 8-36 from geo-spatial data (street level routing).
- Calculating the Estimated Travel Time and Distance (Point-to-Point or As the Crow Flies), page 8-36 .
- Using Default Values for Travel Time and Distance Calculation, page 8-38.

Setting Up Advanced Scheduler to Use Time Distance Calculations

The Router Mode parameter enables users to choose which router to be used during the scheduling operation. These values behave differently while scheduling interactively using various assistance levels in the Schedule Task user interface or when batch scheduling using Autonomous Scheduler or Auto-Schedule functionality in the Dispatch Center. Routers are:

- Off
- Route

- Estimate
- Only Route
- Only Estimate

Understanding Time Distance Scheduling Modes

TDS Mode: Route

Scheduling Mode or Operation	Travel Calculations for Searching and Presenting Options	Travel Calculations for Scheduling Task
Intelligent	Road Network	Road Network
Window To Promise (WTP)	Estimates	Road Network
Assisted	Estimates	Estimates
Recalculate Trip, Optimize Trip, Auto-Assign and Autonomous.	Not Applicable	Road Network

TDS Mode: Only Route

Scheduling Mode or Operation	Travel Calculations for Searching and Presenting Options	Travel Calculations for Scheduling Task
Intelligent	Road Network	Road Network
Window To Promise (WTP)	Road Network	Road Network
Assisted	Estimates	Estimates
Recalculate Trip, Optimize Trip, Auto-Assign and Autonomous.	Not Applicable	Road Network

TDS Mode: Estimate

Scheduling Mode or Operation	Travel Calculations for Searching and Presenting Options	Travel Calculations for Scheduling Task
Intelligent	Estimates	Road Network
Window To Promise (WTP)	Estimates	Road Network
Assisted	Estimates	Estimates
Recalculate Trip, Optimize Trip, Auto-Assign and Autonomous.	Not Applicable	Road Network

TDS Mode: Only Estimate

Scheduling Mode or Operation	Travel Calculations for Searching and Presenting Options	Travel Calculations for Scheduling Task
Intelligent	Estimates	Estimates
Window To Promise (WTP)	Estimates	Estimates
Assisted	Estimates	Estimates
Recalculate Trip, Optimize Trip, Auto-Assign and Autonomous.	Not Applicable	Estimates

TDS Mode: Off

Scheduling Mode or Operation	Travel Calculations for Searching and Presenting Options	Travel Calculations for Scheduling Task
Intelligent	Default Values	Default Values

Scheduling Mode or Operation	Travel Calculations for Searching and Presenting Options	Travel Calculations for Scheduling Task
Window To Promise (WTP)	Default Values	Default Values
Assisted	Default Values	Default Values
Recalculate Trip, Optimize Trip, Auto-Assign and Autonomous.	Not Applicable	Default Values

Calculating Actual Travel Time and Distance (Street Level Routing)

In this method, when the From and To Task addresses are geocoded, the Time Distance Server calculates the actual travel time and distance between the tasks using the road network information available in the uploaded spatial data. If either of the task addresses are geocoded using eLocation service, then the distance is calculated using the road network information available from the eLocation service.

This is how the system calculates the actual travel time. A route is assembled from segments. Each segment has a route characteristic with a corresponding average speed provided by the geo-spatial (Road Network) data. Total travel time is calculated as the sum of travel times of individual segments (Distance of each segment divided by corresponding speed).

To set up the parameter for this method, use the following procedure:

Prerequisites: Install geo-spatial data and the Location Finder or use the eLocation services.

1. Navigate to the Scheduler Rules Dashboard. See: Configuring Scheduler Rules, page 8-4
2. Set Route as the value for the Router Mode parameter to set the default search as the road network.
3. Save your work.

Calculating Estimated Travel Time and Distance (Point-to-Point or As the Crow Flies)

You can choose to estimate a route between two locations by segmenting the road with virtual time boundaries, and then applying predefined average speeds.

Using Linear Estimation gives a 'Point-to-Point' distance between the two tasks by making use of the longitudes and latitudes of the two tasks. This is an estimate and is not the actual road travel distance between the two tasks. This approach can be chosen

by the users as the preferred way of scheduling tasks when performance takes priority over accuracy.

This method employs the following process steps:

1. You determine the linear, point-to-point distance a service technician would travel to a customer.
2. You divide this distance into a maximum of three sections, and then define section boundaries by setting profile options.
3. Next, you set other profile options to define an average speed for each section.

Example

For example:

The average speed in the first section is the lowest, such as surface street travel in a city. The average speed in the second segment is a little faster, representing travel on arterial roads. The third segment average speed is the fastest, to model restricted access highway travel.

4. TDS estimates the linear distance between two tasks.
5. For each section, TDS multiplies the distance by the average speed to calculate total travel time.

This is how the system estimates travel time. The derived distance is broken down into three segments and Time is derived by applying the standard speed limits for each segment, as set up in the profile options.

Total Travel Time = [(Distance of segment 1 divided by Speed of segment 1) + (Distance of segment 2 divided by Speed of segment 2) + (Distance of segment 3 divided by Speed of segment 3)]

To set up TDS for estimation of travel time and distance, use the following procedure to set the appropriate profile options.

Prerequisites: Install spatial data for longitude and latitude information.

1. Navigate to the Scheduler Rules Dashboard. See: Configuring Scheduler Rules
2. Set the following parameters:

Note: You can set these parameters in any sequence.

- Router Mode

Enter either 'Estimate' or 'Only Estimate' to enable the Location TDS to apply the estimate method to calculate travel time by using the parameter settings for segment or section boundaries and average speeds.

- **First Boundary**
Enter the first distance (in kilometers) for which the value you set in the First Average Speed parameter applies.
 - **First Average Speed**
The value you set for average speed (in kilometers per hour) applies to the first boundary distance you define in the First Boundary parameter.
 - **Second Boundary**
Specify the distance from the first boundary to the second boundary (km).
 - **Second Average Speed**
The value you set here for average speed (km/h) applies to the second boundary distance you set in the Second Boundary parameter.
 - **Third Average Speed**
The value you set for average speed (km/h) applies to the remainder of the travel distance from the second boundary to the destination.
3. Save your work.
 4. Navigate to the System Profile Values window. Query the CSF Profiles.
For details see Field Service Profile Options, page B-1.
A list of CSF profile options appears.
 5. Scroll to the CSF: Location Finder Installed profile option.
 6. To launch the Location Finder when a location for a task is missing, set the option to 'Y' (Yes).
 7. Save your work.

Using Default Values for Travel Time and Distance Calculation

You can choose not to have the spatial data installed and use the default travel time and duration (fixed values) for purposes of route calculation. You can set the following parameters to define default values for TDS route calculation:

- Router Mode
- Use Default Values for Invalid Addresses
- Default Travel Distance (in kms)

- Default Travel Duration (in minutes)

Steps

1. Use the Scheduler Rules Dashboard to set the parameters. See: Configuring Scheduler Rules, page 8-4
2. Set the following parameters:
 - Router Mode
This parameter enables Route Calculation alternatives. Values include: Route, Estimate, Only Rout, Only Estimate, or Off. Select Off to calculate the travel time and distance by setting default values for both.
 - Use Default Values for Invalid Addresses
This value denotes whether the default values should be used or not. Options are: Yes or No.
 - Default Travel Distance (in kms)
The value you set here is used as the default travel distance between two tasks.
 - Default Travel Duration (in minutes)
The value you set here is used as the default travel time duration between two task addresses when:
 - The default travel distance applies, in the case of parameter value of Router Mode set to *Off* or
 - One or both of the task addresses can not be resolved through the location Finder provided Use Default Values for Invalid Addresses parameter is set to *Yes*.
3. Save your work.

Geo-Coding

Oracle Advanced Scheduler geo-codes tasks whose locations have not been previously geo-coded, by leveraging the geo-spatial dataset loaded within Oracle Field Service schema.

Addresses and Geo-Coding

Advanced Scheduler's Location Finder or Geo-coder component and the Generate Field Service Trips program use geocoding to convert task addresses and technician home locations such as 1600 Amphitheatre Parkway, Mountain View, CA into their geographic coordinates to enable their plotting on a map. For example, 1600 Amphitheatre Parkway, Mountain View, CA becomes latitude 37.423021 and longitude

-122.083739. Associated road segment details can additionally be used by the time and distance server (TDS) for route calculations.

To geo-code addresses, Advanced Scheduler needs spatial data of the particular region to be available. If spatial data is loaded, geo-coding is done using Scheduler's Geo-coder. If spatial data is not loaded, then Oracle eLocation service is used for geo-coding and to calculate the distance between two address locations.

Once a task address is geo-coded it can be plotted on Google maps if you are registered with them, or the task is plotted on eLocation maps.

Scheduler's Geo-coder has been extended to support country specific address formats and currently provides support for more than 70 countries which includes, North America (Canada, United States, and Mexico), European & World Markets datasets. For more information, please see the *Oracle Advanced Scheduler User Guide*.

Reverse Geo-Coding

If customer addresses are not available but customer location's geographic coordinates are available, the dispatcher can use reverse geocoding to find the address. For more information on this, see Geotesting and Reverse Geocoding to Find Valid Addresses in the *Oracle Field Service User Guide*.

Configuring Geo-Coding

Advanced Scheduler can be configured to not geo-code addresses and locations associated with tasks and technician's addresses, by setting the following profile option:

- CSF: Location Finder Installed

This profile tells whether the particular implementation of Advanced Scheduler has Location Finder component also installed. This is a Site Level profile and is generally turned on only when Spatial Data is available.

Ensure that the profile is turned on for Geo-coding to function in the environment.

Note: When using Oracle Advanced Scheduler to schedule a task using Linear Estimation or Street Level Routing, an address or location of the task, as well as the technician's address should ideally have a geo-code. Depending on the settings of profiles related to the Location Finder and Geo-coding, if the address is not previously geo-coded, Advanced Scheduler will attempt to geo-code the address of a task or technician. If the attempt for geo-coding of any address fails due to invalid spatial data, Advanced Scheduler will mark the address as invalid. If the Use Default Values for Invalid Addresses parameter is set to Yes and parameters for default values are set, then Advanced Scheduler uses these values in the absence of valid geo-codes.

Automating Scheduling and Commitment of Tasks

You can choose to automate the scheduling and commitment of a batch of tasks by creating a query of such tasks for the Autonomous Scheduler and Auto Commit concurrent programs to use in succession.

If the concurrent program does not execute, perform the following procedures:

- Defining an Executable, page 8-44
- Defining Program Parameters, page 8-45

Defining Task Queries for Autonomous Scheduler and Auto Commit Process

To enable the Autonomous Scheduler feature, you first must decide which tasks you want to be picked up for automatic scheduling. Then you create a query to select such tasks. Some queries have already been seeded for this purpose. The following table describes seeded queries along with their values:

Queries and Values for Auto Scheduling

Query Name	Description	SQL of Seeded Query Definitions
All Open	List all tasks that have Task Status: schedulable, and Task Type: schedulable, and no assignments.	<code>nvl(status_scheduleable_flag,'N') = 'Y' and nvl(type_scheduleable_flag,'N') = 'Y' and not exists (select " from csf_ct_task_assignments where task_id = csf_ct_tasks.task_id)</code>
Assigned	List all tasks that have the Assigned Flag set to 'YES'.	<code>exists (select " from jtf_task_statuses_b where task_status_id = csf_ct_tasks.task_status_id and nvl(assigned_flag, 'N') = 'Y')</code>
Auto Rejected	List all tasks that have a status ID = 27 (27 is the seeded value given for Auto Rejected Status by JTF.)	<code>task_status_id = 27</code>
Auto Scheduling	List all tasks that have a status ID = 10025 (10025 is the seeded value given for Auto Scheduling Status by JTF.)	<code>task_status_id = 10025</code>

Query Name	Description	SQL of Seeded Query Definitions
Closed	List all tasks that have the Closed flag set to 'YES'.	exists (select " from jtf_task_statuses_b where task_status_id = csf_ct_tasks.task_status_id and nvl(closed_flag, 'N') = 'Y')
Commit Candidates	All tasks that are scheduled and have a planned status and that have to be executed in the next four hours from now.	
Escalated	List all tasks that are stored in the Escalated View (csf_esc_tasks_v) and have the Closed flag set to 'NO'.	task_id in (select object_id from csf_esc_tasks_v where nvl(closed_flag, 'N') = 'N')
Inbox	List all tasks that have a creation date > Trunc (Sysdate) (Meaning all the tasks that are created today, and have a scheduled start date as NULL.	creation_date > trunc(sysdate) and scheduled_start_date is null and nvl(status_schedulable_flag, 'N') = 'Y' and nvl(type_schedulable_flag, 'N') = 'Y'
Invalid Address	List all tasks that have Validated Flag set to 'NO' for a view (csf_validate_tasks_v)	((TASK_ID IN (SELECT TASK_ID FROM CSF_VALIDATE_TASKS_V WHERE NVL (VALIDATED_FLAG , 'N') = 'N')))
My Inbox	List all tasks that have Owner Type equal to Resource Type and Owner equal to Resource ID.	where owner_id = csf_tasks_pub.resource_id and owner_type_code = csf_tasks_pub.resource_type

Use the following procedure to create a custom query for the tasks you want to schedule automatically.

Prerequisite: The tasks must carry a "scheduleable" status and type.

