Oracle® Field Service

Implementation Guide

Release 12

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Oracle Field Service Implementation Guide, Release 12

Part No. B25726-04

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Oracle Field Service Implementation Guide, Release 12

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Preface

Intended Audience

Welcome to Release 12 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 Applications product information.

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Structure

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

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This chapter documents tasks for implementing Oracle Advanced Scheduler.

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This chapter documents procedures for setting up the Oracle Advanced Scheduler application. For the current release, Oracle Advanced Scheduler implementation documentation is contained in the *Oracle Field Service Implementation Guide*

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Related Information Sources

Oracle Field Service User Guide

This manual contains detailed information about using the Oracle Field Service application, including the Dispatch Center, Debrief, and the Technician's Portal.

Oracle Self–Service Web Applications Implementation Guide.

This manual contains detailed information about the overview and architecture and setup of Oracle Self–Service Web Applications. It also contains an overview of and procedures for using the Web Applications Dictionary.

Oracle Common Application Components User Guide

Oracle Field Service uses many modules from among the Common Application Components, including Resource and Task Manager, among others. Refer to this guide for details on the usage of each module.

Oracle Advanced Scheduler Concepts and Procedures

When Advanced Scheduler is installed, the usage is tightly integrated with the Field Service application. This guide explains the Advanced Scheduler processes and how it is integrated with Field Service.

Oracle Field Service/Laptop Concepts and Procedures

This guide will help you to navigate the mobile client, the laptop device, and explains how to use the Mobile Field Service/Laptop application. Field Service information is send to the laptop device to be handled by the field service representative.

Oracle Field Service/PalmTM Devices Concepts and Procedures

This guide will help you to navigate the mobile client, the palm device, and explains how to use the Mobile Field Service/PalmTM Devices application. Field Service information is send to the palm device to be handled by the field service representative.

Oracle Wireless Option for Service Concepts and Procedures

This guide will help you to navigate the mobile client, the wireless device, and explains how to use the Oracle Wireless Option for Service application. Field Service information is send to the wireless device to be handled by the field service representative.

Oracle Knowledge Management User Guide

This guide will help you understand and use the Oracle Knowledge Management application, which integrates with the Oracle Field Service Technician's Portal module.

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.

Do Not Use Database Tools to Modify Oracle Applications Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications 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 Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, 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 Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications 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.

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.

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
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.
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.

Suite Product	Description
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.
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.
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.
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.
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.
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.
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.

Suite Product	Description
Complex Maintenance, Repair and Overhaul (CMRO)	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. **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.
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.

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 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 representatives, either automatically or manually. When parts reservation are created an order for the parts is initiated by this process.

  The tasks or daily schedules are send to the service representatives 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 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 Trips Management UI, 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 unplan or reschedule 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 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.

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.

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.

Field Service Technicians 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.

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.

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.
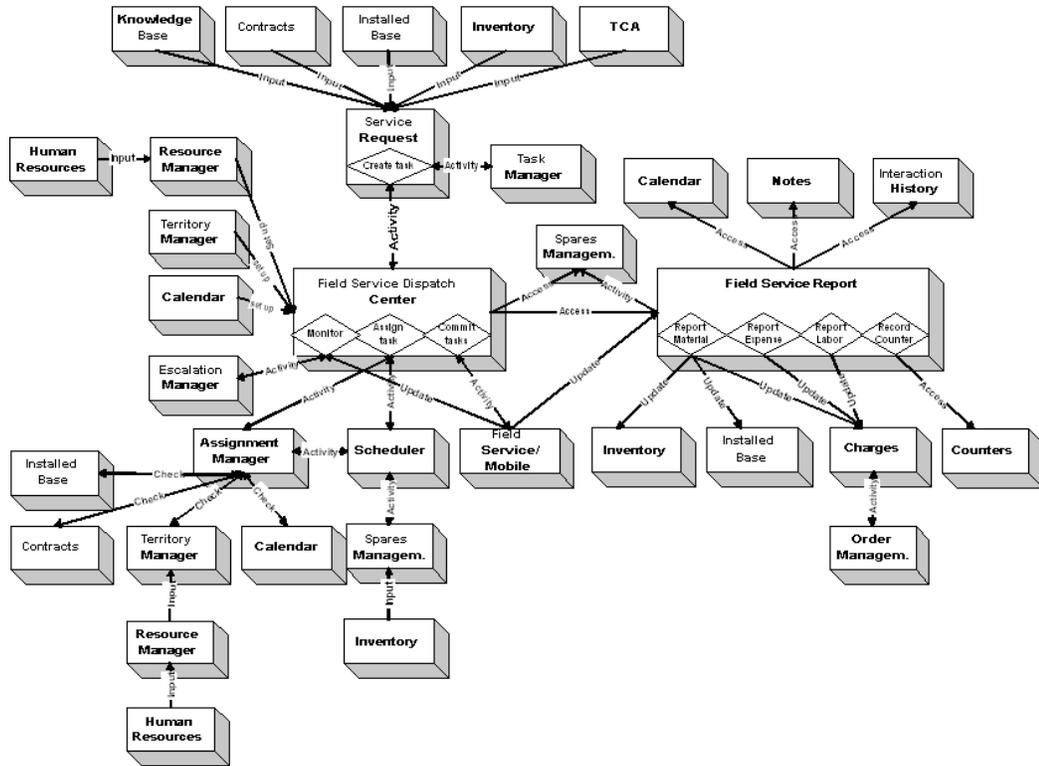
Service Request

A Service Request is created. The following applications have a relation with Service Request:

- Knowledge Base provides input for resolution of the problem.

- Contracts provides response time for the service request when considering task assignment. This could be either Contracts core or Service Contracts.

- TCA provides information on parties and contacts and their information.

- Install Base provides input on the install base information send to the Mobile applications. Used by the service representative when servicing the product.

- Inventory provides input to determine what products are serviceable.

- Task Manager functionality is used to create tasks to perform the field visit.

Resource Manager

All service representatives and field service dispatchers need to be defined as resources in the resource manager individually. Field service dispatchers are also part of a dispatcher group created in Resource Manager to be able to access the Field Service

Dispatch Center.

Territory Manager

Territory Manager is used for two purposes.

- It is used to create territories with service representatives assigned to it. These territories are then related to a dispatcher group. The service representatives assigned to the territory show up 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 and Advanced Scheduler to retrieve a qualified service representative 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 it's 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/PalmTM 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 customers Installed Base from Field Service Debrief. Updating the Installed Base results in an update of the items of the customers Instaledl 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.

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.

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 CRMO 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 6-2.

- 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 7-3 in this guide.

4

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
- Define a Calendar
- Define Currencies
- Define a Set of Books
- Open and Close Accounting periods
- Confirming Setup of Employees
- Confirming Setup of Resources
- Confirming Setup of Inventory
- Define Unit of Measurement
- Check Profile Option for Operating Unit Setting
- Defining Subinventories
- Additional Setup Required for Intransit Subinventory
- Set Up Account Aliases
- Define Items
- Set Up On Hand Quantity for Items
- Define Planners

- Define Shipment Methods

- Define Freight Carriers

- Confirming Setup of Order Management

- Setup of Price Lists

- Oracle Work In Process Setup

- Oracle Bills of Material Setup

- Oracle Purchasing Setup

- Confirming Setup of Service Request

- Confirming Setup of Customer Model 11i (TCA)

- Confirming Setup of Territory Manager

- Set Territory Manager Profile Option

- Confirming Setup of Tasks

- Set up Task Status and Transition Rule

- Set up Task Type

- Set up Task Priority

- Set up Task Manager Profile Options

- Confirming Setup of Escalation Management

- Confirming Setup of Charges

- Confirming Setup of Knowledge Management

- Confirming Setup of Counters

- Confirming Setup of Notes

- Confirming Setup of Interaction History

- Confirming Setup of Install Base

- Setting up Business Processes

- Setting up Transaction Billing Types

- Confirming Setup of Contracts Core

- Confirming Setup of Service Contracts

- Confirming Setup of Assignment Manager

- Confirming Setup of Calendar

- Defining a Calendar

- Defining Calendar Exceptions

- Defining Shifts

- Assigning Shifts/Exceptions to Calendar
- Assigning Resources to Calendar

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 4-4

2. Defining Key Flexfields, page 4-6

3. Defining Calendars, Currencies, and Set of Books, page 4-7

4. Confirming Setup of Employees, page 4-10

5. Confirming Set Up of Resources, page 4-10

6. Confirming Setup of Inventory, page 4-11

7. Confirming Setup of Order Management, page 4-21

8. Setting Up Oracle Work In Process, page 4-24

9. Setting Up Oracle Bills of Material, page 4-24

10. Setting Up Oracle Purchasing, page 4-24

11. Confirming Setup of Service Request, page 4-24

12. Confirming Setup of Customer Model 11i (TCA), page 4-25

13. Confirming Setup of Territory Manager, page 4-26

14. Confirming Setup of Tasks, page 4-27

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.

Responsibility	Description
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.
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.

Prerequisites

None

Responsibility

System Administrator

Navigation

Application > Flexfield > Key

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 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–Org implementation, see the note below.

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

To setup Calendars, currencies, and a set of books perform the following steps:

•   Define a Calendar, page 4-8

•   Define Currencies, page 4-8

•   Define a Set of Books, page 4-9

• Open and Close Accounting periods, page 4-10

Define a Calendar

Carefully consider the type of Calendar that you need for your organization, it can be difficult to change your 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 calenders:

• 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, O*racle Bills of Material User's Guide*. (Optional)

Prerequisites

None

Responsibility

GL (General Ledger) Super User

Navigation

Setup > Financials > Calenders

Define Currencies

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

Do the following 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.*

Prerequisites

None

Responsibility

GL (General Ledger) Super User

Navigation

Setup > Currencies

Define 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 your 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 the following 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*.

Prerequisites

None

Responsibility

GL (General Ledger) Super User

Navigation

Setup > Financials > Books

Open and Close 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 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 4-10 of the Field Service set up.

Prerequisites

None

Responsibility

HR (Human Resource) Super User

Navigation

People > Enter and Maintain

Confirming Setup of Resources

Make sure you implement Resource Manager as described in Resource Manager section in Oracle Common Applications Components Implementation Guide.

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

- Set up service representatives. In Resource Manager assign role "Field Service Representative" to a resource to make it visible in the Dispatch Center.

  A field service representative does not have to be defined as an employee and does not have to be an Oracle Applications User.

- Set up planners. A planner does not need a specific role assigned. You can assign the role "Field Service Dispatcher" in Resource Management.

  A planner needs to be defined as an employee and assigned an Oracle Applications User. Define the planner as an employee and import the employee into Resource Management to define it as a resource. It is then automatically assigned an Oracle Applications User.

- Create planner groups by creating resource groups with only planners assigned to it. The planner groups are used to assign groups of service representatives created in Territory Management to.

- 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.

The setup of Resources is also addressed in more detail in Setting up Resource Relations, page 5-4 of the Field Service set up.

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 4-13

- Check Profile Option for Operating Unit Setting, page 4-14

- Defining Subinventories, page 4-14

- Additional Setup Required for Intransit Subinventory, page 4-15

- Set Up Account Aliases, page 4-16

- Define Items, page 4-16

- Define Planners, page 4-19

- Define Shipment Methods, page 4-20

- Define Freight Carriers, page 4-20

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.

Define Unit of Measurement

You need to define the 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.

Prerequisite

None.

Responsibility

Inventory Super User

Check Profile Option for Operating Unit Setting

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

Prerequisite

None.