Creating a Query

1. Navigate to the Field Service Dispatch Center, page A-1.
The Field Service Dispatcher Center window opens.
2. Click the flashlight icon on the tool bar.
The Find Tasks window opens.

3. Enter information to query the tasks you want to schedule automatically. You can create a query based on a combination of search criteria.
4. Click Find.
The Tasks list region of the Dispatch Center populates with tasks found.
5. To add your query to the Tasks region View By list of values, choose Save Query As from the Tools menu on the tool bar.
(M) Tools > Save Query As
The Save Query As window opens.
6. Enter a Name for the query. This is the name you want to appear in the Dispatch Center Tasks region View By list of values.
7. Enter a Description for the query. This text entry is returned when setting the profile option.
8. Click OK.

Starting and Ending a Query

1. Navigate to the Edit Query window, page A-1.
The Edit Query window appears.
2. To cause a query to expire, set the Active End field to the date you want to end the query. When the Active End date is reached, the query disappears from the Tasks region View By list of values.
3. To change the start date, use the Edit Query window to navigate to the Active Start field, and then make the necessary change.
The Active Start date default value is the date when you set up the Query. You can delay the beginning of a query by specifying a future date in the Active Start date field.
4. Save your work.

Launching the Autonomous Scheduler

The Autonomous Scheduling concurrent program is used to schedule tasks without user intervention. Use the following procedure to define the time intervals at which the program automatically schedules tasks.

1. Navigate to the Autonomous Scheduler window, page A-1.
The Parameters window opens on top of the Autonomous Scheduler concurrent program window.

2. In the Parameters window, choose a query from the Task List Query list of values.

Note: If no parameter is passed for the concurrent program, the program picks up the task list query given in the Autonomous Scheduler Default Query parameter.

3. Click OK to close the Parameters window and access the Autonomous Scheduler window.

The Name field contains the name of the Autonomous Scheduler program. The Parameters field contains the name of the selected query.

4. To schedule the program to run at specific times, click Schedule in the At These Times block.

The Schedule window opens.

5. Define how often you want to schedule tasks. You can schedule for specific periods by selecting either of the following radio buttons:

- Periodically

Enter a Start date, and optionally, an End date. You can also specify how often to rerun the program and when to apply the interval.

- On Specific Days

Choose specific days of the month or week to run the program. The Start date and end date fields can be edited.

6. Click OK to save the schedule and return to the Autonomous Scheduler window.
7. Click Submit to run or schedule the job.

Defining an Executable

If Autonomous Scheduling does not run, perform the following steps to define an executable.

Note: This procedure is usually not required because the concurrent program executable is seeded and installed 'out of the box.'

1. Navigate to the Concurrent Program Executable window, page A-1.
2. At the Concurrent Program Executable window, enter the following values into the fields:

Executable Concurrent Program Parameter Setup

Field	Value
Executable	Search and Schedule Automatically
Short Name	SEARCH_AND_SCHEDULE_AUTO
Application	Oracle Scheduler
Description	Automatically searches plan options and schedules the best option for a list of tasks.
Execution Method	Java Concurrent Program
Execution File Name	AutoScheduler
Execution File Path	oracle.apps.csr.conc.auto

3. Click Save.

Defining Program Parameters

If Autonomous Scheduling is not enabled, you can set up the concurrent program with the following procedure.

Note: This procedure is usually not required because the concurrent program executable is seeded and installed 'out of the box.'

Prerequisite: Define an executable. See Defining an Executable, page 8-44.

1. Navigate to the Concurrent Programs window, page A-1.
2. From the Concurrent Programs window, enter the following values into the fields:

Concurrent Program Parameter Settings

Field	Value
Program	Search and Schedule Tasks Automatically

Field	Value
Short Name	SEARCH_AND_SCHEDULE_AUTO
Application	Oracle Advanced Scheduler
Description	Automatically searches plan options and schedules the best option for a list of tasks.
Executable Name	SEARCH_AND_SCHEDULE_AUTO
Executable Output format	Text

3. Make sure that in the Output region the Save check box is checked and the Print check box is not checked.
4. Click Save.

Preventive Maintenance Setup Steps

This chapter covers the following topics:

- Preventive Maintenance Setup Summary
- Preventive Maintenance Business Process
- Setting Up Preventive Maintenance Programs
- Implementation Task Sequence for Preventive Maintenance
- Create Users and Add Preventive Maintenance Responsibilities
- Create PM Request Type and Map to Responsibilities
- Create Resource Group of Preventive Maintenance
- Create Preventive Maintenance Territory and Assign Resources
- Create Task Template Groups and Task Templates
- Create Master Items
- Create Counter Groups and Counters
- Create Preventive Maintenance Programs
- Create Coverage Templates for PM Programs
- Set Up Service Program/Warranty for Service Contracts
- Add Service Program/Warranty Items to Price List

Preventive Maintenance Setup Summary

This chapter provides an overview of the Preventive Maintenance business process and describes the setup steps for enabling the Preventive Maintenance module of the Field Service application suite.

A Preventive Maintenance program aids a Field Service operation in its proactive efforts to service customers in anticipation of service needs.

Customer's reactive service is effectively addressed in the Oracle Service suite of products. However, service centers also need systems that are equally effective in the proactive and reactive support scenarios. By leveraging Oracle Service and Contracts functionality, the Preventive Maintenance solution provides the capability to log service requests and allocate tasks to the appropriate resources with the right parts and schedule them in anticipation of the service need.

The following topics are detailed in this chapter:

- Preventive Maintenance Business Process, page 9-2
- Setting Up Preventive Maintenance Programs, page 9-4
- Implementation Task Sequence for Preventive Maintenance, page 9-11
- Create Users and Add Preventive Maintenance Responsibilities , page 9-12
- Create PM Request Type and Map to Responsibilities, page 9-12
- Create Resource Group of Preventive Maintenance, page 9-13
- Create Preventive Maintenance Territory and Assign Resources, page 9-13
- Create Task Template Groups and Task Templates, page 9-14
- Create Master Items, page 9-14
- Create Counter Groups and Counters, page 9-15
- Create Preventive Maintenance Programs, page 9-15
- Create Coverage Templates for PM Programs, page 9-28
- Set Up Service Program/Warranty for Service Contracts, page 9-31
- Add Service Program/Warranty Items to Price List, page 9-32

Preventive Maintenance Business Process

The intent of the Preventive Maintenance (PM) solution is to provide the capability to log service requests automatically and allocate tasks to the appropriate resources with the right parts and schedule them in anticipation of the service need. The service need could be estimated based on item usage, calendar dates or a date range as specified in the contract.

In essence, Preventive Maintenance programs maintain products (customer owned or leased assets), by performing certain predefined "activities" at predefined intervals/times based on product's age, usage, current condition, environment it is

installed at, wear and tear of the parts, past performance, and so on.

Currently, Oracle's Preventive Maintenance module employs a scheduling method of coverage, which can be based on manufacturer recommendations, customer requirements, or market demand. These PM activities are independent of abnormal conditions, or quality of the product performance. They are scheduled and performed at intervals, which are generally based on products usage and age

A comprehensive Preventive Maintenance process can be outlined as follows:

Defining PM Programs and PM Coverage and Authoring Service Contracts

This business process step involves the definition of suggested preventive maintenance programs and their respective coverage (in Service Contracts).

Defining PM programs and coverage templates is covered in this implementation guide.

PM Sales/Contracts, Instantiation and Contract Management

This is a process step in which a product and/or service with PM coverage is sold to the customer by the sales people. Once a product and respective service is sold, an instance of that product, coverage (contract) and program association are maintained by the service/contracts department to track and plan for PM activities.

PM Planning

Service departments generally plan in advance the PM activities they need to perform and resources required to fulfill those activities. Planning is an important step of the preventive maintenance process and enables optimal operations and effective delivery.

PM Execution

This process step involves the generation of PM requests (as a result of product usage, customer request and other events) and fulfilling them. The execution process involves, scheduling, reserving/allocating resources, capturing customer confirmation, delivering PM activities and billing customer.

Definitions

The following table provides some definitions of terms that used in this guide when referring to Preventive Maintenance:

Preventive Maintenance Definition Table

Term/Acronym	Definition
Preventive Maintenance	Preventive Maintenance (PM) refers to the Proactive Service of products by performing predefined activities at predefined intervals/times based on a product's age, usage, current condition, environment it is installed at, wear and tear of the parts, past performance, etc.
Program	The recommended grouping of predefined activities to maintain the product over its life span.
Activity	A set of tasks performed on a product as part of proactive service at a predefined interval or time or on a specific date or during a predefined date range.
Program schedule	The recommended date or date range the activities under a defined program as mutually agreed and contractually obligated to be performed.
Task	The smallest unit of work of a given activity.

Setting Up Preventive Maintenance Programs

Because the Preventive Maintenance module only uses a small portion of the available (Complex Maintenance, Repair and Overhaul (CMRO) functionality, the set up of CMRO for Preventive Maintenance is minimal. This includes setting some system profile options, defining some lookup values and a key flexfield.

Optionally, you can set up the approval workflow to enable approval of Maintenance Programs, Activities, and Routes. The only mandatory step to enable CMRO functionality is to set up the System Key Flexfield.

The following sections detail the manual and optional setups within CMRO:

- Set Up Route Management, page 9-5
- Set Up Approval Workflow, page 9-6

- Other CMRO Setup Considerations, page 9-10

Set Up Route Management

To use Route Management in Preventive Maintenance, you must set up the Key Flexfield for the System attribute. In addition, you also can define some lookup values for attributes in the route definition.

Note: When defining routes in CMRO, the user is supported with a list of values for different available attributes. These attributes are optional and do not have functional usage in PM.

Route Management requires that a key flexfield for the definition of the System attribute be set up even though it is optional in Preventive Maintenance. If it's not set up, Route Management will not function properly.

Use the following procedure to set up the key flexfield for the definition of the System attribute.

Steps

1. Navigate to the Segments window, page A-1.
2. From the Segments window, query the Flexfield title, using "AHL Route."
This validates the existence of the Route Flexfield and returns a record.
3. Add segments to this flexfield by clicking the Segments button and entering records for the System Flexfield Segment.
4. In order to create Value Sets to be used by the Flexfield Segments, click the Value Set button.
The Value Sets window appears.
5. Define a Value Set Name.
6. Choose List of Values in the List Type field.
7. Choose No Security in the Security Type field
8. Choose Char as the Format Type.
9. Choose Independent as the Validation Type.
10. Update Flexfield Segments with the Value Sets you defined.
11. To create Values for the Value Sets, navigate to the Segment Values window, page

A-1.

12. Query the name of the Value Set that you defined in Step 4 and click Find.
13. In the Segment Values window, you can add values to the Value Set in the Values Effective tab.
14. When you have added the appropriate values, save your work.

This process enables the Route Management functionality to work properly. For detailed explanation on setting up flexfields, see the *Oracle Applications Flexfields Guide*.

Set Up Approval Workflow

If you plan to use an approval process to maintain your maintenance programs, activities and routes, you can set up an approval workflow. The Preventive Maintenance module has a seeded workflow that addresses the objects mentioned above, but you can also create your own approval workflows. In these cases, any CMRO object can have a specific approval rule with its approval workflow and list of approvers.

CMRO also has a pre-defined default approval rule that is used if the approval profile options are activated, but no object-specific rule is defined.

In order to use an approval process in Preventive Maintenance, the following profile options must be set to Yes:

- AHL: Enable approval workflow for Routes
- AHL: Enable approval workflow for Maintenance Requirement

If you enable these workflows you must also set the following system profile options:

- AHL: Workflow Loop Counter
- AHL: Workflow Timeout Minutes

The Loop Counter profiles requires a numeric value and determines how many times a notification is resent if the user does not respond. The Timeout Minutes profile option requires a numeric value and determines how long the system should wait before it times out a workflow in case the progress is halted.

The following sections detail CMRO setups that are applicable to Preventive Maintenance:

- Set Up Default Approval Role, page 9-7
- Set Up Object Oriented Approval Roles, page 9-8
- Associate Approval Employees to Roles, page 9-8

- Adjust Default Approval Rule in CMRO, page 9-9

In order to use the approval process in the Preventive Maintenance module, you must designate approvers within your organization, create approval roles and assign the roles to the appropriate approval employee.

Employees designated as approvers must be set up in Oracle Human Resources and they must be associated with a particular application user, which you set up in Oracle Applications. For details on setting up employees, see the *Oracle Human Resources Implementation Guide*.

Note: If you want to notify the approval user using email, you must set up the email address for the employee.

Once you create approvers, you can optionally create approval roles. CMRO provides a seeded default approval rule that is used when no object-specific approval rule has been set up. The default rule has one approval hierarchy with a seeded role defined.

Set Up Default Approval Role

To set up the role for the default approval rule, follow the steps in this section.

Steps

1. Navigate to the Role Types window, page A-1.
2. From the Role Types window, query JTF_RS_ROLE_TYPE.
3. Create a role type code for the default approval role.
4. Save your work.
5. Navigate to the Role window, page A-1 and create a role with the code AHL_DEFAULT_APPROVER.

The code must be exactly as state above or the default rule will not recognize the role.

6. Associate the default approval role type code to this role.
7. Optionally, you can create additional roles if you have more than one level of approvers.

Note: For CMRO approval, only one user can be associated with a role. So you must create as many roles as you have approvers.

Set Up Object Oriented Approval Roles

If you have specific approval rules for different CMRO objects, use the following procedure to set them up.

Steps

1. Navigate to the Role Types window, page A-1.
2. From the Role Types window, query JTF_RS_ROLE_TYPE.
3. Create a role type code for the general approval role.
You can create multiple role type codes for grouping the roles together, but you must create at least one.
4. Save your work.
5. Navigate to the Role window, page A-1 and create a role for each approver in your organization.
6. Associate the appropriate approval role type code to each of the roles.
7. Save your work.

Associate Approval Employees to Roles

Use the following procedure to map approval employees to roles. Although each role must only have one employee associated with it, you can associate a single employee to multiple roles.

Prerequisites

Roles and employees must be set up.

Steps

1. Navigate to the Select Resources to Import window, page A-1.
2. From the Select Resources to Import window, select an approval employee.
3. Click Search.
4. In the results spreadtable, select the employee and click Import Resource.
The Set Resource Attributes window appears.
5. Select the role you want to assign to the approver in the Role field from the list of values.

6. Click OK.
7. Click Save Resource.
8. If you want to assign this approver to additional roles, click Details.
9. In the Roles tab, add as many roles as you want to assign to this approver.
10. Click Save.

Adjust Default Approval Rule in CMRO

If you want to adjust the default approval rule

Steps

1. Navigate to the Search Approval Rules, page A-1 window.
2. In the Search Approval Rules window, enter 'Default AHL Rule' in the Default Rule Name field and click Go.
3. In the search results spreadtable, click the hypertext name 'Default AHL Rule.'
This opens the Update Approval Rule window.
4. In the Approver Details section, add any roles or users in the sequence you want the objects to be approved.

The first role is seeded and you can either change the hierarchy or delete this seeded role if necessary.
5. Click Apply.

Guidelines

Do not add any values to the Operating Unit attribute or the Priority attribute. These features are not supported by CMRO. Also, if you set the Status of the default rule to Obsolete you cannot return this rule to any other status.

Define Object Specific Approval Rules

You can optionally define specific approval rules with a specific hierarchy for the different CMRO objects. Follow this procedure, to create these rules.

Steps

1. Navigate to the Search Approval Rules window, page A-1.
2. From the Search Approval Rules window, click Create.

The Create Approval Rule window opens.

3. In the Approval Rule Info section, choose either Maintenance Request or Route Management in the Create Approval Rules For field.
4. Choose Concept as the Approval Type.
5. Select a Status of Active.
6. Enter an Approval Rule Name.
7. Click Apply.

The Update Approval Rule window appears.

8. In the Approver Details section, add roles or users in the sequence you want the objects to be approved.
9. Click Apply.
10. To map the CMRO objects to the Approval workflow, navigate to the Workflow tab.

The Workflow Process Mapping window is displayed.

11. In the Object field, choose the object you want to map.
12. In the Process Name field, choose the approval workflow that you want to map to the object.

The CMRO default workflow is called ASO Generic Approval Process.

13. Repeat steps 10-11 for each object-workflow mapping you want to create.

Guidelines

If you want to use the same approval workflow for all your CMRO objects, leave the Object field blank.

Other CMRO Setup Considerations

In order to use the Preventive Maintenance module for Field Service, keep in mind the following:

Fleet Maintenance Program Setup

CMRO's Fleet Maintenance Program can be used with no additional setup steps. Optionally, you can define the Category attribute for the Maintenance Program or Activity. All other lookups for Fleet Maintenance are either pre-seeded or are not available for Preventive Maintenance.

Unit Maintenance Plan (UMP) Setup

In the Unit Maintenance Plan setup, the only additional consideration is whether or not you want to set the profile option to enable the planning window.

The definition of the planning window in UMP specifies how far out upcoming preventive maintenance requirements will be calculated. If the following profile options are not set, calculation will occur only up to the current day.

- AHL: Maximum Planning Window (Number) - This profile uses a numeric value that defines the days, weeks, months, or years to be considered for calculation.
- AHL: Maximum Planning Window (UOM) - This profiles sets the unit of measure used in the calculation. Seeded values include days, weeks, months, or years.

There is a functional setup of the forecast if you do not use the contracts for your maintenance schedule. Defining forecasts is detailed in the *CMRO User's Guide*. To validate the correct installation of the UMP, check whether or not the Unit Effectivity build routine has been installed.

UMP requires no preventive maintenance specific setups in the Lookups.

To calculate the Unit Maintenance Plan, you must run the Building Unit Effectivity concurrent program, which is pre-seeded and can be set up to run at intervals or on demand.

Implementation Task Sequence for Preventive Maintenance

To ensure a successful implementation, the following task sequence should be followed. Each of these tasks contains Preventive Maintenance-specific steps, which are detailed in the documentation:

Preventive Maintenance Implementation Task Sequence

1. Create Users and Add Preventive Maintenance Responsibilities, page 9-12
 2. Create PM Request Type and Map to Responsibilities, page 9-12
 4. Create Resource Group of Preventive Maintenance, page 9-13
 5. Create Preventive Maintenance Territory and Assign Resources, page 9-13
 6. Create Task Template Groups and Task Templates, page 9-14
 7. Create Master Items, page 9-14
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8. Create Counter Groups and Counters, page 9-15
 9. Create Preventive Maintenance Programs, page 9-15
 10. Create Coverage Templates for PM Programs, page 9-28
 11. Set Up Service Program/Warranty for Service Contracts, page 9-31
 12. Add Service Program/Warranty Items to Price List, page 9-32
-

Create Users and Add Preventive Maintenance Responsibilities

In order to implement and use the Preventive Maintenance module you must create a user and assign the user appropriate responsibilities. At a minimum, the following responsibilities need to be assigned to a user:

- Preventive Maintenance
- Preventive Maintenance Reports

For more information on setting up users and assigning responsibilities, see *Setting Up the System Administrator*, page 5-3.

Create PM Request Type and Map to Responsibilities

You must create a Request Type of "Preventive Maintenance" and you must map it to the Preventive Maintenance and the Preventive Maintenance Reports responsibilities.

For more information, on setting up request types, see *Confirming Setup of Service Request*, page 5-27.

To map the Preventive Maintenance Request Type to the appropriate responsibilities perform the following steps.

Prerequisites

You must have created a Request Type called "Preventive Maintenance."

Steps

1. Navigate to the Request Types window, page A-1.
2. From the Request Types window, query for the Request Type of "Preventive Maintenance" in the Type field and select it.

3. Click the Map Types button.
The Mapping Service Request Types window appears.
4. Select Preventive Maintenance in the Request Type field.
5. In the Responsibility Field, choose Preventive Maintenance from the list of values.
6. Create a second line and repeat steps 3-4 and choose Preventive Maintenance Reports from the list of values.
7. Save your work.

Create Resource Group of Preventive Maintenance

You must create a resource group called Preventive Maintenance and add those Field Service representatives to it that are supporting your program.

For more information on this process, see *Confirming Set Up of Resources*, page 5-9.

Create Preventive Maintenance Territory and Assign Resources

The requirements necessary for assigning/routing of Service Requests in Preventive Maintenance are different than assigning/scheduling Field Service technicians. Furthermore, the users and groups being assigned are also different.

You must create a territory called "Preventive Maintenance" in Oracle Common Application Components with the following properties:

- From the Overview tab enter Preventive Maintenance in the Name field and in the Transaction Types field, choose Service Request.
- From the Transaction Qualifiers tab, in the Name field, choose Request Type from the list of values. In the Qualifier Values block, choose equal to (=) in the Operator Field and choose Preventive Maintenance in the Value From field.
- From the Resources tab, assign all the resources who were assigned to the Preventive Maintenance Resource Group to the territory. Give each of these resources an Access Type of Service Request. Also, add the created Preventive Maintenance group to the territory and give this group resource the Access Type of Service Request.

For more details on setting up territories in Oracle Common Application Components, see the *Oracle Common Application Components Implementation Guide*.

Create Task Template Groups and Task Templates

You need to create task template groups and task templates, which will be used by Preventive Maintenance to initiate service requests in your Field Service operation. Task templates are associated with routes when you are setting up your PM program.

First you will create Task Template Groups, where you can pre-define multiple commonly used tasks for different activities, such as service requests, escalations, or tasks. When creating tasks from a task template, you can select the appropriate template group to generate tasks simultaneously.

Use task templates to make task creation simple and quick. Once a template is defined, you can specify resource requirements, create dependencies, and schedule repeating tasks.

For complete details on creating Task Template Groups and Task Templates, see Part IV Task Manager of the *Oracle Common Application Components User's Guide*.

Create Master Items

You must setup master items in Oracle Inventory in order to create PM programs.

One of the methods for scheduling maintenance on an item through a PM program is by associating a counter to the item. Counters allow you to track usage and schedule preventive maintenance based up a pre-determined usage level you associate with the items.

For more details on creating master items for Field Service, see Define Items, page 5-16 of this manual.

Standard set up is required for items, based upon the procedures detailed in the *Oracle Inventory User Guide*. In order to ensure that master items are accessible in Preventive Maintenance, however, you must also set the following attribute for each master item:

- In the Service tab, select Enabled in the Service Request Enabled field, and check the Serviceable Product check box.
- In the Inventory tab, all items (serialized as well as unserialized) are supported in Preventive Maintenance. In the Serial block, select a Generation type (for example, At Receipt) from the list of values, and enter the Starting Number and Starting Prefix for the item.

Note: The Serial fields Starting Prefix and Starting Number are mandatory ONLY when the Generation value equals Predefined. In all other cases, the serial fields are optional.

Guidelines

Once you have created master items, you must assign them to the appropriate organization. This function can be done by navigating to Tools > Organization Assignment. Master items can be assigned to multiple organizations.

Refer to the *Oracle Inventory User's Guide* for detailed instructions on how to set up and administer inventory organizations.

Create Counter Groups and Counters

You must create counter groups and counters and associate them to master items in order to enable PM programs to schedule maintenance based upon item usage levels.

Counters are used in setting interval thresholds for PM activities. This is one of the methods for determining the preventive maintenance schedule. When determining an interval threshold for a particular effectivity, only those counters associated with the item will be available in the list of values.

Once you have set up the counter groups and related counters, associate them with the related master items. For details on setting up counter groups and counters, see the Implementing Counters section of the *Oracle Service Implementation Guide*. There are no preventive maintenance specific setups required.

Create Preventive Maintenance Programs

You must create the preventive maintenance programs that you will use in your proactive Field Service operation. These setups are part of the Oracle Complex Maintenance, Repair and Overhaul (CMRO) application, but you need not license CMRO to use preventive maintenance. These programs will be associated with coverage templates in Oracle Service Contracts, which will be used when you author service contracts that contain a preventive maintenance coverage plan.

Preventive Maintenance utilizes CMRO's Unit Maintenance Plan functionality, which during the execution phase of Preventive Maintenance, contains the list of Activities that automatically generate Service Requests. This functionality must be fully implemented in order to execute a Preventive Maintenance program.

The following setup steps are required for creating a PM program:

- Set Preventive Maintenance Profile Options, page 9-16
- Create Routes, page 9-18
- Create PM Programs, page 9-18
- Add Effectivities and Interval Thresholds to a Program, page 9-20

- Create Activities, page 9-22
- Associate Routes to Activity, page 9-23
- Add Effectivity and Interval Thresholds to Activities, page 9-24
- Associate Activities to Program, page 9-27

The following sections detail the steps required to set up PM programs. You may consult the *Oracle Complex Maintenance, Repair and Overhaul User's Guide* for complete details on setting up the various components of the PM program.

Prerequisites

Task templates, items, and counters must be set up.

Set Preventive Maintenance Profile Options

There are several profile options that must be set in order to properly configure and run the Preventive Maintenance program.

Initially, you must set the CMRO application to run in Preventive Maintenance mode in order to set up PM programs and activities. This is accomplished by setting the profile option "AHL: Preventive Maintenance Installation" to Yes.

Important: There is no need to license the CMRO application if you are using preventive maintenance.

After you set this profile option, when you log into the CMRO application, you will see the Preventive Maintenance mode, which contains user interfaces specifically designed for setting up PM programs.

You can streamline the PM approval process by setting the following profile options to No:

- AHL: Enable approval workflow for Routes
- AHL: Enable approval workflow for Operations
- AHL: Enable approval workflow for Maintenance Requirement

The default value for this profile option is Yes, which enables the Oracle Workflow process for approvals in CMRO. If you set these profile options to No, then when you create routes, programs, and activities, you can approve them at the time of creation by clicking the Approval button.

The following table contains other PM-related profile options, a description, and a suggested setting:

Profile Options Relating to Preventive Maintenance

Profile Option Name	Descriptions	Value
AHL: Maximum Planning Window (Number)	Used to define the planning window for the UMP	numeric
AHL: Maximum Planning Window (UOM)	Used to define the planning window for the UMP	Date (years, months, etc.)
CSF: PM Incident Status	Defines the status of the generated Service Request	Open
CSF: PM Incident Type	Defines the type of the generated Service Request	Preventive Maintenance
CSF: PM SR Generation Last Run Date	This is a display only profile option that shows that last time this concurrent program was run	Date
CSF: PM Task Confirm Status	Defines the task status of tasks requiring customer confirmation	Confirm

For more information on setting up profile options, see the *Oracle Application User's Guide*.

The following steps detail the process of accessing and setting profile options.