Responsibility

System Administrator

Navigation

Profile > System

Steps

1. To narrow your search, enter MO% at the Profile field.

2. Click Find.

3. 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*.

Prerequisite

None.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Setup > Organization > Subinventories

Steps

1. Enter a name for the subinventory.

2. Enter a description for the subinventory.

3. Check the following check boxes so the subinventory can be used by Spares Management:

   • Qty Tracked

   • Asset Subinventory

   • Allow Reservation

4. 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 forms.

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 form.

Set 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 form.

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

Prerequisites

None.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Setup > Account Aliases

Steps

1. After choosing the Organization, in the Account Aliases window, enter the following name of the alias in the Alias field: CSP_RECEIPT.

2. Enter the following description:

   Account for Spares Management over and under receipt.

3. Select the account to be used.

4. Enter the date on which this alias account is to be effective.

5. Save your work.

Define 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-tractable, 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 checkbox 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 checkbox. 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*.

Prerequisite

Billing types must be defined and associated to billing categories.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Items > Master Item

Guidelines

Items with the associated billing category of Material must be associated with a price list. For details, see Setup of Price Lists, page 4-21.

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.

Set Up On Hand Quantity for Items

In order 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.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Items > Miscellaneous Transaction

Steps

1. In the Transaction Type field, select Miscellaneous Receipt from the list of values.

2. Click the Transaction Lines button.

   The Miscellaneous Receipt form opens.

3. Choose the Item you want to set an on-hand quantity for from the list of values.

4. Choose the Subinventory you want to associate to this Miscellaneous Receipt line from the list of values.

5. Enter a numeric value in the Quantity field.

   This represents the on-hand quantity value for this item and subinventory.

6. If the Account field is enabled, select an Account from the list of values.

7. 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.

Define 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.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Setup > Planners

Steps

1. In the Planners setup form, enter the name of the planner in the Name field.

2. Enter the user role in the Description field.

3. Select the employee name from the Employee list of values.

4. Save your work.

Define 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*.

Prerequisite

None.

Responsibility

Inventory

Navigation

Setup > Organization > Shipping Methods

Steps

1. From the Ship Method Lookups window, enter a unique alphanumeric code describing the shipping method.

2. Enter the Meaning of the shipping method code.

3. Enter a Description of the shipping method.

4. Optionally, enter from and to effective dates.

5. Indicate whether the shipping method is enabled.

6. Save your work.

Define 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 carries must be defined in Oracle Inventory before delivery times can be setup in Spares Management.

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

Prerequisite

None.

Responsibility

Inventory

Navigation

Setup > Freight Carriers

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 Managment 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.

Setup of Price Lists

Perform the following steps to create price lists listing prices for items.

Prerequisite

None

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Order Management > Pricing > Price Lists > Price List Setup

Steps

1. From the Price List setup page, in the Name field, enter a name for the Price list.

2. At Description enter a description of the Price List.

3. The functional currency for your business unit defaults into the Currency field.

4. 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.

5. At Effective Dates enter the start and end date for the Price List to be effective.

6. Select Payment Terms from the list of values.

    Examples of options include Collect, Prepaid, Third Party Billing, etc.

7. Select the default Freight Terms and Freight Carriers from the list of values.

8. Click on the List Lines tab.

9. In the Product Context field, select Item.

10. Select Item Number in the Product Attribute field from the list of values.

11. 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.

12. Keep the default values for UOM.

13. 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.

14. In the Value field, enter the list price for the item.

15. For service items enter a value at Dynamic Formula and leave Static Formula open.

16. 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.

17. At Line Type select Price List Line from the list of values.

18. At Modifier Level select Line from the list of values.

19. 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 then one list line from a Price List.

20. Check Primary UOM if this is the primary pricing UOM for this list line item on the price list.

21. Repeat steps 8-20 for each item you want to associate with this price list.

22. Save the Price List.

23. Click the Pricing Attributes button to define pricing attributes.

24. Enter a pricing context in the Product Context column and an attribute in the Product Attribute column.

25. At Operator select = or BETWEEN.

26. At Value:

    • When Operator is BETWEEN, enter To.

    • Otherwise enter From.

27. Save Pricing Attributes.

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

Oracle Work In Process Setup

Set up Work in Process 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.

Oracle Bills of Material Setup

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.

Oracle Purchasing Setup

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.

Confirming Setup of Service Request

On the service request form all information for a field service visit is captured. Tasks are assigned to this service request and these tasks are assigned to field service representatives.

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."

If you are using the Preventive Maintenance module, you must c

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.

Prerequisite

None

Responsibility

Field Service Administrator

Navigation

Service Requests

Confirming Setup of Customer Model 11*i* (TCA)

Customer Model 11*i* 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*.

Prerequisite

None

Responsibility

Field Service Dispatcher or Order Management

Navigation

Customer Management > Contact Center

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.

- 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 Implementing Territory Management as part of the Oracle Common Applications Components Implementation Guide. Create Territories as described in Oracle CRM Foundation Concepts and Procedures

The creation of territories is also addressed in more detail in Setup Resource Relations as part of Confirming Setup of Resources, page 4-10

Perform the following Field Service specific steps:

- Set Territory Manager Profile Option, page 4-27

Set Territory Manager Profile Option

You need to set a profile option from Territory Manager that affects the way tasks are scheduled by the Assignment Manager or Oracle Advanced Scheduler.

Responsibility

Field Service Administrator

Navigation

Other > Profiles

Steps

1. Open the Find Personal Profile Values window.

2. At Profile Name enter TERR%.

3. Click Find.

   Set the following profile option:

Territory Manager Profile Option Setup

Step	Profile Option	Description
1	TERR: Multiple Winning Territories	There are two options from the list of values: • **Single Winner**: Only qualified resources found in one of the territories selected are considered. • **Multiple Winners**: All qualified resources found in each of the territories selected are considered.

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 you schedule tasks.

Make sure you implement Task Manager as described in Implementing Task Manager as part of the Oracle Common Applications Components Implementation Guide.

Perform the following Field Service specific setup steps:

Set up Task Status and Transition Rule

Setup 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."

Prerequisite

None

Responsibility

Field Service Administrator

Navigation

Field Service Dispatcher > Field Service Setup > CRM Foundation > Task and Escalation Manager > Setup > Define Task Status

Steps

1. At the Status field enter the name of the Task Status you want to define.

2. At Description enter a brief description of the Task Status you are defining.

3. At From and To enter the date for the Task Status to be effective.

4. 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 Applications Components Implementation Guide.

> **Note:** Make sure to check the Schedulable flag in order to be able to schedule a task in Oracle Field Service.

5. 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.

6. In the Current State field, select the task status that you want to set a transition for. (For example, Open).

7. In the Next State field, select the task status that you want the Current State that you selected to transition to. (For example, Closed).

8. Repeat this process for each status you want to set a transition status for, such as Cancelled, Reject, Complete, Assigned, and so on.

9. Save the Task Status.

Set up Task Type

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

Prerequisite

None

Responsibility

Field Service Administrator

Navigation

Field Service Dispatcher > Field Service Setup > CRM Foundation > Task and Escalation Manager > Setup > Define Task Type

Steps

1. In the Task Types window, at the Type field enter the name of the Status Type you want to define.

2. 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.

3. At From and To enter the date for the Task Type to be effective.

4. Select an UOM (Unit of Measurement) to go with the Task Type.

5. 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 Applications Components Implementation Guide.

6. Save the Task Type.

Set up Task Priority

Set up task priorities.

Prerequisite

None

Responsibility

Field Service Administrator

Navigation

Field Service Dispatcher > Field Service Setup > CRM Foundation > Task and Escalation Manager > Setup > Define Task Priority

Steps

1. In the Task Priority window, enter the name of the Status Priority you want to define in the Priority field.

2. At Importance enter a numerical value between 1 and 4.

   In this field, 1 is highest priority and 4 is the lowest.

3. At Description enter a brief description of the Task Priority you are defining.

4. At From and To enter the date for the Task Priority to be effective.

5. Save the Task Priority.

Set up Task Manager Profile Options

The 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.

Prerequisites

None

Responsibility

Field Service Administrator

Navigation

Other > Profiles

Steps

1. Open the Find Personal Profile Values window.

2. At Profile Name enter Task Manager%.

3. Click Find.

4. 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 task

   • Task Manager: View All Tasks

   Please refer to the Oracle Common Applications Components Implementation Guide for more information on the profile options.

Confirming Setup of Escalation Management

An escalation management system allows an organization to identify, track, monitor,

and manage situations that require increased awareness and swift action. Escalation Management is offered as an integrated as 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 Applications Components Implementation Guide for Escalations Manager setup.

No additional Field Service specific setup steps are necessary.

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.

Confirming Setup of Knowledge Management

Knowledge Management is used from the Service Request form.

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 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 checkboxes are selected in the Inventory tab of the Master Item form -- 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.

Confirming Setup of Notes

Notes provides 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 Field Service Debrief.

Please refer to the appropriate section from Oracle Common Applications Components 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 Common Applications Components Implementation Guide for Interaction History setup.

No additional Field Service specific setup steps are necessary.

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 form. 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 4-35

- Setting up Transaction Billing Types, page 4-36

Setting up Business Processes

Business Process setup is required in order 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. You must create 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. Switch to Field Service Administrator responsibility.

2. Navigate to Setup > Install Base > Business Processes.

3. Enabling the Service Request flag enables the user to pick this business process when charges are invoked from Service Request.

4. Enabling the Depot Repair flag enables the user to pick this business process when charges are invoked from Depot Repair.

5. 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.

6. Save your work.

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 Contracts Core

The set up of Contracts Core is optional, but when you have installed it, please refer to *Implementing Oracle Contracts Core* for Contracts setup.

No additional Field Service specific setup steps are necessary.

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 form. You can drill down to contract details on the Product Coverage tabbed page.

Please refer to *Oracle Service Contracts Concepts and Procedures* for Service Contracts setup.

No additional Field Service specific setup steps are necessary.

Confirming Setup of Assignment Manager

The setup 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 form and the Oracle

Field Service Dispatch Center.

Please refer to the appropriate section from Oracle Common Applications Components 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.

Responsibility

Field Service Administrator

Navigation

Other > Profiles

Steps

1. Open the Find Personal Profile Values window.

2. At Profile Name enter AC%.

3. 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).

Step	Profile Option	Description
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 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 4-39

- Defining Calendar Exceptions, page 4-39

- Defining Shifts, page 4-40

- Assigning Shifts/Exceptions to Calendar, page 4-40

- Assigning Resources to Calendar, page 4-40

Defining a Calendar

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

Steps

1. Switch to the Field Service Administrator responsibility.

2. Navigate to CRM Foundation > Calendar > Calendar Setup > Define Calendar.

3. For details see, Oracle Common Applications Components Implementation Guide.

Defining Calendar Exceptions

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

Steps

1. Switch to the Field Service Administrator responsibility.

2. Navigate to CRM Foundation > Calendar > Calendar Setup > Define Exceptions.

3. For details see, Oracle Common Applications Components Implementation Guide.

Defining Shifts

Define the working hours for your resources.

Steps

1. Switch to the Field Service Administrator responsibility.

2. Navigate to CRM Foundation > Calendar > Calendar Setup > Define Shifts.

3. For details see, Oracle Common Applications Components Implementation Guide.

Assigning Shifts/Exceptions to Calendar

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

Steps

1. Switch to the Field Service Administrator responsibility.

2. Navigate to CRM Foundation > Calendar > Calendar Setup > Assign Shifts/Exceptions.

3. For details see, Oracle Common Applications Components Implementation Guide.

Assigning Resources to Calendar

Define for each calendar for which resources it applies.