Steps

1. Navigate to the System Profile Values window, page A-1.
2. At the Profile field of the Find System Profile Values field, perform a search by entering a partial value followed by the wildcard (%) and clicking Find.
3. Select profile option you want to set from the list of profile options displayed.
4. In the Site field, select the value you want to set to the profile option.
5. Save your work.
6. Repeat steps 2-5 for each profile option you want to set.

Create Routes

When creating PM programs with associated activities, you must create routes, which manage the work definition of scheduled and unscheduled maintenance tasks. It allows maintenance organizations to create work cards specifying the zone, work location, supporting process types, skill types, and significant maintenance tasks.

Task Template Groups and Task Templates also are associated with the routes and it is this connection that links service requests in Field Service to the PM programs associated to particular customers. This will be used for task generation at the time of PM Program/Activity execution in Field Service.

For detailed step by step information on setting up Routes, see the Managing Maintenance Routes section of the *Oracle Complex Maintenance, Repair and Overhaul User's Guide*.

Note: The Task Template Group field is not covered in CMRO documentation, as it is specific to the PM module. Select the predefined Task Template Group that you want to associate with the route.

Guidelines

The mandatory fields for routes are Route Number, Title, Time Span and Start Date. Time Span defines the total duration of a route in hours, however, it is used in CMRO's Visit Work Package module and is not a part of the PM module. Enter any numeric value.

The Task Template Field is required for PM programs.

Once a route is created, if the profile option AHL: Enable Approval WorkFlow for Routes" is null or set to No, you do not need to access Oracle Workflow. You only need to click Approve to approve the route.

Create PM Programs

Preventive Maintenance programs represent the recommended grouping of predefined activities to maintain the product over its life span. These programs, once defined and associated with activities, can be associated with coverage templates in Oracle Service Contracts, which provides the basis for providing coverage in a Preventive Maintenance Program.

A Preventive Maintenance Program is associated to a product and is governed by a set of effectivity rules. Each Activity thus contained in the Preventive Maintenance Program is a collection of tasks and/or task sets. An Activity contains the information on what tasks or task sets need to be performed and when it needs to be performed. The Preventive Maintenance request generating program creates one Service Request for every Activity.

Normally a Preventive Maintenance Program is a manufacturer suggested maintenance

requirement. A typical Preventive Maintenance Program is generally defined for a product or group of products and contains the "what", "when," and "how" of the Preventive Maintenance Activities.

For more details on this process, see the Managing Maintenance Requirements section of the *Oracle Complex Maintenance, Repair and Overhaul User's Guide*.

Prerequisites

You should know the Maintenance Requirement Category, Program Type, and the Service Type. These values must exist in the database.

Steps

To set up a Preventive Maintenance Program, follow these required steps:

1. Navigate to the Fleet Maintenance page, page A-1.
2. Click Create.
3. At the Type field, choose Program from the list of options.

This is the point where you differentiate between setting up a Program and setting up an Activity. This is specific to the PM Mode of CMRO and not covered in the CMRO documentation.
4. Enter a name for the program in the Title field.
5. Choose a program Category from the list of values.

This is the user-defined category of the program. A common method of categorization would be based on the equipment type to which the maintenance requirement applies.
6. Enter a Program Type. If you do not know the name of the Program Type, perform a search and select the appropriate Program Type from the list of values.

This is the user-defined maintenance requirement program type. Program Types are used to classify or group PM programs. Program Sub-Types are not used in Preventive Maintenance.
7. Choose a seeded Implement Status from the list of values.

The options are: Mandatory, Optional Implement, or Optional Do Not Implement.

For PM programs, DO NOT choose "Optional Do Not Implement," or the Program will not be picked up by the Unit Maintenance Plan (UMP).
8. Choose whether or not the Program will be Repetitive.

The field values can be Yes or No. The field value indicates whether the maintenance requirement is one time or repetitive. If you choose Yes, then you

must choose a value in the Show field.

9. Choose the Whichever Comes value for the PM program.

The possible values are First or Last. This is used to determine whether to choose the first or the last due date calculated based on all the interval thresholds defined for the program. Choosing First would indicate an OR condition, and Last would indicate an AND condition for the interval threshold records.

10. Enter an Effective From Date.
11. Click Apply to save your work.

Guidelines

The side navigation displays links to Effectivities and Relationships, which are used to associate Effectivities and Activities to a PM Program.

Add Effectivities and Interval Thresholds to a Program

Once you create a PM Program, you must add effectivities and interval thresholds to the program.

Effectivities are the specific items -- set up in Oracle Inventory -- which are to be serviced in under this specific Preventive Maintenance Program. These effectivities can also be associated with one or more Activities that are associated with the Program. Please note that ALL effectivities that are to be associated to the activities must be associated to the PM program.

The interval thresholds determine the total duration of the program as it relates to the specific effectivity it is associated with. The interval threshold for the program's duration can be represented in terms of calendar date, or by usage. For example, if a program is set up to be effective for one year for all the effectivities associated with it, you must set that value for each effectivity on the program. Similarly, if the interval threshold is based upon usage, you can set the usage limits and select the appropriate counters.

Prerequisites

The PM Program must be set up. Master Items must also be set up in Oracle Inventory. Counters must also be set up.

Steps

To add effectivities and interval thresholds to an existing Preventive Maintenance Program, follow these steps:

1. Navigate to the Fleet Maintenance page, page A-1.

2. Enter some search criteria for the Preventive Maintenance Program you want to access and click Go.

The Preventive Maintenance Program you searched for will appear in the Maintenance Requirements Results table. You can either click the hypertext title of the program to navigate to the Update form, or you can click the Effectivity icon to navigate directly to the Effectivity window. (If you go to the Update window, click the Effectivities hypertext link on the side navigation bar.)

3. Click the Add More Rows button to create some blank rows in the Effectivities List table.
4. In the Effectivity field, enter a text name.
5. Enter a % character (or enter a partial value if you know the item number) in the Item Number field and click the Flashlight icon to search for the Item you want to represent the effectivity.

6. Select the item from the list of values.

7. Click Apply to save the effectivity to the program.

Once the effectivity is saved, the Interval Threshold icon appears to the right of the Item Number.

8. To add the Interval Threshold for the effectivity, click the icon.

The Update Interval Threshold window appears.

9. If you are using a calendar date-based threshold, enter a numeric value in the first Program Duration field and select the date interval you are using in the second field.

Possible values in the second field are Days, Weeks, Months, and Years. So, for example, if you want your program to be effective for eight months, enter 8 in the first field and choose Months in the second.

10. If you are adding a usage-based threshold interval (these are not mutually exclusive and you can have both), then click the Add More Rows button.

The value that you want the program to begin defaults to 0 in the Start field.

11. Enter the value that you want the program to End in the Stop field.

12. Choose the Counter that you want to associate with this interval threshold from the list of values.

The UOM defaults from the Counter.

13. Click Apply to save your work

14. Repeat steps 4-13 for each effectivity and interval threshold you want to add to the program.

Guidelines

Be sure to add every effectivity to the program that you want to add to the activities associated with this program. All activity effectivities must exist as program effectivities.

Create Activities

A Preventive Maintenance Activity is the work definition or work scope per Preventive Maintenance service request. The work definition is in terms of tasks and/or task sets. Generally, a Preventive Maintenance visit is initiated by an Activity defined within the Preventive Maintenance Program, based on the predefined trigger rules, such as usage or time elapsed. Preventive Maintenance Activities also contain the fulfillment requirements such as parts, tools and labor. One Activity will result in creation of one Service Request.

When you set up activities you navigate to the same page where you set up the Preventive Maintenance Programs. One or more PM Activity is associated with a PM Program and, as such, the Activity always reflects the status of "child" to a "parent" PM Program. This is relevant when you are creating the association between the two.

Once you create an Activity, you can associated Routes, Effectivities, and Threshold Intervals to it. These associations are what determines the terms and duration of coverage of the activities that you are including in your PM program.

Prerequisites

You should know the Maintenance Requirement Category, Program Type, and the Service Type. These values must exist in the database.

Steps

To set up a Preventive Maintenance Activity, follow these required steps:

1. Navigate to the Fleet Maintenance page, page A-1.
2. Click Create.
3. At the Type field, choose Activity from the list of options.

This is the point where you differentiate between setting up a Program and setting up an Activity. This is specific to the PM Mode of CMRO and not covered in the CMRO documentation.

4. Enter a name for the activity in the Title field.

5. Choose an activity Category from the list of values.

This is the user-defined category of the program. A common method of categorization would be based on the equipment type to which the maintenance requirement applies.

6. Enter a Program Type. If you do not know the name of the Program Type, perform a search and select the appropriate Program Type from the list of values.

7. Choose a seeded Implement Status from the list of values.

The options are: Mandatory, Optional Implement, or Optional Do Not Implement.

For PM activities, DO NOT choose "Optional Do Not Implement," or the Activity will not be picked up by the Unit Maintenance Plan (UMP).

8. Choose whether or not the Activity will be Repetitive.

The field values can be Yes or No. The field value indicates whether the maintenance requirement is one time or repetitive. If you choose Yes, then you must choose a value in the Show field.

9. Choose the Whichever Comes value for the PM program.

The possible values are First or Last. This is used to determine whether to choose the first or the last due date calculated based on all the interval thresholds defined for the program. Choosing First would indicate an OR condition, and Last would indicate an AND condition for the interval threshold records.

10. Enter an Effective From Date.

11. Click Apply to save your work.

Associate Routes to Activity

Preventive Maintenance programs are linked to Field Service through the tasks template groups and task templates that are attached to routes. In order to complete this linkage, you must associate the routes to PM activities in order to make them available to the program.

Each activity in a PM program generates a service request in Field Service, the parameters of which are determined by which task templates are associated with it.

For more details on this process, see the *Complex Maintenance, Repair and Overhaul User's Guide*.

Prerequisites

A Preventive Maintenance Activity must be set up and Routes must be set up.

Steps

To add routes to an existing Preventive Maintenance Activity, follow these steps:

1. Navigate to the Fleet Maintenance page, page A-1.
2. Enter some search criteria for the Preventive Maintenance Activity you want to access and click Go.

The Preventive Maintenance Activity you searched for will appear in the Maintenance Requirements Results table. Click the hypertext title of the program to navigate to the Update form.
3. On the left-hand side navigation, click the Routes hypertext link.

The Update Attached Routes window appears.
4. In the Routes List table, click Add More Rows to create blank rows.
5. In the Route Number field, enter a partial value or the % character and click the Flashlight icon to search for the Route you want to attach to the Activity.
6. Select the Route Number from the list of values.

The Route Description, Product Type, Operator, and Revision Number default from the Route Number.
7. Click Apply to save your work.

Add Effectivity and Interval Thresholds to Activities

Once you create a PM Activity, you must add effectivities and interval thresholds to it.

Effectivities are the specific items -- set up in Oracle Inventory -- which are to be serviced when a specific Preventive Maintenance Activity is undertaken by a Field Service representative. Please note that ALL effectivities that are to be associated to the activities must be associated to the PM program that the activity is in relationship with.

With activities, the interval thresholds differ from those attached to the program in that they determine when a service activity is to take place. Whereas interval thresholds for programs set the maximum time that the program will be in effect, the activity's interval threshold determines the schedule for the preventive maintenance.

The number of interval and threshold values defined for an activity can be unlimited, and maintenance personnel can select whether the combined intervals will come due at "whichever occurs first" or "whichever occurs last". The interval thresholds are directly related to one of the effectivities of an activity, allowing an activity to have several useful interval threshold sets, depending on the effectivity.

The interval threshold for the activity can be represented in terms of calendar date, or by usage or both. For example, if a activity is set up to provide service for a copy

machine every six months, or every 10,000 copies, you must set the interval threshold to account for both parameters.

For detailed information on setting up interval thresholds, see the Managing Maintenance Requirements section of the *Complex Maintenance, Repair and Overhaul User's Guide*.

Prerequisites

The PM Activity must be set up. Master Items must also be set up in Oracle Inventory. Counters must also be set up.

Steps

To add effectivities and interval thresholds to an existing Preventive Maintenance Activity, follow these steps:

1. Navigate to the Fleet Maintenance page, page A-1.
2. Enter some search criteria for the Preventive Maintenance Activity you want to access and click Go.

The Preventive Maintenance Activity you searched for will appear in the Maintenance Requirements Results table. You can either click the hypertext title of the program to navigate to the Update form, or you can click the Effectivity icon to navigate directly to the Effectivity form. (If you go to the Update form, click the Effectivities hypertext link on the side navigation bar.)

3. Click the Add More Rows button to create some blank rows in the Effectivities List table.
4. In the Effectivity field, enter a text name.
5. Enter a % character (or enter a partial value if you know the item number) in the Item Number field and click the Flashlight icon to search for the Item you want to represent the effectivity.
6. Select the item from the list of values.
7. Click Apply to save the effectivity to the activity.

Once the effectivity is saved, the Interval Threshold icon appears to the right of the Item Number.

8. To add the Interval Threshold for the effectivity, click the icon.

The Update Interval Threshold window appears.

9. Click the Add More Rows button to create blank rows in the Interval Threshold List table.

10. Fill out the appropriate fields in the row to set your interval threshold.

The available fields and definitions are as follows:

- **Start Date** - This is the start date of the range after which the interval specified is valid. This date begins the range for the interval in relation to the associated counter.
- **Stop Date** - This is the stop date of the range before which the interval specified is valid. This date begins the range for the interval in relation to the associated counter.
- **Start** - This is the start counter value of the range from which the interval specified is valid. This date begins the range for the interval in relation to the associated counter.
- **Interval** - The interval value for repetitive PM Activity, and drop-dead counter values for one time activities. When used with one time activities, interval will be a count down of the associated counter. When used with repetitive activities, interval will represent the frequency of occurrence according to the associated counter.
- **Stop** - This is the stop counter value of the range before which the interval specified is valid. This date ends the range for the interval in relation to the associated counter.
- **Tolerance Before** - The number of counter units of measure that is acceptable for activity accomplishment before the specified interval. This value aids in planning maintenance jobs.
- **Tolerance After** - The number of counter units of measure that is permissible for activity accomplishment before the specified interval. This value aids in planning maintenance jobs.
- **Counter Name** - The associated counter identifier. This identifier is used to set all numerical values in the row, including Interval, Tolerances, Start and Stop.
- **UOM** - The Unit of Measure as per the associated counter. This value is defaulted when you select the counter.

11. Click Apply to save your work.

12. Repeat steps 4-11 for each effectivity and interval threshold you want to add to the program.

Guidelines

Be sure to that you only add effectivities to the activity that you already associated with

the program.

Associate Activities to Program

In order for a Preventive Maintenance Program to have usefulness, you must associate activities to the program. You can associate as many activities to the program as necessary for your business needs.

Typically, a PM Program can be thought of as a collection of related activities. For example, if you have a Program called "Commercial Truck Maintenance," you might relate several activities to that program that all deal with different maintenance issues for commercial trucks. You might have one preventive maintenance activity to track and service tires, another to service the engine maintenance, another to deal with fluid replacement, and so on.

Activities and Programs can be associated with one another from either the Program UI, or the Activity UI. The key to the association is that the PM Program is always the "parent" in the relationship and the Activity is always the "child."

Prerequisites

The PM Program and activities must be set up.

Steps

To associate activities to programs, follow these steps:

1. Navigate to the Fleet Maintenance page, page A-1.
2. Enter some search criteria for the Preventive Maintenance Program you want to access and click Go.

The Preventive Maintenance Program you searched for will appear in the Maintenance Requirements Results table. You can either click the hypertext title of the program to navigate to the Update form, or you can click the Relationships icon to navigate directly to the Maintenance Requirements Relationships form. (If you go to the Update form, click the Relationships hypertext link on the side navigation bar.)

3. Click Add More Rows to create some blank rows in the Maintenance Requirements List table.
4. In the Title field, search for the Activity you want to associate with the program and select it from the list of values.
5. In the Relationship Type field, choose Child if you are associating an activity to a program.

Relevant information about the activity is defaulted upon selection, including Type, Program Type, Status, and so on.

You can also associate a program to an activity using this same process, but if you do so, you must choose Parent in this field.

6. Repeat steps 4-5 for each activity you want to associate with the program.
7. Click Apply to save your work.

Guidelines

In order to associate programs and activities to a coverage template, both need to be approved.

Once programs and activities are, if the profile options "AHL: Enable Approval WorkFlow for Maintenance Programs" and "AHL: Enable Approval WorkFlow for Operations" are null or set to No, you do not need to access Oracle Workflow. You only need to click Approve to approve them.

Create Coverage Templates for PM Programs

A Preventive Maintenance Program can be associated with a Coverage Template in Service Contracts. "Confirmation Required" can be defined at this point. Stream levels can be also set up. The coverage template, with an associated PM program, also may be linked to a service item in Oracle Inventory module.

A PM Program consists of pre-defined activities, which you set up in CMRO. A user can associate a Preventive Maintenance Program to a coverage template by picking up a Preventive Maintenance Program from a list of values. The "Description" field is populated automatically from the PM Program source, once a program name is chosen and can not be edited. The "Schedule" button is enabled only when a PM program is associated to the coverage template. By clicking the "Schedule" button, the Preventive Maintenance Schedule page is invoked, which allows users to schedule coverage streams and to enter or modify the information related to the selected PM program.

Note: Only those PM Programs and Activities that have been approved and carry a status of "Complete" can be associated with coverage templates.

For an instantiated coverage, if the status of the contract is not "Entered", the user cannot change or select another PM program. If the status of the contract is "Entered" when another PM Program is chosen, the originally defined stream levels are associated with the new PM Program.

Coverage templates are used when you are creating a Service Program/Warranty which details the coverage and pricing of a particular preventive maintenance program. An approved Service Program/Warranty is selected when you are creating a Service Contract.

For step-by-step details on creating Coverage Templates, see the *Oracle Service Contracts*

Users Guide.

The following topic related to the Preventive Maintenance Schedule is covered in this section:

- Setting Up Preventive Maintenance Schedule, page 9-29

Prerequisites

Items and PM programs must be set up.

Other prerequisites include: Coverage type lookup codes in Service Contracts and price lists and time zone in Order Management. In Customer Support you must set up the following: service request severity, business processes, resource types, resources, billing types and billing rates.

Steps

- Navigate to the Standard Coverage window, page A-1.
- When creating a coverage template for Preventive Maintenance, select a Preventive Maintenance Program Name from the list of values. The Program Description field will automatically populate.

After you have associated a Preventive Maintenance program to the coverage template, the Schedule button is enabled. Click this button to open the Preventive Maintenance Schedule page to set coverage schedules and to view or modify the other information related to the selected Preventive Maintenance program.

Setting Up Preventive Maintenance Schedule

Once you choose a Preventive Maintenance Program for the coverage template, you can navigate to the Preventive Maintenance Schedule window, which provides access to details about the program and related activities and also allows you to set up stream levels.

There are two tabs within this window:

Program Schedule

The Program Schedule tab displays the Program Name and Program Description and the Coverage Effectivity defaults to the current date. Click the View Program button to access the details of the PM Program, which you set up in the CMRO Preventive Maintenance Mode. See Create Preventive Maintenance Programs, page 9-15 for additional details.

When defining a coverage template, only the following fields within the Stream Levels block are enabled and made navigable: Sequence Number, Periods, UOM/Period, UOM, Offset Period, and Offset UOM. The Auto Schedule checkbox is automatically selected and the Schedule block is grayed out during template creation.

Setting up Stream Levels allow you to determine the coverage cycle you want to associate with the PM Program and activities you have associated with this Service Contract coverage template. A coverage schedule may have many coverage streams and each stream level is a set of coverage periods.

Note: If the coverage set on the template is different from the default schedule dictated by the Preventive Maintenance Program, it takes precedence over the default schedule.

Activity Schedule

The Activity Schedule tab displays the Activities that are associated with the PM Program that you selected for this coverage template. Click the View Activity button to access the details of the Activity, which you set up in the CMRO Preventive Maintenance Mode. See Create Preventive Maintenance Programs, page 9-15 for additional details.

You can manually fill in the Stream Levels for each activity for the same enabled fields as in the Program Schedule, or you can default the values from the Program Schedule by clicking the Populate From Program button.

Note: If the Activity Schedule is different from the Program Schedule, it takes precedence over the Program Schedule.

Prerequisites

Items and PM programs must be set up.

Steps

To set up Stream Levels for PM Programs, follow these steps:

1. Navigate to the Preventive Maintenance Schedule window, page A-1.
2. In the Stream Levels region, enter a numeric Sequence Number in the Seq No field.
This is the sequence in which you wish to have the coverage stream levels instantiated.
3. Enter a numeric value for the number of Periods you want included in the Stream Level.
For example, if you want to set up a stream level of "coverage for 1 period of 15 days," the value in this field should be "1."
4. Enter the number of periods to be included in this stream level in the Periods/UOM field

In the previous example, the value in this field should be "15."

5. Select the Unit of Measure for the period in the UOM field from the list of values.
In the example, you would select "Days" as the UOM value.
6. Optionally, you can enter values for Offset Period and Offset UOM if you want the coverage to start at some point after the Coverage Effectivity date.

If you enter a value in either of these fields, you must enter values in both. Offset Period can be any numeric value you choose and will relate directly to the Offset UOM you choose. For example, if you choose "8" for the Offset Period, and "Weeks" for the Offset UOM, then the coverage will begin eight weeks after the Coverage Effectivity date.
7. Repeat steps 2-6 for each Stream Level you want to associate to the Program for this coverage template.
8. If you want to add Stream Levels to the Activity Schedule, click the Activity Schedule tab.
9. To default the values from the Program tab, click the Populate From Program button.

You can also manually enter values for Stream Levels for each Activity. You may want to set up coverage cycles that differ from one activity to the next.
10. Click OK to save the values and return to the Coverage Template window.

Set Up Service Program/Warranty for Service Contracts

A Preventive Maintenance service program or warranty is used to instantiate a particular PM program when you author a service contract. When you create the service program/warranty you attach it to the appropriate coverage template. Once created in Oracle Inventory, you create a price list for this item, which defaults down to the contract.

A Service Programs/Warranty is set up as a master item and is associated with a coverage template.

At a minimum, set the following attributes for the service program/warranty:

- From the Main tab, select Service Program/Warranty in the Item Type field.
- From the Order Management tab, select Customer Ordered and OE transactable checkboxes.
- From the Invoicing tab, select the Invoiceable Item checkbox.

- From the Service Tab, select Service from the list of values in the Contract Item Type. In the Contract block, select a Duration Period and enter a Duration to establish the length of the contract coverage. In the Template field, choose the Coverage Template you want to associate with the service program/warranty. In the Service Request Enabled field, select Enabled.

For detailed step-by-step instructions on setting up master items, see the *Oracle Inventory User's Guide*.

Add Service Program/Warranty Items to Price List

Once you have created all Service Program/Warranty entries in Oracle Inventory that you will need to author preventive maintenance service contracts, you must create a price list entry for each Service Program/Warranty.

At a minimum, you must enter the following information for each entry on the List Lines tab of the Price Lists page:

- Select Item in the Product Context field
- Select Item Number in the Product Attribute field
- Choose the relevant Service Program/Warranty in the Product Value field
- Enter the price of the Service Program in the Value field.

For details on creating price lists and adding items to the list, see Setup of Price Lists, page 5-20.

Windows/Pages and Navigation Paths

Overview of Field Service Windows and Navigation Paths

The following table displays the default navigation path for each Oracle Field Service window.

- Text in brackets ([]) indicates a button.
- (T) indicates to select a tab.
- (M) indicates to select the menu option from the window.

To assist with clarification, the responsibility may be listed ahead of the navigation path in the Navigator Menu Path column of the table. For example, Purchasing: Supply Base > Suppliers. In this example, Purchasing is the responsibility.

Windows/Pages and Navigator Paths

Oracle Field Service Windows/Pages and Navigation Paths

Window/Page	Navigator Menu Path
Access Hours	Field Service Dispatcher > Dispatch Center > right-click the task number in the task list > (M) Access Hours
Account Aliases	Field Service Dispatcher > Spares Management > Inventory > Setup > Account Aliases

Window/Page	Navigator Menu Path
Action Types	Approvals Management Business Analyst: Business Analyst Dashboard > (I) Setup > (T) Action Types
Approver Groups	Approvals Management Business Analyst: Business Analyst Dashboard > (I) Setup > (T) Approver Groups
Assign Resources	Field Service Administrator: CRM Foundation > Calendar > Calendar Setup > Assign Resources
Assign Shifts/Exceptions	Field Service Administrator: CRM Foundation > Calendar > Calendar Setup > Assign Shifts/Exceptions
Assign Territories to Planner Groups	Field Service Administrator: CRM Foundation > Assign Territories to Planner Groups
Auto Commit Schedule	Field Service Administrator: Auto Commit Tasks
Autonomous Scheduler	Field Service Setup > Autonomous Scheduler
Billing Type Attributes	Field Service Dispatcher > Service Request > Setup > Charges > Billing Type Attributes
Business Analyst Dashboard	Approvals Management Business Analyst: Business Analyst Dashboard
Business Events	Workflow Administrator Web Applications: Administrator Workflow > Business Events
Calendar	Field Service Administrator: CRM Foundation > Calendar > Calendar Setup > Define Calendar
Concurrent Program Executable	System Administrator: Concurrent > Program > Executable
Concurrent Programs	System Administrator: Concurrent > Program > Define

Window/Page	Navigator Menu Path
Contact Center	Customer Management > Contact Center
Currencies	GL (General Ledger) Super User: Setup > Currencies
Customer Confirmation	Field Service Dispatcher > Dispatch Center > Right-click on a task in the task list > (M) Customer Confirmation
Define Calculation Rule	<ul style="list-style-type: none"> Field Service Dispatcher > Spares Management > Setup > Calculation Rules Field Service Setup > Spares Management > Spares Management Rules > Calculation Rules
Define Counters	Field Service Dispatcher > Field Service Setup > Counters > Define Counters
Define Delivery Time	Field Service Dispatcher > Spares Management > Setup > Delivery Time
Define Groups	Field Service Administrator: CRM Foundation > Resource Manager > Maintain Resources > Groups
Define Expense Justification Codes	Field Service Administrator: Debrief > Define Expense Justification Codes
Define Labor Justification Codes	Field Service Administrator: Debrief > Define Labor Justification Codes
Define Material Justification Codes	Field Service Administrator: Debrief > Define Material Justification Codes
Define Shifts	Field Service Administrator: CRM Foundation > Calendar > Calendar Setup > Define Shifts
Define Tasks Parts	Field Service Dispatcher > Spares Management > Setup > Task Parts > [New]
Dispatch Center	Field Service Dispatcher > Dispatch Center