Steps

1. Switch to the Field Service Administrator responsibility.

2. Navigate to CRM Foundation > Calendar > Calendar Setup >Assign Resources.

3. For details see, Oracle Common Applications Components Implementation Guide.

4. Define a Calendar, page 4-8

5

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

- Setting up Resource Relations

- Assigning Territories to Planner Groups

- Generate Field Service Trips

- Generating Field Service Trips

- Defining an Executable

- Setting Up the Generate Field Service Tasks Concurrent Program

- Assigning Resources to Subinventories

- Activating Automatic Commitment of Schedules

- Defining Material Justification Codes

- Defining Labor Justification Codes

- Defining Expense Justification Codes

- Set Up Billing Types and Service Activity Codes

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

- Set up Skills Management

- Setting Up Query Selection for Task Owner Context Enforcement

- Set Up Tasks Custom Color Coding

- Setting up the Map

- Setting Up Spatial Data

- Defining Resource Addresses and Subinventories

- Setting Up Google Maps

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. Setting up Resource Relations, page 5-4

To launch the Field Service Dispatch Center you need to setup the following resources: field service dispatchers and field service representatives.

2. Assigning Territories to Planner Groups, page 5-13

Use this Field Service setup screen to relate territories of service representatives to field service dispatcher groups. Once setup, this is the default group of service representatives shown to the field service dispatcher in the Field Service Dispatch Center.

3. Generate Field Service Trips, page 5-14

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

4. Assigning Resources to Subinventories, page 5-20

Use this setup screen in Field Service to relate service technicians to their trunk stock or other sub-inventories.

5. Activating Automatic Commitment of Schedules, page 5-21

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

6. Defining Material Justification Codes, page 5-24

Define justification lookup codes when reporting on material in Field Service Debrief.

7. Defining Labor Justification Codes, page 5-26

Define justification lookup codes when reporting on labor in Field Service Debrief.

8. Defining Expense Justification Codes, page 5-29

Define justification lookup codes when reporting expense in Field Service Debrief.

---

9. Set Up Billing Types and Service Activity Codes, page 5-31

Set up multiple service activity codes that are differentiated by the associated billing type.

10. Set up Skills Management, page 5-43

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.

11.

Setting Up Oracle E-Records and E-Signatures for Field Service, page 5-37

12. Set Up Tasks Custom Color Coding, page 5-50

Color coded tasks viewed in the Field Service Dispatch Center allow dispatchers to quickly identify 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.

13. (Optional) Setting Up Spares Management, page 6-2

Setup and enable the Spares Management module.

14. (Optional) Setting up the Map, page 5-51

A Map is available to the user as part of the Field Service Dispatch Center functionality and the installation of spatial data. The Map display is supported by the MapViewer which is part of Oracle 9iAS.

15. (Optional) Setting Up Google Maps, page 5-61

Integration with Google Maps is available so that you can have a pictorial view of the tasks, task status, and technicians location details on the Google Map. Google Map is available from the Field Service Dispatch Center and the Field Service Technician Portal.

16. (Optional) Setting Up Spatial Data, page 5-55

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).

17. (Optional) Setting Up Oracle Advanced Scheduler, page 8-2

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

Preventive Maintenance Task Sequence

For the Preventive Maintenance implementation task sequence, see Implementation Task Sequence for Preventive Maintenance, page 9-12.

Advanced Scheduler Task Sequence

Advanced Scheduler Implementation Tasks

Setting up Resource Relations

In order to launch the Field Service Dispatch Center as a dispatcher showing the right Field Service representatives (resources), and to be able to assign tasks to these service representatives, you need to do the following:

- Create Application Users with the Field Service Dispatcher Role, page 5-4

- Create Employees, page 5-5

- Assign the Field Service Representative Role to Employees, page 5-6

- Create Resources with the Field Service Representative Role, page 5-7

- Assign a Human Resource to an Applications User (Field Service Dispatcher), page 5-8

- Assign an Applications User to a Resource (Field Service Dispatcher), page 5-9

- Create Field Service Dispatcher Groups, page 5-9

- Create Territories (of Field Service Representatives), page 5-10

- Create Territories (of Qualifiers), page 5-11

- Generate Territory Packages, page 5-12

- Assigning Territories to Planner Groups, page 5-13

Create Application Users with the Field Service Dispatcher Role

In order for a Field Service dispatcher to access the Field Service Dispatch Center, you must create it in Applications.

For more information on setup of the refer to *Oracle Applications System Administrator's Guide*.

Prerequisites

None

Responsibility

System Administrator

Navigation

Security > User > Define

Steps

1. From the Define User window, enter the Applications User Name and Password.

   The password must be at least 5 characters and you must enter it twice to verify.

2. Make sure that on the Responsibilities tab, Field Service Dispatcher is selected from the list of values at Responsibility.

3. Optionally, you can set password expiration parameters and enter other information, such as person name, email, fax, etc.

4. Save your work.

Create Employees

You need to define your Field Service dispatchers as employees (human resources). It is optional to define field service representatives as employees. However you must define service representatives as resources in order to assign tasks to them, but they do not necessarily have to be employees. This process is described in Create Resources with the Field Service Representative Role, page 5-7.

There are two options for creating employees.

- From Human Resources

- From Resource Manager

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

Prerequisites

None

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Resource Manager > Maintain Employee > Employee

Steps

1. When Human Resource application is installed, this navigation path will fail.

2. Switch to the HR Super User responsibility.

3. Navigate to People > Enter and Maintain.

4. For both applications you need to at least supply the following information:

    •   Last Name: Last name of resource

    •   Gender: Select from list of values

    •   Type: select employee form list of values

    •   Social Security: Social security number

    •   Employee number

    •   Birth Date

        For set up details please refer to Oracle Commom Application Components Implementation Guide or *Oracle Human Resource Management Systems* to enter and maintain employees.

5. Save your work.

Guidelines

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

Assign the Field Service Representative Role to Employees

When you have defined your Field Service representatives as employees, they need to be assigned the field service representative role to show up in the Field Service Dispatch Center. Use the following procedure to assign the field service representative role.

Prerequisites

None

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Resource Manager > Maintain Resources > Import Resources

Steps

1. At Resource Category, select Employee.

2. Enter a search criteria in the Resource Category region.

3. Click Search.

   The results are shown in the Search Results region.

4. Check the resource and click Create.

   The Default Values window is opened.

5. At Role select Field Service Representative from the list of values.

6. Click OK.

7. Click Save Resource.

   A transaction number is displayed upon saving.

   For additional set up details please refer to Oracle Common Application Components Implementation Guide.

Create Resources with the Field Service Representative Role

When you are working with field service representatives that aren't employees of your company use this procedure. The field service representatives need to be defined as resources with the field service representative role assigned to show up in the Field Service Dispatch Center.

Prerequisites

None

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Resource Manager > Maintain Resources > Resources

Steps

1. From the Resources window, click New.

2. Enter all the appropriate information.

   For set up details, refer to the Oracle Common Application Components Implementation Guide.

3. On the Roles tab make sure the Field Service Representative Role Type and Role are selected.

4. Save your work.

Assign a Human Resource to an Applications User (Field Service Dispatcher)

The Field Service Dispatcher needs to be assigned his Application user account. Use either this procedure or the next to establish this.

Prerequisites

You should have already created a Field Service Dispatcher Application user and defined the Field Service Dispatcher as an employee in human resources.

Responsibility

System Administrator

Navigation

Security > User > Define

Steps

1. From the Define window, search for the relevant Applications User Name.

2. At the Person field, choose the human resource name from the list of values.

3. Save your work.

Assign an Applications User to a Resource (Field Service Dispatcher)

When you haven't used the previous procedure to assign the field service dispatcher his applications user name, use this procedure in Resource Management.

Prerequisites

You should have already created a Field Service Dispatcher Application user and, because we defined him as an employee, he is automatically defined as a resource.

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Resource Manager > Maintain Resources > Resources

Steps

1. In the Resource region, select Employee from the Category list of values.

2. Optionally, choose the Field Service Dispatcher's Name.

3. Click Find.

   The Resource Search results window is opened.

4. Select the Field Service Dispatcher and click Resource Details.

   The Resource window is opened.

5. At User Name field, select the appropriate Applications user name from the list of values.

6. Optionally, you can assign the Field Service Dispatcher Role Type and Role on the Roles tab.

   This is not mandatory for Field Service dispatchers.

7. Save your work.

Create Field Service Dispatcher Groups

Create field service dispatchers groups. These groups are used to assign territories of service representatives to.

Once a territory of service representatives is assigned to a dispatcher group it is shown to the field service dispatcher in the Field Service Dispatch Center. A dispatcher group can have one or more field service dispatchers.

Prerequisites

Field Service representative and territories must be defined.

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Resource Manager > Maintain Resources > Groups

Steps

1. In the Groups window in the Name field, enter a name for the dispatcher group you are creating.

2. Enter a Description.

3. On the Members tab, select Employee from the Category list of values.

4. Enter the employee number for the field service dispatcher you want to add to this dispatcher group.

   For setup details please refer to Oracle Common Application Components Implementation Guide

5. Save your work.

Create Territories (of Field Service Representatives)

You need to create territories with field service representatives assigned to them to be able to connect to the dispatcher groups. Use this procedure to create territories of field service representatives.

Prerequisites

You should have already created a Field Service Dispatcher Application user and defined the Field Service Dispatcher as an employee in human resources.

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Territory Manager > Territory Administration

Steps

1. In the Navigator window, from the menu bar choose Administration > Define Territory.

   The Territory Details window opens.

2. In the Overview tab in the Usage field, select Oracle Service from the list of values.

3. Enter a territory Name and Description.

4. At the Transaction Type field choose Service Request and Task from the list of values.

5. Select the Resources tab.

6. Enter all the Field Service representatives you want to add to this territory.

   For more information on setup, refer to Oracle Common Application Components Implementation Guide.

7. Save your work.

Create Territories (of Qualifiers)

In order to create territories to be used by the Assignment Manager and Oracle Advanced Scheduler to assign a task to a Field Service representative in the most effective way, you must create territories with transaction and resource qualifiers attached.

Qualifiers allow the assignment manager and Advanced Scheduler to select the appropriate territory and resource from among all the available options. This allows for automated scheduling.

To create territories that can be used by Field Service for scheduling purposes you need to do the following procedure.

For more information on setting up territories with qualifiers, please refer to Oracle Common Application Components Implementation Guide.

Prerequisites

None

Responsibility

Field Service Administrator

Navigation

CRM Foundation > Territory Manager > Territory Administration

Steps

1. From the Navigator window, go to the menu bar and choose Administration > Define Territory.

2. In the Overview tab select Oracle Service from the list of values at Usage.

3. Enter a territory Name and Description.

4. At Transaction Type choose Service Request and Task from the list of values.

5. Navigate to the Transaction Qualifiers tab or, optionally, the Resource Qualifiers tab and enter the appropriate details.

6. Save your work.

Generate Territory Packages

After territory creation or updates, you must run the Generate Territory Package concurrent program to generate the correct, and updated territories before a calling module can properly assign resources that are defined in your territories.

Prerequisites

None

Responsibility

Field Service Administrator

Navigation

Other > View Requests

Steps

1. From the View Requests window, check the All My Requests radio button.

2. Click Submit a New Request.

The Submit a New Request window is opened.

3. Click Single Request.

The Submit Request window is opened.

4. At Name, select the Generate Territory Packages from the list of values.

5. At Parameters enter the following:
   - Usage: Oracle Service
   - Qualifier Type: Service Request and Task
   - Debug flag: Y
   - SQL Trace: Y

6. Click OK.

7. Click Submit.

8. To verify whether the Territory packages have been generated navigate to Other > View Requests.

9. Select All My Requests and click Find.

   An overview is shown with the progress of the generating process. When the generation was successful it reads Completed.

Assigning Territories to Planner Groups

This setup screen is used to assign territories to planner groups. Planner groups are a group of resources (field service dispatchers) dedicated to planning and are setup in Resource Management. Territories consist of service representatives and are setup in Territory Management. Once this is setup this is the default group of territories that is shown to a planner group in the Dispatch Center.

Prerequisites

Create a resource group with field service dispatcher(s) assigned to it in Resource Management. Create a territory with service representatives assigned to it in Territory Management.

Responsibility

Field Service Administrator

Navigation

Setup > Assign Territories to Planner Groups

Steps

1. From the Select Planner Group window, select the resource group that represents the planner group you want to assign territories to from the list of values.

2. Click OK.

   The Assign Territories to Planner Groups window is opened.

3. Select a territory from the list of values you want to add to the planner group. You can add multiple territories to a planner group.

4. Save your work.

Generate Field Service Trips

This program replaces the 'Generate Shift Tasks' concurrent program. This concurrent program generates the Departure and Arrival Tasks for the technicians and creates a placeholder for technicians' trips. Trips are created and stored in order for scheduler to perform the scheduling, optimizing and recalculating operations with efficiency, consistency, and accuracy. This program should be scheduled to run periodically.

The Generate Field Service Trips concurrent program creates departure and arrival tasks for each service representative. 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 representative in the CRM Foundation Calendar, and normally use the service representative's home address 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.

When running this program for a multi-day period of time, the Advanced Scheduler profile option CSR: Plan scope determines the length of the period, in days, for which departure and arrival tasks are created. When running this program daily, the CSR: Plan scope profile option setting determines the day in the future for which departure and arrival tasks are created.

> **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.
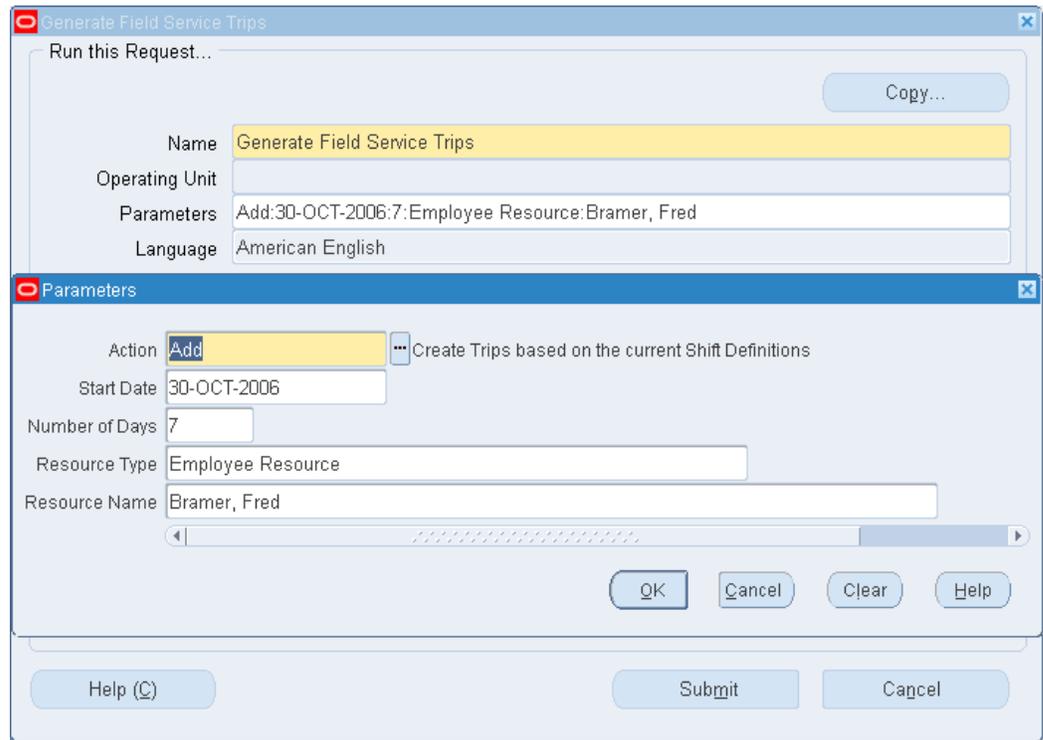
To create departure and arrival tasks and generate field service trips, see the procedure:Generating Field Service Trips, page 5-15.

Generating Field Service Trips

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

Prerequisites

❑ Set up work shifts in the CRM Foundation Calendar.

Steps:

1. From the Field Service Manger responsibility, navigate to Generate Field Service Trips.

Field Service Setup > Generate Field Service Trips

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 exiting 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. Click OK.

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

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

9. On the Schedule window, you can choose a radio button 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.

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

    The Upon Completion window appears.

11. From the Upon Completion window, you can select the check box to save output, choose a Layout template, specify persons to notify, and select a printer. Click OK.

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

13. If the Generate Field Service Trips concurrent program does not execute, perform

the following tasks:

- Defining an Executable, page 5-18

- Setting Up the Generate Field Service Tasks Concurrent Program, page 5-19

Defining an Executable

See Generating Field Service Trips, page 5-15 procedure. If the Generate Field Service Trips program does not run, follow this procedure to define an executable.

Steps:

1. From the System Administrator responsibility, navigate to the Concurrent Program Executable window.

   Concurrent > Program > Executable.

   The Concurrent Program Executable window appears.

2. Enter the following values into the fields:

   Executable Setup Parameters

Field	Value
Executable	Generate Shift Tasks
Short Name	CSFVGST
Application	Field Service
Description	This form 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 5-19.

Setting Up the Generate Field Service Tasks Concurrent Program

See Generating Field Service Trips, page 5-15 procedure. If the Generate Field Service Trips program does not run, see Defining an Executable, page 5-18, and then follow this procedure to set up the Generate Field Service Tasks concurrent program.

Prerequisites

❒ Complete the Defining an Executable, page 5-18 procedure.

Steps:

1. From the System Administrator responsibility, navigate to the Concurrent Program Executable window.

   Concurrent > Program > Define.

   The Concurrent Programs window appears.

2. 1. Enter the following values into the fields:

   Concurrent Program Setup Parameters

Field	Value
Program	Generate Shift Tasks
Short Name	CSFVGST
Application	Field Service
Description	This form allows format free text entry. For example: Generates departure and arrival tasks and schedules tasks for field service representatives within a specified time frame.
Executable Name	CSFVGST
Executable Output format	Text

3. Save your work.

Assigning Resources to Subinventories

The Resources to Subinventories Assignment setup window is used to relate field service representatives to subinventories. For now resources will be service representatives, in future other type of resources might be available. When entering a material transaction in the Field Service Debrief, the subinventories for the service representative are shown.

Steps

1. Logon with the Field Service Administrator responsibility.

2. Navigate to Spares Management > Resources Subinventories Assignment.

3. Enter the following values into the fields, perform these steps in sequential order.

   > **Note:** When the setup screen is opened you will be prompted to select the code that applies for your organization. Make sure you choose the right organization code because you will not be able to change this once you have selected it.

   Updating a record results in the creation of a new record, re-query to make the record visible. You cannot delete a record.

Resources and Subinventories Mapping

Step	Field	Value
1. 1	Organization: Code	This field is populated with the code that was selected at the prompt the setup screen was opened.
1. 2	Organization: Name	The name of the organization will automatically be populated once the code of the organization is selected.
1. 3	Resource Type	Select a resource type from the list of values.

Step	Field	Value
1. 4	Resource	Select a service representative from the list of values.
1. 5	Subinventory	Select the subinventory you want to assign to the service representative.
1. 6	Default	Select **IN** for good subinventory, **OUT** for bad subinventory and nothing for all other subinventories.
1. 7	Start date	Select the start date for the assignment to be effective.
1. 8	End date	Select the end date for the assignment to be effective.

4. Click Save.

Activating Automatic Commitment of Schedules

To commit schedules or tasks to service representatives without interference of a dispatcher, you can run a concurrent program at predefined intervals.

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 it's destination).

Perform the following tasks:

- Set Profile Options, page 5-22

- Auto Commit Schedule, page 5-22

If for some reason the concurrent program doesn't seem to execute, perform the following tasks:

- Define an executable, page 5-18

- Set Up Concurrent program, page 5-23

Set Profile Options

The following 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 "In planning" task status profile option.

- The To task status is determined by the CSF: Default Assigned task status profile option.

Auto Commit Schedule

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

Prerequisites

None.

Steps

1. Logon with the Field Service Administrator responsibility.

2. Navigate to Auto Commit Schedule. The Parameters window opens.

3. Enter the Start date of the time frame to run the program for a specific period and optionally enter a Task List Query.

4. Click Ok. The Auto Commit Schedule setup window opens.

5. The Parameters field contains the entered start date for the time frame.

6. Click Schedule. The Schedule window opens.

7. Define how often you want to commit the schedules for the time frame defined previously.

8. Click Apply a Saved Schedule to use the settings of a previous saved schedule.

9. Choose one of the options at Run the Job.

10. Click OK when finished.

11. Click Submit.

Define an executable

Steps

1. Log on with the System Administrator responsibility.

2. Navigate to Concurrent > Program > Executable.

3. 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_Planned_Task_Status

4. Click **Save**.

Set Up Concurrent program

Steps

1. Logon with the System Administrator responsibility.

2. Navigate to Concurrent > Program > Define.

3. 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, e.g.Committs schedules automatically from In Planning to Assigned status.
Executable Name	CSFVCMT
Executable Output format	Text

4. Click Save.

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.

Prerequisites

None.

Responsibility

Field Service Administrator

Navigation

Debrief > Define Material Justification Codes.

Steps

1. 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.

2. 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.

3. Create material justification lookup lines by entering the following information in
   the lower region on the window:

   Material Justification Lookup Lines

Field	Value
Code	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. 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.

Field	Value
Meaning	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.
Description	You can display the description along with the meaning to give more information about your Lookup.
Tag	Optionally, enter in a tag to describe your lookup. The tag can be used to categorize lookup values.
From and To	Enter the dates between which this Lookup becomes active. If you do not enter a start date, your Lookup is valid immediately.
	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.

4. Check Enabled for each line you want to activate.

5. 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.

Prerequisites

None.

Responsibility

Field Service Administrator

Navigation

Debrief > Define Labor Justification Codes

Steps

1. 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.

2. 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.

3. Create labor justification lookup lines by entering the following information in the lower region on the window:

Labor Justification Code Table

Field	Value
Code	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.
	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.
Meaning	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.
Description	You can display the description along with the meaning to give more information about your Lookup.
Tag	Optionally, enter in a tag to describe your lookup. The tag can be used to categorize lookup values.
From and To	Enter the dates between which this Lookup becomes active. If you do not enter a start date, your Lookup is valid immediately.
	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.

4. Check Enabled for each line you want to activate.

5. 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.

Prerequisites

None.

Responsibility

Field Service Administrator

Navigation

Debrief > Define Expense Justification Code

Steps

1. 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.

2. 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.

3. Create expense justification lookup lines by entering the following information in the lower region on the window:

Expense Justification Codes Table

Field	Value
Code	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.
	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.
Meaning	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.
Description	You can display the description along with the meaning to give more information about your Lookup.
Tag	Optionally, enter in a tag to describe your lookup. The tag can be used to categorize lookup values.
From and To	Enter the dates between which this Lookup becomes active. If you do not enter a start date, your Lookup is valid immediately.
	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.