Window/Page	Navigator Menu Path
Edit Query	Field Service Dispatcher > Dispatch Center > (M) Tools > Edit Query
Exceptions	Field Service Administrator: CRM Foundation > Calendar > Calendar Setup > Define Exceptions
Excess Reject Reason Codes Lookup	Field Service Dispatcher > Spares Management > Setup > Excess Reject Reasons
Excess Rules	Field Service Dispatcher > Spares Management > Setup > Business Rules > (T) Excess Rules
Field Service Dispatch Center	Field Service Dispatcher > Dispatch Center
Find Product Task	Field Service Dispatcher > Spares Management > Setup > Task Parts
Find Requests	Other > View Requests
Fleet Maintenance	Preventive Maintenance: Engineering > Fleet Maintenance > Overview
Forecast Rules	<ul style="list-style-type: none"> Field Service Setup > Spares Management > Spares Management Rules > Business Rules Field Service Dispatcher > Spares Management > Setup > Business Rules
Freight Carriers	Inventory: Setup > Freight Carriers
Generate Field Service Trips	Field Service Setup > Generate Field Service Trips
Inter-Org Shipping Networks	Inventory > Setup > Organizations > Shipping Networks > (M) Tools > Shipping Method
Manual Override Reason Lookups	Field Service Dispatcher > Spares Management > Setup > Manual Override Reason

Window/Page	Navigator Menu Path
Master Items	Field Service Dispatcher > Spares Management > Inventory > Items > Master Items
Miscellaneous Transaction	Field Service Dispatcher > Spares Management > Inventory > Items > Miscellaneous Transaction
Notification Rules	Field Service Dispatcher > Spares Management > Setup > Business Rules > (T) Notification Rules
Oracle Applications Administration: Cores Services - Profiles	Functional Administrator: (T) Core Services > (T) Profiles
Order Automation Rules	Field Service Dispatcher > Spares Management > Setup > Business Rules > (T) Order Automation Rules
Organization Item	Inventory > Items > Organization Items
Organization Item: Lead Times	Inventory > Items > Organization Items > (T) Lead Times
Organization Item: MPS/MRP Planing	Inventory > Items > Organization Items > (T) MPS/MRP Planning
Parameter Settings	<ul style="list-style-type: none"> Field Service Administrator: Scheduler Setup Field Service Setup > Scheduler Setup
Parts Priorities	Field Service Dispatcher > Spares Management > Setup > Part Priorities
People	US Super HRMS Manager: People > Enter and Maintain

Window/Page	Navigator Menu Path
Personal Profile Values	<ul style="list-style-type: none"> Field Service Administrator: Other > Profile Values System Administrator: Profile > Personal
Planner's Desktop	Field Service Dispatcher > Spares Management > Planner's Desktop
Planners	Inventory > Setup > Planners
Preventive Maintenance Schedule	Service Contracts Manager: Setup > Service Offerings > Standard Coverage > [Schedule]
Price List Setup	Field Service Dispatcher > Spares Management > Order Management > Pricing > Price Lists > Price List Setup
Query Selection for Task Owner Enforcement	Field Service Setup > Task Owner Enforcement for Queries
Request Types	Field Service Setup > Service Requests > Request Types
Reschedule Rules	Field Service Dispatcher > Spares Management > Setup > Business Rules > (T) Reschedule Rules
Resource	Field Service Administrator: CRM Foundation > Resource Manager > Maintain Resources > Resources

Window/Page	Navigator Menu Path
Resource Addresses and Subinventories	<ul style="list-style-type: none"> Field Service Administrator: Spares Management > Resource Addresses and Subinventories Field Service Dispatcher > Dispatch Center > (M) Navigate > Resource Addresses and Subinventories Field Service Dispatcher > Dispatch Center > Plan Board or Gantt view > right-click Resource > (M) Resource Addresses and Sub-inventories <p>Field Service Administrator: Spares Management > Resource Addresses and Subinventories</p>
Role	CRM Resource Manager: Setup > Role
Role Types	CRM Resource Manager: Setup > Role Types
Route Management	Preventive Maintenance: Engineering > Route Management > Routes > Create
Rules	Approvals Management Business Analyst: Business Analyst Dashboard > (I) Setup > (T) Rules
Scheduling Chart	Field Service Dispatcher > Read Only Scheduling Chart
Scheduling Chart Setup	Field Service Setup > Scheduling Chart Setup
Scheduler Rules Dashboard	Field Service Setup > Scheduler Rules
Search Approval Rules	Preventive Maintenance: Administration > Approvals
Segment Values	Applications Developer: Flexfield > Key > Values
Segments	Application Developer: Flexfield > Key > Segments

Window/Page	Navigator Menu Path
Select Resources to Import	<ul style="list-style-type: none"> Field Service Administrator: CRM Foundation > Resource Manager > Maintain Resources > Import Resources CRM Resource Manager: Maintain Resources > Import Resources
Select Territories and Task Owners	Field Service Dispatcher > Dispatch Center > (M) Navigate > Select Territories and Task Owners
Service Activities and Billing Types	Field Service Dispatcher > Service Request > Setup > Charges > Service Activities and Billing Types
Service Business Process	<ul style="list-style-type: none"> Field Service Administrator: Installed Base > Business Processes Field Service Dispatcher > Service Request > Setup > Charges > Service Business Process
Service Lookups	Field Service Dispatcher > Service Request > Setup > Customer Support Lookups
Service Request	Field Service Administrator: Service Requests
Setup	Functional Administrator: Evidence Store > Setup
Shipping Methods	Inventory: Setup > Organizations > Shipping Methods
Shipping Networks	Inventory > Setup > Organizations > Shipping Networks
Skills Management	Field Service Dispatcher > Skill Management
Sourcing Rule / Bill of Distribution Assignments	Purchasing > Supply Base > Assign Sourcing Rules

Window/Page	Navigator Menu Path
Sourcing Rule	Purchasing > Supply Base > Sourcing Rules
Spreadtable Meta Data Administration	Field Service Setup > CRM Foundation > Spreadtable > Metadata Administration
Standard Coverage	Service Contracts Manager: Setup > Service Offerings > Standard Coverage
Subinventories	Field Service Dispatcher > Spares Management > Inventory > Setup > Organization > Subinventories
Submit a New Request	Field Service Administrator: Field Service Dispatcher > Service Request > Others > Submit Requests
Supplier	Purchasing: Supply Base > Suppliers
System Profile Values	System Administrator: Profile > System
Task and Escalation Status	Field Service Setup: CRM Foundation: Task and Escalation Manager: Setup > Define Task Status Field Service Dispatcher > Service Requests > Setup > Task Management > Task Status
Task Priority	Field Service Administrator: CRM Foundation > Task and Escalation Manager > Setup > Define Task Priority
Task Templates	Field Service Dispatcher > Field Service Setup > CRM Foundation > Task and Escalation Manager > Tasks > Task Templates
Task Types	Field Service Administrator: CRM Foundation > Task and Escalation Manager > Setup > Define Task Type
Task's Custom Color Setup	Field Service Setup > Task's Custom Color Setup

Window/Page	Navigator Menu Path
Territories	CRM Administrator: Territory Manager > Territory Administration > Territories
Territory Manager	CRM Administrator: Territory Manager > Territory Administration > Territories
Transaction Sub Types	Field Service Dispatcher > Service Request > Setup > Charges > Install Base Transaction Types
Update Access Hours	Field Service Setup > Preventive Maintenance > Access Hours
Users	System Administrator: Security > User > Define

Profile Options

This appendix covers the following topics:

- Overview of Profile Options
- Field Service Profile Options

Overview of Profile Options

During implementation, you can set values for profile options at various levels to specify how the Oracle Field Service applications control access to and processes data. The system administrator sets and updates profile values. For more information see, *Setting User Profile Options in the Oracle Applications System Administrator's - Maintenance Guide*.

The following profile options are unique to Oracle Field Service and include profile options for the Spares Management and Preventive Maintenance modules. The Advanced Scheduler uses rules (combination of parameters) in place of profile options. See: *Configuring Scheduler Rules*, page 8-4

Note: The profile options numbered 1 to 4 regarding task statuses have seeded values. There is no immediate need to set these up differently. When a new status flow is implemented these profile options need to be changed to match the change in state transitions.

Field Service Profile Options

You can set the profile options described in this section in any order and at any level as indicated in the profile option tables:

- Site (S)
- Application (A)

- Responsibility (R)
- User (U)

For the Advanced Scheduler, you must set the parameters in place of profile options. You can set few of these parameters at the territory and technician levels apart from the mentioned four levels. See the Scheduler Parameters section in Configuring Scheduler Rules, page 8-4. In addition, most of the profile options have been provided with default values.

The abbreviation TDS stands for Time Distance Server.

CSF: Alert Auto Reject

Task assignment should be rejected if technician does not take any action on a notification before the due date.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Notifications	S/A/R/U

CSF: Alert before shift begins in minutes

The number of minutes before a shift start that assignment notifications should be sent.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	30	Notifications	S/A/R/U

CSF: Alert Reminder Response Due Time in minutes

Time-out in minutes for reminder to create assignment notification.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	120	Notifications	S/A/R/U

CSF: Alert Response Due Time in minutes

Time-out in minutes for the first create assignment notification.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	60	Notifications	S/A/R/U

CSF: Alert Send Preference

Used by notifications to calculate the send date for notifications. Values are:

- During Shift: Notifications will be sent immediately if current time is within the shift duration. Otherwise, notifications will be sent at the beginning of the next day's shift start time. The profile CSF: Alert before shift begins in minutes will determine the number of minutes before the next day's shift the notifications will be sent.
- Immediate: Notifications will be sent immediately and the system will ignore the profile value CSF: Alert before shift begins in minutes.
- Scheduled Day: Notifications will be sent immediately if it is today's task. Otherwise, notifications will be sent at the beginning of the task scheduled day's shift start time minus CSF: Alert before shift begins in minutes.

LOV Values	Default Value	Where Used	Supported Levels
During Shift, Immediate, and Scheduled Day	During Shift	Notifications	S/A/R/U

CSF: Alerts Task Priority Level

Notifications and alerts will be sent only for tasks of the specified priority or above.

LOV Values	Default Value	Where Used	Supported Levels
Task Priorities	Medium	Notifications	S/A/R/U

CSF: Allow overlapping labor lines for Debrief

Select Yes, if you want to enable creation of overlapping labor lines for Debrief. This option is used to enable or disable the entry of overlapping start and end times for labor debrief lines.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Debrief page	S/A/R/U

CSF: Business Process

This profile option sets the order in which tasks are to confirm to schedule. Values are:

- 1: Need to debrief or update task in scheduled sequence.
- 2: Only one task assignment status can be set to working and the technician can work in any order.
- 3: Enables technicians to work in any order and multiple task assignments can be set to working.

LOV Values	Default Value	Where Used	Supported Levels
1, 2, and 3	1	Mobile Field Service Wireless, Store and Forward pages	S/A/R

CSF: Capture Travel Information

This profile option sets the specific type of travel information to capture through the Field Service Technicians Portal when a technician is performing task-related work at a customer site. Capturing travel information is optional functionality.

Values are:

- None: Travel fields not displayed.
- Time: Enables Start and End Times fields.
- Distance: Enables Distance field.
- Time and Distance: Enables all fields related to time and distance.

LOV Values	Default Value	Where Used	Supported Levels
None, Time, Distance, and Time and Distance	None	<ul style="list-style-type: none"> Field Service Technician Portal Mobile Field Service Wireless pages Mobile Field Service Store and Forward Laptop pages 	S/A/R/U

CSF: Copy Service Request Item Category to Task Skill Requirements

The profile enables auto generation of task skills from the product category on the service request, when creating the task.

Note: Product category skills are only copied if the service request has a product category attached.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Task tab of the Service Request window	S/A/R/U

CSF: Copy Service Request Item to Task Skill Requirements

The profile enables auto generation of task skills from the product on the service request, when creating the task.

Note: Product category skills are only copied if the service request has a product category attached.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Task tab of the Service Request window	S/A/R/U

CSF: Data window in days for Gantt

Set to initialize the range of dates for which the data will be displayed on the Gantt chart. This option controls the display of the number of days on the Gantt chart.

LOV Values	Default Value	Where Used	Supported Levels
Number (of days)	7	Field Service Dispatch Center page	S/U

CSF: Default Accepted Task Status

Default status that is assigned when you accept a Field Service notification.

LOV Values	Default Value	Where Used	Supported Levels
All Task Statuses	Accepted	Notifications	S/A/R/U

CSF: Default Auto Close Task Status

This option defines the default task status that will be used for closing a task upon closure of the service request.

LOV Values	Default Value	Where Used	Supported Levels
All Statuses	Closed	Field Service Task API	S/A/R/U

CSF: Default Cancelled tasks status

Default status that is assigned to tasks that are set to "Canceled" in the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
All Task Statuses	Cancelled	Field Service Dispatch Center page	S/A/R/U

CSF: Default Commit Task Status

Default commit task status. Used when running the commit process in all modes to update the task status, during the commit function.

LOV Values	Default Value	Where Used	Supported Levels
All Task Statuses	Assigned	<ul style="list-style-type: none"> Commit concurrent program Commit function in the Field Service Dispatch Center 	S/A/R/U

CSF: Default Debrief Business Process

This profile option sets the default business process that you want associated with the service activity code that displays in the Debrief page.