4. Check Enabled for each line you want to activate.

5. The double brackets ([ ]) identify a descriptive flexfield that you can use to add data fields to this window without programming.

6. Click Save.

Set Up Billing Types and Service Activity Codes

In previous releases of Field Service Debrief, billing types were limited to 'L' (labor), 'M' (material) and 'E' (expense), which prevented customers from creating different coverage based on the specific details of an item. For example, a customer might want to have different coverage on an item that is consumable rather than a non-consumable item. These categories also determine which tab on the Debrief window the item should appear: Expense, Labor, or Material.

In this release, a new 'billing category' has been added in Service core that allows users to differentiate the billing types into categories of (Material) 'M', (Labor) 'L' and (Expense) 'E'. 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 following steps are required to enable billing functionality to be used in Debrief and Spares Management:

- Define Billing Types , page 5-31

- Set Up Billing Type Attributes, page 5-32

- Set Up Service Activity Codes, page 5-33

- Set Up Material Service Activity Codes in Install Base, page 5-35

- Associate Service Activity Codes with a Business Process, page 5-36

Define Billing Types

You can define billing types to fit your business needs, which you can 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, which you set up in Oracle Inventory.

Prerequisites

None.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Service Request > Others > Service: Lookups

Steps

1. At the Oracle Service Lookups window, choose Find from the View menu and query the following lookup: MTL_Service_Billable_Flag.

   The Meaning, Application and Description are defaulted in. The Access Level is set at Extensible.

2. To create a new lookup, insert a record (Ctrl + down arrow) and enter a code for the new billing type in the Code field.

3. Enter the name of the billing type in the Meaning Field.

4. Optionally, enter a Description.

5. Leave the Tag field blank. It is not used in this lookup for Field Service.

6. Enter an Effective From date. This is the date that the billing type becomes active.

7. Optionally, 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.

8. Check the Enabled checkbox.

9. Repeat steps 2-8 for each new billing type you want to create.

10. Save your work.

Set Up Billing Type Attributes

When you create billing types, you must associate them with billing categories to ensure that the lookups appear in on the appropriate tab in the Debrief window. The new extensible billing types will either be categorized as Material, if you want them to appear in the Materials Tab, or Expense, if you want them to appear in the Expense tab.

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

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

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

Prerequisites

Billing types must be set up.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Service Request > Setup > Charges > Billing Type Attributes

Steps

1. In the Billing Type window, create a new record and in the Billing Type field, choose a billing type from the list of values.

2. In the Category field, choose a category to associate your billing type with from the list of values.

   The options are: Material or Expense.

3. Enter a Start Date.

4. Optionally, enter an End Date. To keep the lookup active indefinitely, leave this field blank.

5. If you want to associate this Billing Type with a specific item in Inventory, select the item in the Rollup Item field.

6. Repeat steps 1-5 for each billing type you want to associate with a category.

7. Save your work.

Set Up Service Activity Codes

You must create the Service Activity Codes that you want to appear in the lookups on

the Material, Labor and Expense tabs of Field Service Debrief. All activities that a Field Service technician will be logging in Debrief must have a related Service Activity Code.

These are extensible. 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 on the Material Tab of the Debrief window.

Service Activity Codes must be categorized 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.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Service Request > Setup > Charges > Service Activities and Billing Types

Steps

1. In the Service Activities block of the Service Activities and Billing Types window, create a new record (CTRL + down arrow).

2. In the Service Activity field, enter the name of the Service Activity Code you want to create.

3. Optionally, enter a description of the Service Activity Code.

4. In the Line Category field, choose whether the Service Activity Code is to be of type Order or type Return.

5. Enter a Start Date.

6. Optionally, you can enter an End Date. If you leave this field blank, the Service Activity Code will be open ended.

7. In the Billing Types block, choose the Billing Type that you want to associated with Service Activity Code that you just created from the list of values.

   The description defaults from the billing type and the Start Date defaults to the current date.

8. Repeat step 7 for each billing type you want to associate with the Service Activity Code.

9. In the Order Management Header and Line Type block, choose the Operating Unit you want to associated with the Service Activity Code.

10. In the Order Type field, choose Mixed from the list of values.

11. In the Line Type field, choose Standard from 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*.

12. Save your work.

Guidelines

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. Within the Debrief window, Service Activity Codes are filtered for each tab based upon the billing category.

Set Up Material Service Activity Codes in Install Base

All Service Activity Codes that are categorized 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.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Service Request > Setup > Charges > Install Base Transaction Types

Steps

1. When the Transaction Sub Types window opens, select the Service Type flag.

   This flag will enable you to access only Service Transaction Types among the LOVs in the Name field.

2. Query on the name of the Service Activity Codes that you created in the Service Request fields and select one that you created with a billing category of Material.

3. In the Source Info block, select the Reference Required check box if you want to include trackeable items.

4. Select the Change Owner check box.

5. If the Service Activity Code has a line type of Order, then choose External in the Change Owner field. If the Service Activity Code has a line time of Return, then choose Internal in the Change Owner field.

6. Choose a Status for the source.

   Be sure to not select a status that will reflect the source as inactive, such as Terminated or Expired.

7. In the Source Transaction Types block, you must set up lines for Field Service and Order Management application. Select each from the list of values in the Application Name field.

   The Field Service line will default the values in the Transaction Name, Transaction Type, and Description fields.

8. For the Order Management line, select Order Management Ship/Fulfill in the Transaction Name field.

   The Transaction Type and Description fields are defaulted.

9. For both lines, select the Update IB checkbox to include trackable items in your setup.

10. Save your work.

Associate Service Activity Codes with a Business Process

Within the Oracle E-Business Suite there may be several applications that use 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, page 4-35 for details on setting up business processes.

Prerequisites

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

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Service Request > Setup > Charges > Service Business Process

Steps

1. From the Service Business Process form, switch to query mode and search for the business process you want to associated the service activity code with in the Name Field.

    For example, Field Service.

2. Select the Field Service checkbox.

    The Service Request checkbox is selected by default. If you want to enable Depot Repair you can select the checkbox as well.

3. Optionally, enter an Effective Date range. If you leave these fields blank, the mapping will remain open ended.

4. In the Service Activities block, 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.

5. Repeat step 4 for each Service Activity Code you want to map to the business process.

6. 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 the ability to store electronic records of key application transactions and retrieve them during the audits.

See 21 CFR Part 11 Overview, page B-1.

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 In Field Service Technician Portal the following 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 profile: 'EDR: E-records and E-Signatures' value

1. From the Functional Administrator responsibility, navigate to Profiles.

   Core Services > Profiles

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 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. Choose 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: 'eRecord Required' and 'eSignature Required' values

1. From the Functional Administrator responsibility, navigate to Setup.

   Evidence Store > Setup

2. Search for the Transaction Name: 'ERES Debrief Report Event'.

3. In the search result, select 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, select the update icon against the variable name 'E Signature Required'.

Enabling the ERES workflow business event subscription:

1. From the Workflow Administrator Web Applications responsibility, navigate

   Business Events

2. Search for the Business Event: 'oracle.apps.csf.dbrf.approve'.

   Click the Update icon.

3. Choose 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 succeed with the approval process showing the list of approvers matching the defined Approval Management Engine rule.

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

Defining New Attributes

> **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.

1. From the Approvals Management Business Analyst responsibility, navigate:

    Setup > Attributes

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

3. Click Create.

4. Enter the Item Name and Description. The default value for Item Class is: Header.

5. Choose a Data type from the drop down list of values.

6. Choose 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. Choose 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.

    Example
    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.

Including the existing attributes and newly defined attributes

12. Click Use Existing Attribute.

13. 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.

14. Click Continue.

    The Existing attribute-modify usage page launches.

15. Modify the details, if required. Click Finish.

Defining Condition

16. From the Approvals Management Business Analyst responsibility, navigate:

    Setup > Conditions

17. Click the Setup icon against the Transaction type: ERES Debrief Report Event.

18. Click Create.

19. Choose the Condition type from the drop down list of values.

20. Provide the Attribute on which this condition is based. You can key or search and select the attribute by clicking the lens icon.

21. Click Apply.

Defining New Action Types

> **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.

22. From the Approvals Management Business Analyst responsibility, navigate:

    Setup > Action Types

23. Click Use Existing Action Types.

24. Click Create.

25. Define Name, Handler, and Description.

26. Choose the Rule type from the drop down list of values.

27. Enable the desired check box for the Allowed Approver Types.

28. Choose the Dynamic Action Description from the drop down list of values.

29. Define the Action Description Query when the dynamic action description is chosen as Query Generated.

30. You can also add attributes that the Action type defined requires when it is calculating the required approvers for a transaction.

31. Click Apply.

Using the newly defined or existing Action type in the selected Transaction type
(ERES Debrief Report Event)

32. Click Use Existing Action Type.

33. 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.

34. Click Continue.

35. Review the action type details.

36. To add the selected attribute to the Transaction type, click Finish.

Defining New Approver Groups

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.

37. From the Approvals Management Business Analyst responsibility, navigate:

Setup > Approver Groups

38. Click Create.

39. Define the Name, Description, and Order Number.

40. Choose the Voting Method and Usage Type from the drop down list of values.

41. Define the Query if the Usage Type is chosen as Dynamic.

42. Define the group members by clicking Add Another Row.

43. Choose the Approver Type from the drop down list of values.

44. Define the Approver and Order Number.

45. Click Apply.

Using an existing Approver Group in the selected Transaction type

(ERES Debrief Report Event)

46. Click Use Existing Approver Group.

47. Select the check box against the existing Approver Group which needs to be added to the Transaction type: ERES Debrief Report Event.

48. Click Add.

Defining a Rule:

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. From the Approvals Management Business Analyst responsibility, navigate:

   Setup > Rules

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

7. From the Approvals Management Business Analyst responsibility, navigate:

   Setup > Rules

8. Click Create.

9. Define the Name of the Rule.

10. Choose the Rule Type from the drop down list of values.

11. Define the start and end date of the rule, and then click Next.

12. To add conditions to this rule, click Add Condition.

13. Choose the desired conditions by selecting the check box against the conditions, and then click Continue.

14. To add actions to this rule, click Next.

15. Choose the Action Type from the drop down list of values.

16. Define the Action for the Action Type chosen by search and select, or by keying the value.

17. To review the details of the rule, click on the Next.

18. To create a new rule, click Finish.

Set up Skills Management

In order to effectively manage a field service representative's 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 representative's 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 5-44

- Define Skills Types and Skills, page 5-46

Once you have set up rating scales, skill levels, defined skills sets and skills, you can add skills to a resource and assign skills to a task. For more information on that process, see the *Oracle Field Service User Guide*.

Set Up Rating Scales and Skill Levels

You can define multiple skills scales, which you can use when you are creating skills 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 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 allows 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.

Once 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 5-46.

Prerequisite

None

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Skills Management

Steps

Use this process to set up a new rating scale:

1. Open the Skill Levels tab and open a new form.

    You can do this by navigating down through the seeded scales until you reach a blank form.

2. In the Rating Scale section, enter a Name for the Rating Scale.

3. Optionally, enter a Description.

4. The From Date defaults to the current date. You can change this, if needed.

    If you want the Rating Scale to be available indefinitely, leave the To date blank.

5. 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.

6. 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, etc.)

7. Optionally, enter a brief description of the skill level.

8. The From date defaults to the current date that you are setting up the rating scale. You can change this date, if necessary.

9. Repeat steps 5-8 for each skill level you want to associate with this rating scale.

10. Save your work.

Guidelines

If you want to inactivate a Rating Scale, enter a To date in the appropriate field in the Rating Scale section. 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.

Define Skills Types and Skills

Skills are the Field Service representative's competencies. Skills fall into three major categories: product skills, other technical skills, and non-technical skills. 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, etc. 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, etc.

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

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Skills Management

Steps

Use this process to set up skills and still types:

1. Navigate to the Skills tab.

2. In the Skills Type section, enter a name of your skills type.

3. Optionally, enter a Description.

4. In the Use Scale field, choose the rating scale that you want to use when assigning skills to a resource.

   The rating scale you choose will determine the list of values available for assigning skills to a resource or a task. For details on Rating Scales, see Define Skills Types and Skills, page 5-46.

5. The From Date defaults to the current date. You can change this date, if necessary.

6. Optionally, enter a To Date.

You can enter a To Date if you want to end the use of a particular skill type.

7. In the Skills section spreadtable, enter a Skills Name on the first line.

    This name should reflect a skill related to the Skill Type it is associated with.

8. Enter a Description of the Skill.

9. Optionally, enter an Alias for the skill.

10. The From Date defaults to the current date. You can change this date, if necessary.

11. Optionally, enter a To Date.

    You can enter a To Date if you want to end the use of a particular skill.

12. Repeat steps 7-11 for each skill you want to associate with the Skill Type.

13. Save your work.

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 user interface 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.

Steps:

1. The set up user interface 'Query Selection for Task Owner Enforcement' is provided under Field Service Manager Set Up Main Navigation Menu.

    Service Setup > Task Owner Enforcement for Queries.

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 user interface menu bar, and then choose 'Select Territories and Task Owners' from the Navigate menu.

Dispatch Center > (M) Navigate > Select Territories and Task Owners

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 Dispatchers in all the Resource Groups 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.

4. Click OK to save your work.

Set Up Tasks Custom Color Coding

Color coding tasks that can be viewed in the Field Service Dispatch Center allows 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 your 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 planner's ability to effectively manage the day-to-day field service operations.

To set up your custom color coding, perform the following setups.

Prerequisites

The profile option "CSF: Use Custom Color Coding Scheme" must be set to Yes in order to set up custom color coding.

Task Types, Task Statuses, and Task Priorities must be set up.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Task's Custom Color Setup

Steps

1. At the Task's Custom Color Setup UI, enter a Color Determination Priority number.

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

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

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

4. 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.

5. Choose the Color for your color configuration.

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

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

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

7. If you want the custom color configuration to be usable in Field Service, select the Active checkbox.

8. Save your work.

Guidelines

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

Setting up the Map

A 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 9iAS and the installation of spatial data. The installation of spatial data is explained in the next step.

The installation and setup of the Oracle 9iAS MapViewer is described in the *Oracle 9iAS User Guide.*

The implementation of the Map, also referred to as eLocation map, specific to Field Service is done by setting specific profile options.

Plan and setup of the Oracle 9iAS MapViewer as described in the *Oracle 9iAS User Guide* :

- Verify MapViewer is Set Up Correctly and Running, page 5-52

- Check the eLocation Map Profile Options, page 5-52

Verify MapViewer is Set Up Correctly and Running

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

Prerequisites

Oracle 9iAS is installed and setup.

Steps

- Open a browser and enter the following:

    http://<mapserver name>:<mapserver port number>/mapserver/oms

    The message returned should read the following:

    [omslauncher] responding...

    map server is registered as mapserver

Check the eLocation Map Profile Options

Set the profile options specific to the eLocation Map.

Prerequisites

None.

Steps

1. Switch to the System Administrator responsibility.

2. Navigate to Profile > System. The Find System Profile window is opened.

3. Check Site.

4. At Profile enter CSF%.

5. 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: Use eLocation Map	Indicate you are using the eLocation map.
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 RMI binding name	The Remote Method Invocation binding name that is used for the eLocation map server.
CSF: eLocation Map RMI host name	The Remote Method Invocation host name that is used for the eLocation map server (typically the machine name where the map server is running).
CSF: eLocation Map RMI port number	The Remote Method Invocation port number that is used for the eLocation map server.
CSF: eLocation Map basemap name	The basemap name for the eLocation map as found in the data source maps table.
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 can not be restarted.
CSF: eLocation Map database SID	The database SID of the data source for the eLocation map. Typically the same as the SID of the database server.
CSF: eLocation Map enable java debugging	Optionally enable additional debugging output to the Java console for the eLocation map.

Profile Option	Description
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 host name	The name of the host of the data source for the eLocation map. Typically the same as the database server machine name.
CSF: eLocation Map icon URL	The URL of the directory where the image files are stored for the eLocation map markers. The images are used to show instant status of the resource on the Map in the Field Service Dispatch Center.
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 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 maps table name	The name of the maps table in the data source for 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.
CSF: eLocation Map port number	The listener port number for the data source for the eLocation map. Typically the same as the database server listener port number.
CSF: eLocation Map styles table	The name of the styles table in the data source for the eLocation map.

Profile Option	Description
CSF: eLocation Map themes table	The name of the themes table in the data source for the eLocation map.
CSF: eLocation Map user identification	Leave empty, used for development purposes only.
CSF: eLocation mappers count	The highest number of parallel map requests that are required to be serviced at one time for the eLocation map.

Setting Up Spatial Data

Spatial data is used for Map Display (Dispatch Center), and Oracle Advanced Scheduler functionality such as Route Calculation (Time Distance Server) and Location finding (geocoding).

Customers can load the spatial data into the schema only in a 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 (Navtech). Navtech 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 Navtech.

Before installing spatial data perform the following checks:

- Check if the Spatial Data Option is Installed on the Oracle RDBMS, page 5-55

After installation of the spatial data check the following:

- Check if the Normal and Domain Indexes are Created, page 5-56

- Check Whether the Layer Style Sheets Tables are not Empty, page 5-58

- Check Map Display, page 5-59

Check if the Spatial Data Option is Installed on the Oracle RDBMS

Even though it's impossible to install spatial data when the spatial data cartridge is not installed, a DBA's task is to check whether it is installed. Make sure the MDSYS user schema is there without any INVALID objects.

Check if the Normal and Domain Indexes are Created

After installing the spatial data, normal and domain indexes have been created. These indexes should have the status VALID. If the indexes don't exist or are INVALID, the Map won't display.

Use the following procedure to check whether the indexes have been created.

Prerequisites

Spatial Data is installed.

Steps

1. Logon as user csf/csf.

2. Execute the following statement:

```
select object_name, status_type from user_objects

where object_name like 'CSF%'
and object_type = 'INDEX';
```

3. In the list returned with objects make sure the following are listed:

   CSF_MD_RDSEGS_N1

   CSF_MD_RDSEG_NM_ASGNS_N1

   CSF_MD_RDSEG_NM_ASGNS_N2

   CSF_MD_NAMES_N1

   CSF_MD_ADM_BNDS_N1

   CSF_MD_RD_SEGS_N1

   CSF_MD_HYDROS_N1

   CSF_MD_RLSEGS_N1

   CSF_MD_LND_USE_N1

   CSF_MD_POIS_N1

   CSF_LF_BLOCKS_N1

   CSF_LF_BLOCKS_N2

   CSF_LF_NAMES_N1

   CSF_LF_NAMES_N2

   CSF_LF_PLACES_U1

   CSF_LF_PLACES_N2

CSF_LF_PLNMS_U1

CSF_LF_PLPCS_N1

CSF_LF_PLPCS_N2

CSF_LF_POIPL_N1

CSF_LF_POIS_N1

CSF_LF_PNAMES_N1

CSF_LF_PNAMES_N2

CSF_LF_POSTCODES_N1

CSF_LF_POSTCODES_N2

CSF_LF_RDSEGS_N1

CSF_LF_RDSEGNMS_N1

CSF_LF_RDSEGNMS_N2

CSF_LF_RDSEGPL_N1

CSF_LF_RDSEGPL_N2

CSF_LF_RDSEGMPC_N1

CSF_LF_RDSEGMPC_N2

CSF_TDS_BINARY_TILES_N1

CSF_TDS_BINARY_TILES_N2

CSF_TDS_BINARY_TILES_N3

CSF_TDS_TILES_N1

CSF_TDS_TILES_N2

CSF_TDS_TILES_N3

CSF_TDS_TILES_N4

CSF_TDS_SEGMENTS_N1

CSF_TDS_SEGMENTS_N2

CSF_TDS_SEGMENTS_N3

CSF_TDS_SEGMENTS_N4

CSF_TDS_SEGM_NODES_N1

CSF_TDS_SEGM_NODES_N2

CSF_TDS_SEGM_NODES_N3

CSF_TDS_SEGM_NODES_N4

CSF_TDS_SEGM_NODES_N5

CSF_TDS_NODES_N1

CSF_TDS_NODES_N2

CSF_TDS_NODES_N3

CSF_TDS_NODES_N4

CSF_TDS_NODES_N5

CSF_TDS_NODES_N6

CSF_TDS_CONDITIONS_N1

CSF_TDS_CONDITIONS_N2

CSF_TDS_COND_SEGS_N1

CSF_TDS_COND_SEGS_N2

CSF_TDS_COND_SEGS_N3

CSF_TDS_ROADBLOCKS_N1

CSF_TDS_ROADBLOCKS_N2

CSF_TDS_RDBLCK_INTVLS_N1

CSF_TDS_RDBLCK_INTVLS_N2

CSF_TDS_RDBLCK_SGMNTS_N1

CSF_TDS_RDBLCK_SGMNTS_N2

CSF_TDS_RDBLCK_SGMNTS_N3

CSF_TDS_INTERVALS_N1

CSF_TDS_INTERVALS_N2

Check Whether the Layer Style Sheets Tables are not Empty

Layer style sheets define the "display" of the spatial data. These are all predefined and optimized for the data set used but it is possible to modify the style sheets. By default in the style sheets it is defined per spatial object type (i.e., motor way, waterway, residential area, etc.) how and under what conditions it is displayed. For example when looking at an entire country there is no reason to display "local roads" as this kind of detail shows up as a colored blob on the screen. Also every object is given its own color. The color to display a road is different depending on the part of the world one is in, the style sheet also describes this information.

It is recommended to involve a consultant with experience in Geographic Information to define alternative settings in the layer style sheets. Knowledge required to modify the layer style sheets besides Oracle database is:

• Spatial cartridge and some geographic experience

Prerequisites

Spatial Data is installed.

Steps

1. Logon as user csf/csf.

2. Execute the following statements:

```
select count(*) from csf_user_sdo_maps;

select count(*) from csf_user_sdo_styles;

select count(*) from csf_user_sdo_themes;
```

For each statement, values should be returned higher then 0.

Check Map Display

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

1. Navigate to the Dispatch Center in the Field Service application. Field Service Dispatcher > Dispatch Center.

2. Select the Map tab.

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.

Defining Resource Addresses and Subinventories

You assign ship to addresses and subinventories to field technicians in the Resource Addresses and Subinventories window. A typical field service organization may have thousands of field technicians, so this window is designed to provide an efficient method for maintaining ship to addresses and subinventories for your field technicians.

- 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 technician's subinventories when you order parts in the Parts Requirement window.

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

❒ Define field technicians as employee resources.

❒ Define subinventories.

Steps:

1. From the Field Service Administrator, navigate

   Spares Management > Resource Addresses and Subinventories

2. Select the appropriate resource type from the Resource Type list of values.

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.