LOV Values	Default Value	Where Used	Supported Levels
All business processes	Null	<ul style="list-style-type: none"> Debrief page Wireless Debrief 	S/A/R/U

CSF: Default Debrief Service Activity Code

You can set a default Service Activity code to display in Debrief from this profile option.

LOV Values	Default Value	Where Used	Supported Levels
All Transaction Types belonging to the default debrief business process	Null	<ul style="list-style-type: none"> Debrief page Wireless Debrief 	S/A/R/U

CSF: Default Dispatch Center Display

Determines the display mode of the Field Service Dispatch Center when opened.

LOV Values	Default Value	Where Used	Supported Levels
Detail Tabbed Pages, Gantt, and Plan Board	Detail Tabbed Pages	Field Service Dispatch Center page	S/A/R/U

CSF: Default Distance Unit

This profile enables you set the default unit of measure for distance on the wireless and portal pages.

LOV Values	Default Value	Where Used	Supported Levels
Miles, and Kilo Meters	Miles	<ul style="list-style-type: none"> Mobile Field Service Wireless Field Service Technician Portal 	S/A/R/U

CSF: Default Effort

The profile enables you specify a default value for effort when the actual end date is missing in the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
Number	2	Field Service Dispatch Center	S/A/R/U

CSF: Default Effort UOM

The profile enables you specify a default value for unit of measure for the default effort profile option.

LOV Values	Default Value	Where Used	Supported Levels
UOM for the Default Effort profile	Hour	Field Service Dispatch Center	S/A/R/U

CSF: Default Find Tasks Function

The profile determines which find task should get opened from the Field Service Dispatch Center. This option controls the Search Task page that appears as the default.

LOV Values	Default Value	Where Used	Supported Levels
Basic and Advanced	Advanced	Field Service Dispatch Center	S/A/R/U

CSF: Default Planned Task Status for Planned Task

Default planned task status. Used by Scheduler to assign a status to planned tasks including tasks rescheduled from one technician's trip to another technician's trip.

LOV Values	Default Value	Where Used	Supported Levels
All Statuses	Planned	Interactive Scheduling and Autonomous Scheduling	S/A/R/U

CSF: Default Query

Select which query will default in the Dispatch Center to View Tasks by in the task list.

LOV Values	Default Value	Where Used	Supported Levels
Query Name	In Box	Field Service Dispatch Center page	S/A/R/U

CSF: Default Rejected Task Status

Default status that is assigned when you reject a Field Service notification.

LOV Values	Default Value	Where Used	Supported Levels
All Task Statuses	Rejected	Notifications	S/A/R/U

CSF: Default Return Reason (for Material Debrief)

This option determines the default return reason for a part on the Debrief page.

LOV Values	Default Value	Where Used	Supported Levels
User Defined Values	Null	<ul style="list-style-type: none"> Debrief page Mobile Field Service Wireless Debrief 	S/A/R/U

CSF: Default Scheduling Type

The default scheduling type to be used when scheduling requests.

LOV Values	Default Value	Where Used	Supported Levels
Assisted, Intelligent, and Window to Promise	Assisted	Advanced Scheduler	S/A/R/U

CSF: Default Service History Display

This profile determines the query that is executed relating to service history when launched through the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
Customer, Site, Item, and Instance	Customer	Field Service Dispatch Center	S/A/R/U
No user defined values			

CSF: Default Skill Level Copy for Service Request Item

Enables the system to automatically assign Field Service task skill requirements when a task is not created from a template.

LOV Values	Default Value	Where Used	Supported Levels
Expert, Trainee, and Standard	Standard	Service Request window	S/A/R/U

CSF: Default Source for Contact

This profile sets the default source for the contact details. Based on the value selected, corresponding contacts (either service request or task contacts) will be displayed in both the Field Service Dispatch Center - Contacts tab and the Gantt tool tip.

You can have either Employee or Customer contacts associated to a service request. Similarly, contacts can be associated against the specific task in the Service Request window - Task tab and then click the More button where there is a Contacts tab within the Task Details window.

LOV Values	Default Value	Where Used	Supported Levels
Service Request and Task	Service Request	Field Service Dispatch Center	S/A/R/U

CSF: Default Status Responsibility

Choose a default responsibility to define which state transition rule is used. This profile option is set for the users from the mobile applications.

If responsibility is not mentioned while defining status transition, then the value for the responsibility is taken from this profile option.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Used in the status transitions for task assignment	S/A/R/U

CSF: Default Task Blocked Assigned Status

Default task status for "Blocked Assigned".

In the Dispatch Center when you block a trip, any tasks in that trip that have a status of *Assigned* will be moved to this status.

LOV Values	Default Value	Where Used	Supported Levels
All task statuses	Blocked Assigned	Dispatch Center	S/A/R/U

CSF: Default Task Blocked Planned Status

Default task status for "Blocked Planned".

In the Dispatch Center when you block a trip, any tasks in that trip that have a status of *Planned* will be moved to this status.

LOV Values	Default Value	Where Used	Supported Levels
All task statuses	Blocked Planned	Dispatch Center	S/A/R/U

CSF: Default Task Status for Personal Tasks

The profile defines the default task status for personal tasks. This task status appears by default when creating personal tasks.

LOV Values	Default Value	Where Used	Supported Levels
<p>All task statuses with the following task status attributes are enabled:</p> <ol style="list-style-type: none"> 1. Task Status 2. Assignment Status 3. Assigned and the following status attributes are not enabled: <ol style="list-style-type: none"> 1. Rejected 2. Onhold 3. Cancelled 4. Schedulable <p>The enabling of the other attributes is optional</p>	Assigned	Mobile Field Service (Store and Forward) Laptop and Pocket PC	S/A/R/U

CSF: Default Task Type for Personal Tasks

The profile defines the default task type for personal tasks. This task type appears by default when creating personal tasks.

LOV Values	Default Value	Where Used	Supported Levels
All task types having the Private flag enabled and either mapped to the source object service request or task manager, or not mapped to any source object.	Personal	Mobile Field Service (Store and Forward) Laptop and Pocket PC	S/A/R/U

CSF: Default Time Zone Source - Dispatch Center

Default time zone source for the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
Corporate Time Zone, User Time Zone	User Time Zone	Field Service Dispatch Center	S/A/R/U

CSF: Default Time Zone Source - Schedule Advice

Default time zone source for Schedule Advice.

LOV Values	Default Value	Where Used	Supported Levels
Corporate Time Zone, User Time Zone	User Time Zone	Schedule Advice	S/A/R/U

CSF: Default Unscheduled Task Status

This profile sets the default unscheduled task status when performing the unschedule function in the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
All Statuses	In Planning	Field Service Dispatch Center unschedule function	S/A/R/U

CSF: Default Working task status

This profile sets the default status for a parent task when any one of the child tasks is in a working status.

LOV Values	Default Value	Where Used	Supported Levels
All Statuses	Working	Field Service Dispatch Center	S/A/R/U

CSF: Default "In planning" task status

Default status that is assigned to tasks that are set to "In planning" in the Field Service Dispatch Center. This option is used in the Field Service Dispatch Center when the user unschedules a task by using the unschedule functionality.

LOV Values	Default Value	Where Used	Supported Levels
All Task Statuses	In Planning	Field Service Dispatch Center page	S/A/R/U

CSF: Display Arrival Departure Tasks in Gantt

This profile value determines whether to display the Arrival and Departure tasks in the Gantt view of the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Field Service Dispatch Center Gantt chart	S/A/R/U

CSF: Display Label on Task

Determines whether label (Customer Name) on a task bar in Dispatch Center Gantt chart is to be displayed.

LOV Values	Default Value	Where Used	Supported Levels
Yes or No	No	Field Service Dispatch Center Gantt chart	S/A/R/U

CSF: Display Only Technicians in Dispatch Center

This profile determines if dispatchers and dispatcher groups are also displayed as resources in the Plan Board, Scheduling Chart, and Map views of the Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
Yes or No	No	Field Service Dispatch Center Plan Board, Gantt chart, and Map views	S/A/R/U

If you leave the default value for the profile selected, all Dispatch Center views display dispatchers and technicians assigned to territories without filtering based on assigned roles. Set the profile to Yes to display only technician resources assigned to the Field Service Representative role.

CSF: Display Shifts in Scheduling Results Gantt Chart

This profile controls if shift information is queried and displayed in the Gantt chart with scheduling results. If set to NO, the Gantt chart won't display shift in the Schedule Advice window.

LOV Values	Default Value	Where Used	Supported Levels
Yes or No	Yes	Field Service Dispatch Center Gantt chart	S/A/R/U

CSF: Display Warning Messages in Dispatch Center

This profile determines whether to display all warning messages on field level scheduling validations together in the List Messages window of the Dispatch Center or individually as and when validation occurs.

LOV Values	Default Value	Where Used	Supported Levels
Yes or No	No	Field Service Dispatch Center	S/A/R/U

CSF: eLocation Map data source name

The unique name that is given to the collection of data source parameters for the eLocation map (for example csfmap). This option is passed to the Mapviewer to render the Map. The name must be modified if any of the data source profile options change and the map server can not be restarted.

LOV Values	Default Value	Where Used	Supported Levels
Name	CSFMAP	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map Enable Java Debugging

Optionally enable additional debugging output to the Java console for the eLocation map.

Client side debugging will be enabled is set to Yes.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map High Latitude Coordinate

Do not change, high latitude coordinate of the last view area of the eLocation map. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map High Longitude Coordinate

Do not change, high longitude coordinate of the last view area of the eLocation map. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map JDBC Driver Type

The JDBC driver type used to make a connection to the data source for the eLocation map. The JDBC driver type is passed to the Mapviewer for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
None	Thin	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map Last Used Service Area Number

Do not change, the identification number of the last viewed service area on the eLocation map. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
Number	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map Last Used Spatial Dataset

When a user in the Dispatch Center Map View selects the dataset and country to find technician locations on Google Maps and perform accurate routing and trip calculations, this profile stores these selections. This ensures that the next time the user navigates to the Map view, it displays the last used spatial dataset.

LOV Values	Default Value	Where Used	Supported Levels
None, NA (North America), EU (Europe), WM (World Markets), and AU (Australia)	None	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map Low Latitude Coordinate

Do not change, low latitude coordinate of the last view area of the eLocation map. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map low longitude coordinate

Do not change, low longitude coordinate of the last view area of the eLocation map. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map Move Factor (between 0.1 and 1)

The fraction of the width or height by which the eLocation map view should be moved when using the navigate buttons on the Map tab in the Field Service Dispatch Center. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
Number between 0.1 and 1	0.85	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation MapViewer URL

The profile dictates the mapviewer URL that is used for the eLocation map server.

LOV Values	Default Value	Where Used	Supported Levels
None	qapache.us.oracle.com	Field Service Dispatch Center Map	S/A/R/U

CSF: Enable Alerts

Determines whether a technician receives Field Service alerts and notifications.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Notifications	S/A/R/U

CSF: Enable Multi Dataset

This profile enables access to multiple spatial datasets in a single global instance for Field Service execution and management spanning North America, Australia, Europe and World Markets.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Field Service Dispatch Center	S/A/

CSF: Google Map Key

After you register for Google Maps from Google, Inc., you will enter the Registration KEY in this profile. This will invoke the Google Map functionality in the Field Service Dispatch Center and the Field Service Technician Portal.

If you set the value for this to Null, it invokes the eLocation Map in the Dispatch Center and the Technician Portal to display tasks, technician locations, and technician trips on the map.

LOV Values	Default Value	Where Used	Supported Levels
Blank, Null	Blank	Google Maps	S/A/R/U

CSF: Inventory Organization ID

Set the default Inventory Organization ID by selecting one from the list of values. When the Field Service task is created in the Service Request window (not from a template) the item on the service request is used along with this profile while creating the skills.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Service Request window	S/A/R/U

CSF: Location Finder Accuracy Level

This profile determines the minimum level of accuracy to which all addresses are to be resolved. Based on this value, the Location Finder would try to resolve the addresses. An address would be regarded as resolved if and only if the accuracy factor to which it got resolved is equal to or more than the one required by the user.

LOV Values	Default Value	Where Used	Supported Levels
Zip code or City level accuracy, Street level accuracy, and Building number level accuracy	Zip code or City level accuracy	Scheduler	S

CSF: Location Finder Installed

Value set to check if the location finder is installed. It is launched when a location for a task is missing, see profile option CSR: Create location. When set to Yes, it resolves the missing address using either available spatial data, Google Maps, or the eLocation map. For more information on what it uses to find addresses, see Using Google Maps in the Dispatch Center in the *Oracle Field Service User Guide*.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Null	Scheduler	S/A

CSF: Maximum Tile Memory Size (in MB)

Maximum Memory in MB to be allocated for storing Tiles in Memory. Default allocated memory size in MB, if the caching is turned on.

LOV Values	Default Value	Where Used	Supported Levels
None	128	Scheduler/TD Server	S/A/R/U

CSF: Override Task Skill Requirement for Rescheduling in Scheduling Chart

This profile determines if dispatchers can drag and drop tasks with skill constraints when rescheduling.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Field Service Dispatch Center Scheduling Chart view	S/A/

CSF: Pass Scheduling Chart Context Date to Plan Board

This profile controls the maintainance of the date context when toggling from Scheduling Chart view to Plan Board view. If the dispatcher clicks on a user task to perform any action on the task including drag and drop rescheduling, the Dispatch Center takes the start date of this task and displays tasks across resources for this date when moving to the Plan Board view.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	When toggling from Dispatch Center Scheduling Chart view to Plan Board view	S/A/R/U

CSF: PM Service Request Status

This profile determines the default Preventive Maintenance service request status. This is used to default the service request status during PM service request generation.