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

5. The Addresses tab opens by default.

6. Select an address style for the appropriate country from the Address Style list of values.

7. Tab to the Address field to open the Location Address flexfield. Enter the details for the ship to address.

8. If you want this address to become the default address for this field technician, check the Primary Address check box. You can set only one address as the primary address and you must have one primary address.

9. You can define additional addresses for this field technician by adding more address lines.

10. Open the Subinventories tab to associate one or more subinventories to this field technician.

11. Enter an inventory organization or select one from the Organization list of values.

12. Enter a subinventory name or select one from the Subinventory list of values. The list of values displays only those subinventories which have been defined for the

organization you selected.

13. 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.

14. The Start Date defaults to today's date. You can override this date with a future date, if needed.

15. Check the Default column 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.

16. The Start Date field defaults to today's date. You can override this value to a date later than today's date, if needed.

17. The End Date field is used to inactivate a subinventory assignment.

18. If you check the Owner box, the field technician name is assigned as the Owner Name for this subinventory. Each subinventory can have only one owner.

19. Assigning an owner enables the Org and Sub 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.

20. 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.

21. Save your work.

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. Google Maps integration makes it easy for the dispatchers to visualize key business information on maps. With this new functionality, the Field Service application enables customers with or without spatial data information, to have a pictorial view of the tasks, task status, and technicians

location details on the Google Map. Google Maps provides 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.

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. 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.

The geo-coder, which is part of the Oracle Advanced Scheduler, 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*.

Implementing Google Maps:

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.

To use Google Maps with the Field Service application you need to have a Registration Key from Google, Inc.

Setting Up Google Maps:

After the registration is complete, users need to enter the Registration KEY in the profile **CSF: Google Map Key.**

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 Integrating With Google Maps Through the Field Service Dispatch Center, *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*.

6

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
- Define 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
- Define Excess and Defective Warehouses, and Repair Suppliers
- Defining Excess Warehouses and Assign to the Warehouse Being Planned in WRP
- Defining Defective Warehouse Organizations
- Defining and Assigning Internal Repair Suppliers
- Setting Up Other Warehouse Planning Parameters
- Defining Planning Parameters to create Min-Max levels for a Warehouse or

Technician

- Setting Up Lead Times

- Set Up External Repair Execution

- Setting Up Repair Parameters

- Setting Profile Options for External Repair Execution

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 6-3

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

2. Define Calculation Rules, page 6-8

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 6-9

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 6-11

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 6-14

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 planners is changing or not implementing the recommendations.

6. Define Task Parts, page 6-15

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

7. Define Parts Priorities, page 6-17

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 6-18

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. Setup Warehouse Replenishment Planning, page 6-22

Define and assign excess and defective warehouses and internal repair suppliers. Define warehouse planning parameters, set up reschedule rules, specify plan methods, and setup lead times.

10. Setup External Repair Execution, page 6-38.

Define and assign external repair suppliers. Setup Repair Parameters and Profile Options.

Define Forecast Rules

Forecast rules are used to determine how forecasts are calculated. A forecast rule is used in Parts Loops, Min-Max Recommendations and Warehouse Replenishment Planning. Forecast rules are also used in making Min-Max recommendations for Authorized Stock Lists.

See Setting Up a Forecast Rule, page 6-3 and Selecting a Forecast Rule, page 6-6.

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. 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.

Forecast rules are created in the Forecast Rules tab on the Business Rules user interface.

Forecast Parameters

The list below 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 measured numerically in days. If you wanted to set up a weekly period, for example, you would enter 7.

• The Forecast Periods field indicates the number of future periods to generate a forecast.

• The History Periods field indicates the number of periods in the past that you want to include in the forecast calculation.

• The Alpha field is used in the Exponential Smoothing and Trend Enhanced methods. In exponential smoothing, alpha is the factor that determines how much weight to apply to current period usage. In the Trend Enhanced method, the alpha factor is used to determine the constant for the trend line.

• The Beta field is used in the Trend Enhanced method and is the factor 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

Four forecast methods are provided in Spares Management:

- The Simple Average forecast method is based on the number of history periods selected.

- The Weighted Average forecast method is based on the number of history periods, and you can assign different weights to each history period.

- The Exponential Smoothing forecast method provides a simplified version of weighted averages. 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).

- The Trend Enhanced forecast method produces a trended 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 weight given to current history period.

To create a forecast rule:

Steps:

1. From the Field Service Manager responsibility, navigate to the Forecast Rules tab of the Business Rules window.

   Field Service Setup > Spares Management > Spares Management Rules > Setup > Business Rules

   The Business Rules window opens to the Forecast Rules tab.

2. In the Forecast Rules tab, enter a rule name in the Name field.

3. Optionally, enter a description in the Description field.

4. Select a forecast method from the Forecast Method list of values.

   The choices 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, enter 7.

6. In the Forecast Periods field, enter the number of periods over which the forecast will be generated.

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 periods to use in calculating the Tracking Signal. For example, if 4 is entered and the Period size is 7, then the Tracking Signal calculations would use a period size of 28.

   The Tracking Signal is a measure forecast error and is used in Recommendation Rules to automate the update of Min-Max levels. It is also used in Notification Rules to automate warehouse Notifications from the Planner's Desktop.

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 fraction with a decimal point. 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 fraction with a decimal point. 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 generate the transaction history used to generate the forecast.

12. Save your work.

Selecting a Forecast Rule

The Forecast Rule is used to generate the Usage Forecast for Total Requirements in Warehouse Replenishment Planning. The Forecast Rule is also used to generate forecasts for use in Min-Max Recommendations for warehouses or technicians and Parts Loops. The Forecast Rule is also used to generate the WRP Returns Forecast for the Defective Warehouse.

The Forecast Rule is assigned to a warehouse (organization) or a technician (sub inventory) in the Planning Tree of the Planner's Desktop.
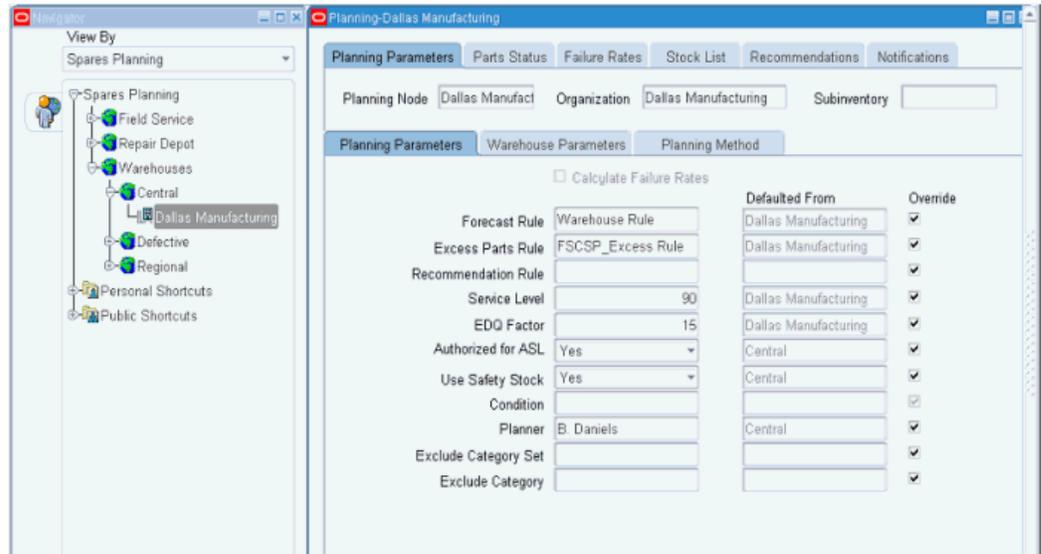
To select a Forecast Rule:

Steps:

1. From the Field Service Manager Responsibility, navigate to the Planner's desktop.

   Field Service Dispatcher > Spares Management > Planner's Desktop.

   The Planner's Desktop opens to display the Planning Parameters tab, and Planning Parameters sub tab.

2. In the Navigator window, expand Spares Management > Warehouses.

3. Select a warehouse.

4. 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 a Node other than an organization (warehouse) or sub inventory (technician) is selected, then the Forecast Rule (or other parameters) default to lower level nodes underneath the node where the Forecast Rule was selected.

5. In the Forecast Rule field of the Planning Parameters, select a Forecast Rule from the list of values.

6. Save your work.

Defining Calculation Rules

Calculation rules are included when calculating 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 Time Fence that represents the number of days in the future to be used when considering the availability elements.

A calculation rule is a dependency for 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. Below 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 the following procedure to define calculation rules:

Steps:

1. From the Field Service Dispatcher responsibility, navigate to the Calculation rules window.

   Field Service Dispatcher > Spares Management > Setup > Calculation Rules

2. From the Calculation Rules window, enter a rule name in the Name field.

3. (Optional) Enter a description in the Description field.

4. Select the appropriate 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, and

- In-transit Move Orders

5. Enter a tolerance percent.

   This is used in loop planning to filter notifications that are within the tolerance percent. If a 10 is entered, for example, 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 allows 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 ASL are considered to be excess and would then appear in the Excess List window for return.

Excess Rules are assigned to either the technician or the warehouse in the Planner's Desktop.

Use the following procedure to create excess rules:

Steps:

1. From the Field Service Dispatcher responsibility, navigate to the Business Rules window.

Field Service Dispatcher > Spares Management > Setup > Business Rules

Select the Excess Rules tab.

The Excess Rules tab appears.

2. From the Excess Rules tab, enter a unique name for the excess rule.

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 allows 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 to represent the percentage of total excess value that you want to see on the excess list. For example, if you enter a 80 in this

field, the excess list will show 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. You can enter or 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.

9. If you enter a value for Category Set, the Category field is enabled.

    A category is a code used in Inventory to group items with similar characteristics.

10. Save your work.

    > **Note:** Excess Rules are assigned 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 review of excess recommendations, a planner or technician might reject a particular excess line recommendation. You can set up 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 extensible and can be modified throughout the life cycle of the application.

Use this process to set up the values available for your excess reject reasons:

Steps:

1. From the Field Service Dispatcher responsibility, navigate to Excess Reject Reasons.

    Field Service Dispatcher > Spares Management > Setup > Excess Reject Reasons

    This navigation path opens the Application Object Library: Excess Reject Reasons codes Lookups.

    The lookup Type, User Name, Application, Descriptions fields are not editable. The Access Level of User is also protected. You can add values in the spread 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 user interface.

3. In the Meaning field, enter name of the lookup that you want to appear in the list of values.

> **Note:** The Meaning should be word that makes sense in relation to the excess reject reason you are trying to represent. For example, if the excess reason is because the parts are hazardous, you might want to enter the word Hazardous in the Meaning field.

4. (Optional) Enter a description in the Meaning field.

5. For the Excess Reject Reason, leave the Tag field blank.

6. The Effective From date defaults current date.

7. (Optional) You can change the Effective From date, and add an Effective To date.

8. Repeat steps 1-7 for each addition Excess Reject Reason setup you want to add to the list of values.

9. Save your work.

> **Note:** To remove an obsolete Lookup, you can either disable the code by deselecting the Enabled check box next to the lookup value, enter an end date, or change the meaning and description to match a replacement code.

Creating Business Rules to Automate Warehouse Notifications

Creating business rules to automate warehouse notifications is beneficial when planners have a large number of Warehouse Notifications to execute and when the notification cycles need to be processed frequently to insure timely replenishment.

These rules are setup to address notifications that reflect a low notification value combined with a good forecast reliability. You can create automation rules for the following three 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.