LOV Values	Default Value	Where Used	Supported Levels
All Service Request Statuses	Null	Service Request/Task Generation program	S/A/R/U

CSF: PM Service Request Type

This profile determines the default Preventive Maintenance service request type. This is used to default the service request type during PM service request generation.

LOV Values	Default Value	Where Used	Supported Levels
All Service Request Types	Null	Service Request/Task Generation program	S/A/R/U

CSF: PM SR Generation Last Run Date

This profile displays the Preventive Maintenance SR Generation last run date. This value is set when the concurrent program is run. It will be used in the next iteration of the program run.

LOV Values	Default Value	Where Used	Supported Levels
Date	Null	Service Request/Task Generation program	S

CSF: Scheduler Active

Profile that indicates if the Advanced Scheduler is active. Used to enable and disable scheduling functionality.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	<ul style="list-style-type: none">Field Service Dispatch CenterScheduler	S/U

CSF: Selection of Tasks for Auto Commit Tasks

Auto Commit Tasks uses this query when the parameter is not passed. Used by the concurrent program to identify which tasks to commit.

LOV Values	Default Value	Where Used	Supported Levels
Name of the query	Commit Candidates	Used as a parameter for the Auto Commit concurrent program	S/A/R/U

CSF: Service Debrief Default UOM for Labor

This profile sets the time unit of measure default value for reporting labor.

LOV Values	Default Value	Where Used	Supported Levels
Minute, Hour, Day, Week, Month, Quarter, and Year	Hour	<ul style="list-style-type: none">Field Service Technician PortalDebrief window	S/A/R/U

CSF: Service History Time Frame Number

This profile, combines with CSF: Service History Time Frame UOM to determine the default amount of time for which you want to retrieve the service history. For example, if you set 30 as the number and Days as the UOM, then the service history for the past 30 days is retrieved.

LOV Values	Default Value	Where Used	Supported Levels
Number	1	Field Service History window accessed from the Field Service Dispatch Center	S/A/R/U

CSF: Service History Time Frame UOM

This profile, combines with CSF: Service History Time Frame Number to determine the default amount of time for which you want to retrieve the service history. For example, if you set 30 as the number and Days as the UOM, then the service history for the past 30 days is retrieved.

LOV Values	Default Value	Where Used	Supported Levels
UOM for Time	Years	Field Service History window accessed from the Field Service Dispatch Center	S/A/R/U

CSF: Shift Task Address Source

This profile determines the default address source used by the Generate Trips concurrent program.

LOV Values	Default Value	Where Used	Supported Levels
Resource Default Trip Location, Resource Home Address, Resource Subinventory Address	None	Generate Trips	S/A/R/U

CSF: Skill Level Match

This profile options sets the comparison type to be used to compare the skill level of a resource and a task.

LOV Values	Default Value	Where Used	Supported Levels
Equal To, Equal To or Smaller Than, and Equal To or Greater Than	Equal To	Scheduling	S/A/R/U

CSF: Skip eLocation

This profile option controls the switching on and switching off of the eLocation service..

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Scheduling and managing tasks, schedules, and technician trips	S/A/

CSF: Task Signal Color

This enables you to specify a "signal" color to identify incorrect or incomplete data that's displayed on the Plan Board or Gantt of the Dispatch Center. Colors are listed as RGB values.

LOV Values	Default Value	Where Used	Supported Levels
RGB Hexadecimal Codes	R255, G000, B000 (value corresponds to the red color)	Field Service Dispatch Center Plan Board and Gantt chart	S/A/R/U

CSF: TDS Caching Activated

When this profile is enabled, caching will make sure that after a route is calculated, the same route will be returned for all the next requests.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Scheduler/TD Server	S/A/R/U

CSF: The unit of measure for hours

The setting of the unit of measure for hours must be entered and correspond with the MTL_UNITS_OF_MEASURE. Used to default the UOM for time UOM of hour.

LOV Values	Default Value	Where Used	Supported Levels
Sourced from Inventory unit of measures	HR (hour)	<ul style="list-style-type: none">• Debrief• Field Service Dispatch Center• Mobile Field Service Store and Forward• Mobile Field Service Wireless	S/A/R/U

CSF: The unit of measure for minutes

The setting of the unit of measure for minutes must be entered and correspond with the MTL_UNITS_OF_MEASURE. Used to default the UOM for time UOM of minutes.

LOV Values	Default Value	Where Used	Supported Levels
Sourced from Inventory unit of measures	MIN (minutes)	<ul style="list-style-type: none">• Debrief• Field Service Dispatch Center• Mobile Field Service Store and Forward• Mobile Field Service Wireless	S/A/R/U

CSF: Time Frame in Days for Advanced Find Query based on Task Creation Date

This profile value determines the time frame (backwards), till which tasks need to be searched based on the query criteria provided in the Advanced Find Tasks window.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Field Service Dispatch Center	S/A/R/U

CSF: Update planned/scheduled times allowed

To define whether a service technician is enabled to change the planned or scheduled times of the tasks they receive on their laptop device.

If set to No, then updates to scheduled and planned start and end date and time are not allowed on Task Information page.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Laptop applications	S/A/R

CSF: Use Custom Color Coding Scheme

Enables the use of a custom color coding scheme for tasks. If the value is No, this keeps the standard seeded color coding scheme active.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Field Service Dispatch Center	S/A/R/U

CSF: Use eLocation Map

If set to Yes, it enables the eLocation Map for the map display within the Field Service Dispatch Center. If set to No, and you are registered with Google Maps, it displays addresses on the Google Map.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Field Service Dispatch Center	S/A/R/U

CSF: View scheduling results in Gantt chart

To view scheduling results in the Gantt chart set to Y (yes); set to N (no) if you want to default to the table view.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	If set to Yes, Gantt will be displayed and if set to No, the Table will be displayed in the Schedule Advice window	S/A/R/U

CSFW: Technicians Schedulable Options

This profile determines the scheduler options that will appear for a technician when scheduling a task using the Schedule Task page accessed from the Field Service Technician Dashboard.

For more information on scheduling a task from the Field Service Technician Dashboard, see *Scheduling Tasks, Oracle Field Service User Guide* and *Creating and Scheduling Follow-Up Tasks., Oracle Field Service User Guide*

This profile option is also used by Oracle Mobile Field Service Wireless and Voice. For more information, see Task Scheduling and Assignment section in the Implementing the Wireless Option chapter in the *Oracle Mobile Field Service Implementation Guide* .

LOV Values	Default Value	Where Used	Supported Levels
No Scheduling Permission, Work On It, Self Schedule, and Window to Promise	Window to Promise	<p>If set to No Scheduling Permission or Work On it, the scheduling functionality will not be available in the Field Service Technician Dashboard.</p> <p>If set to Self Schedule, the Scheduler Options that appear in the Schedule Task page are Intelligent and Self Schedule.</p> <p>If set to Window To Promise, the Scheduler Options that appear in the Schedule Task page are Intelligent, Self Schedule, and Window To Promise.</p>	S/A/R/U

CSFW: Update Schedulable Task

This profile option is used by the system in determining when the task assignment status for a task can be modified by a dispatcher using the Field Service Dispatch Center.

When this profile is set to No, changing the assignment status from a non-schedulable status to a schedulable status *is not* allowed.

When this profile is set to Yes, changing the assignment status from a non-schedulable status to a schedulable status *is* allowed.

For more information on how this profile option is used, see Maintaining the Task Assignment Status for a Technician, *Oracle Field Service User Guide*.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Field Service Dispatch Center. Updating the task assignment status value for a service request and task.	S/A/R/U

CSP: Cancel Reason

This profile defines the reason code that is used when canceling an internal order. When a task is cancelled the internal order is also cancelled where possible.

LOV Values	Default Value	Where Used	Supported Levels
Cancellation Reason Codes setup in Order Management	Null	Spares and Scheduler Integration	S/A/R/U

CSP: Excess Parts Order Type

This profile option is used to define the type of internal order to use when the excess returns order is automatically created. The recommended profile value is Intransit.

LOV Values	Default Value	Where Used	Supported Levels
Order Types setup in Order Management	Null	Excess Lists window	S/A/R/U

CSP: Include Alternates

Determines whether or not alternate parts should be included when checking availability of parts.

LOV Values	Default Value	Where Used	Supported Levels
Always, Never, Parts Requirement Only, Scheduler Only	Never	<ul style="list-style-type: none"> Parts Requirement window Scheduler 	S/A/R/U

CSP: Include Car Stock

Determines when, if ever, car stock should be included in availability calculations.

LOV Values	Default Value	Where Used	Supported Levels
Always, Never, Parts Requirement Only, Scheduler Only	Always	<ul style="list-style-type: none"> Parts Requirement window Scheduler 	S/A/R/U

CSP: Move Order Intransit Subinventory

Use this profile option to set the default subinventory for move orders that are intransit. Select from the list of values. Used to track intransit between subinventories.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Move Order	S

CSP: Order Type

This profile option is used to provide a default value for order type when creating internal orders in the Scheduler integration. Used as the Default Order Type in the Parts Requirement list of values and when creating internal orders in Mobile Field Service - Wireless. Select from any valid order type in the list of values.

LOV Values	Default Value	Where Used	Supported Levels
Order Types setup in Order Management	Order Only	<ul style="list-style-type: none"> Spares and Scheduler Integration Parts Requirement window Mobile Field Service - Wireless 	S/A/R/U

CSP: Product Task History Threshold

This profile option is used to define the minimum number of tasks for Task Parts history before Scheduler will use the automated version of Task Parts.

LOV Values	Default Value	Where Used	Supported Levels
None	100	Spares and Scheduler Integration	S/A/R/U

CSP: Purchasing Line Type

Sets the default purchasing line type for Spares Management. The line type is used when creating a Purchasing requisition. Choose from the list of values.

LOV Values	Default Value	Where Used	Supported Levels
Line Types setup in Purchasing	Null	Parts Requirement window	S/A/R/U

CSP: Ship Complete

Defines whether parts need to be shipped from the same warehouse. Controls whether parts can be shipped from multiple warehouses or must be shipped from a single warehouse.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Null	Spares and Scheduler Integration	S/A/R/U

CSP: Show non min-max planned items in subinventory stocklist

This profile determines whether non min-max planned items display in the Stocklist tab in the Planner's Desktop.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Stocklist tab of the Planner's Desktop	S/A/R/U

CSP: Usage Run Date

This profile displays the last run date of the Create Usage for ASL Recommendations concurrent program. The program can search for new usage history since last run date.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	Create Usage for ASL Recommendations concurrent program	S

CSP: Use ATP For Parts

Determines when, if ever, ATP should be included in determining parts availability.

LOV Values	Default Value	Where Used	Supported Levels
Always, Never, Parts Requirement Only, Scheduler Only	Always	Spares and Scheduler Integration	S/A/R/U

EDR: E-records and E-Signatures

Set to 'Yes' to enable E-records and E-Signatures functionality.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Field Service Technician Portal	S/A/R/U

21 CFR Part 11 Compliance

This appendix covers the following topics:

- 21 CFR Part 11 Overview

21 CFR Part 11 Overview

The Food and Drug Administration (FDA) protects the public health by regulating the food and drug industries. In 1997, the FDA issued new regulations for quality systems using computerized software in the FDA Code of Federal Regulations (CFR) Title 21 Part 11, otherwise known as 21 CFR Part 11. The regulations strive to assure that computerized records are safe, secure, and as accurate as a paper based system.

According to 21 CFR Part 11, the software application's role in the data management process is to guarantee and substantiate that the manufactured product data is electronically captured, manipulated, extracted, and coded during the manufacturing of the product. All subject data and definitional objects (metadata) must have a complete audit trail.

In general, 21 CFR Part 11 describes the requirements that must be met when using electronic records (e-records) and electronic signatures (e-signatures), but does not describe where they are required. The FDA left the definition of where to use electronic records and which signatures to apply as electronic signatures to the discretion of the medical device manufacturers who use software applications as part of their quality management system. The predicate rule used by the medical device manufacturers is FDA 21 CFR Part 820. Oracle Field Service Applications enable electronic records and signatures for certain business events (as described in this chapter), as well as give users ways to choose which business events must meet 21 CFR Part 11 requirements, by using the Oracle E-Records product. Refer to the *Oracle E-Records Implementation Guide* for information on how to tailor Oracle E-Records to meet your needs.

Depending on the type of business event, an electronic signature is either online or deferred. An online signature requires that you enter a valid signature before saving the event or transaction.

Certain business events also include any attachment made to the business event object

in the e-record. For example, if a drawing depicting an engineering change is attached to an engineering change order, you can review the drawing in the e-record for the engineering change order.

The e-records and e-signatures (ERES) framework is a central tool designed to achieve 21 CFR Part 11 compliance for the necessary Oracle Applications business events. The ERES framework uses common Oracle Applications components such as Oracle Workflow business events, the XML Gateway, and others.

To enable electronic records and signatures for Oracle Field Service Applications, follow the steps listed in Implementing E-Records, in the *Oracle E-Records Implementation Guide*. Otherwise, no e-records or e-signatures are required.

- Oracle Field Service Technician Portal
- Oracle Field Service Administrator Portal

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