- Repair value - This is the value of defective inventory that, when repaired, can be used to satisfied the notification.

- Notification value - This is the value of the notification recommendation.

- 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 as many or as few of the parameters as you want. But for the automated process to be activated, ALL the parameters that have been set must be met.

For all parameters with the exception of the Tracking Signal Min, if the actual value is less than the parameter value, the notification is triggered. In the case of the Tracking Signal Min, if the actual variance is more than the parameter value, the notification is triggered.

> **Note:** You can only set up one Notification Rule for each warehouse.

To set up automated notification rules, follow this procedure.

Steps:

1. Navigate to the Business Rules window.

   Field Service Dispatcher > Spares Management > Setup > Business Rules

2. From the Business Rules window, click 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 number.

6. Enter a Repair Value.

7. Enter a Notification Value.

8. Enter Tracking Signal Min and Max Values.

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. In either case, if a planner overrides a recommendation or enters a Min – Max manually, the planner can enter a reason for that action.

The list of lookups available to your Field Service operation is user extensible and can be modified throughout the life cycle of the application.

Use this process to set up the values available for your manual override reason:

Steps:

1. From the Field Service Dispatcher responsibility, navigate to the Manual Override Reason Lookups window.

   Field Service Dispatcher > Spares Management > Setup > Manual Override Reason

   This navigation path opens the Application Object Library: CPSASLReasonCode Lookups window

   The lookup Type, User Name, Application, Descriptions fields are not editable. The Access Level of User is also protected. You can add values in the spread 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 user interface.

3. In the Meaning field, enter name of the Override Reason that you want to appear in the list of values, which appears in the Planner's Desktop user interface used to manually create an Authorized Stock List.

   > **Note:** The Meaning should be word that makes sense in relation to the manual override reason you are trying to represent.

4. Optionally, enter a Description for the Override Reason.

5. For Override Reason setups, leave the Tag field blank.

   The Effective From date defaults current date.

6. Optionally, you can change the Effective From date, and add an Effective To date.

7. Repeat steps 1-6 for each additional Override Reason that you are setting up.

8. Save your work.

> **Note:** To remove an obsolete Lookup, you can either disable the code (by deselecting the Enabled check box next to the lookup value), enter an end date, or 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 or internal order for a specific task. Using task parts saves time because there is no need to manually enter which parts are needed for tasks that are frequently executed. When a task parts definition is used, the predefined list of parts can be overridden, if necessary.

Tasks Parts are defined for combinations of products and task templates in 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 (quantity used, times used, quantity, percentage, and so on) based on the usage history associated with the product over the time period specified in the Forecast Rule.

The Manual region of the window allows for the manual entry of items used on the product and task template, or you can manually define parts in this window. When parts are entered manually, the manual entries 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. From the Field Service Dispatcher responsibility, navigate to the Tasks Parts

window.

Field Service Dispatcher > Spares Management > Setup > Task Parts

2. Close the Find Product Task window by clicking the New button.

   The Define Task Parts window opens.

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 valid 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 from the list of values.

   The Unit of Measure default value appears in the UOM field depend on the item you selected.

9. Enter a revision number in the Rev field, if applicable for this part.

10. Enter the quantity of parts required for this task.

11. Enter a value in the % (percentage) field to represent how often this part is expected to be used in this task template/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 7-12 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 Task Parts. 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 Task Parts.

In order to aid scheduling, including Oracle Advanced Scheduler, in determining the priorities for assigning and scheduling technicians who require parts to fulfill their task requirement, you can define priorities, descriptions, and upper and lower percentages for parts.

There are 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 Dispatch Center.

Use this process to set up the values available for parts priorities:

Steps:

1. From the Field Service Manager responsibility, navigate to the Parts Priorities user interface.

   Field Service Dispatcher > Spares Management > Setup > Part Priorities

2. In the Parts Priorities user interface, 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 might want to enter P1 as the Priority designation. If it were low, you might want to enter P4.

   Example
   For example, Lower Range = 75, Upper Range = 100 and Priority = P1, means that a part with a likelihood of being used on a product and task between 75% and 100% of the time would be classified as P1

4. In the Meaning field, enter a meaning of the Priority, which will appear in the list of values in Advanced Scheduler.

   > **Note:** The Meaning should be text that makes sense in relation to the part priority you are trying to represent. 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 Meaning field.

   Example
   For example, for a Priority = P1, then the description could be Description = Highest

Priority.

6. Repeat steps 1-5 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 Task Parts. 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. From the Field Service Manager responsibility, navigate to the Define Delivery Time window.

   Field Service Dispatcher > Spares Management > Setup > Delivery Time

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 user interface shows 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 lead time is set to 1.

7. The Time Zone field will default to the time zone associated with the organization that you choose.

8. Enter a number in the Comfort Zone in hours.

The Comfort Zone (Hours) is the time you want 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, based on the Reschedule In business rule. 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, based on the Reschedule Out business rule. The current order may need to be repositioned later in the schedule to avoid an inventory that is higher than needed.

An exception condition exists when the projected balance is out of the range defined by the reschedule rules.

Follow this procedure to set up Reschedule Rules:

Steps:

1. From the Field Service Manager responsibility, navigate to the Reschedule Rules tab of the Business Rules window.

   Field Service Setup > Spares Management > Spares Management Rules > Setup > Business Rules

   The Business Rules window opens to the Forecast Rules tab.

2. Open the Reschedule Rules tab.

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 projects the on-hand balance period by period using Requirements, Current On-hand and Current On-order. The Planned Balance

includes Planned Orders and Repairable Returns.

Normally, the rescheduling would be based on the Current Balance.

5. Enter the Start Day and End Day to define period applicable for the Reschedule In Rule to monitor.

6. Select the On Hand Balance exception 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 Less Than condition (within the range of days defined by the Start Day and the End Day) to qualify for Reschedule In.

   Example
   For example, The On Hand Balance Less Than condition is "Less than 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 an exception message.

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 to qualify as a Reschedule-Out.

11. Enter the EDQ Multiple used to define the reschedule order.

    The EDQ Multiple along with the Reorder Point or 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 occurrences of the On Hand Balance being above the On Hand Balance value (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 on three or more occasions 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 6-32.

Setting Up Warehouse Replenishment Planning

Warehouse Replenishment Planning (WRP) is used by the planner to plan warehouse inventories and execute replenishment in a 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 setup 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. Setup Forecast Rules and assign to the warehouse being planned. See

   • Setting Up a Forecast Rule, page 6-3

   • Selecting a Forecast Rule, page 6-6

2. Define Excess and Defective Warehouses and assign to the warehouse being planned. See Define and Assign Excess and Defective Warehouses, page 6-23.

3. Setup Reschedule Rules, page 6-19 and assign to the warehouse.

4. Define Repair Suppliers and Assign to the warehouse. See Defining and Assigning Internal Repair Suppliers, page 6-29.

5. Setup Other Warehouse Planning Parameters for the warehouse. See Setting Up Other Warehouse Planning Parameters, page 6-32.

6. Setup Lead Times, page 6-34 for excess repair and new-buy

7. Setup External Repair Execution, page 6-38, if required.

Define Excess and Defective Warehouses, and Repair Suppliers

When planning the field service warehouse, other warehouses need to be specifically defined for the utilization of excess and defective inventory. Repair suppliers also need to be defined that are to be used in the replenishment of that primary warehouse.

All warehouses: primary, excess, and defective need to be setup as inventory organizations. Repair Suppliers also need to be setup as inventory organizations and repair suppliers in Purchasing.

Defining Excess Warehouses and Assign to the Warehouse Being Planned in WRP

When planning the field warehouse there may be other warehouses whose excess needs to be incorporated into the planning of the that warehouse. The specific excess warehouses are defined using Sourcing Rules and linked 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.

This section covers creating the Sourcing Rule and Assignment Set and linking the Assignment Set to the warehouse being planned in WRP.

To set up excess warehouses for usable excess parts:

Prerequisites

❒ Set up the warehouse being planned as an inventory organization.

❒ Set up the excess warehouses as inventory organizations.

Steps:

1. From the Field Service Manager responsibility, navigate to the Sourcing Rules window.

   Purchasing > Supply Base > Sourcing Rules.

   The Sourcing Rules window appears.

   > **Note:** The Sourcing Rule would be created for the organization representing the warehouse being planned.

2. On the Sourcing Rule window, define a Sourcing Rule name for specific warehouses where excess inventory can be utilized for the replenishment of the warehouse being planned.

3. List the usable excess parts warehouse inventory organizations to *Transfer From* in the Shipping Organization region.

   See Defining Sourcing Rules, in the *Oracle Purchasing User's Guide*

4. Create an Assignment Set, and assign the Sourcing Rule to the primary warehouse being planned.

5. Navigate to the Sourcing Rule / Bill of Distribution Assignments window.

   Purchasing > Supply Base > Assign Sourcing Rules.

   The Sourcing Rule / Bill of Distribution Assignments window appears.
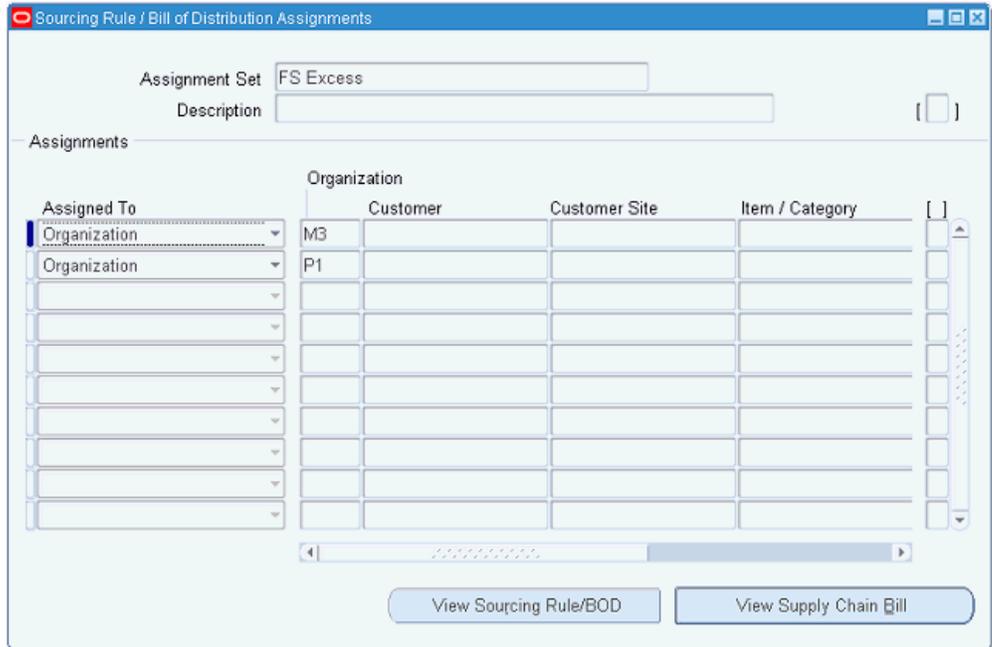
The Assignment Set is the link between the Sourcing Rule that defines the excess warehouses and the warehouse being planned.

6. Enter the Sourcing Rule name in the Assignment Set field of the Sourcing Rule / Bill of Distribution Assignments window, and then in the Assignments region, tie the Sourcing rule to organizations or items.

   See Assigning Sourcing Rules and Bills of Distribution, *Oracle Purchasing User's Guide*.

7. From the Field Service Manager Responsibility, navigate to the Planner's desktop.

   Field Service Dispatcher > Spares Management > Planner's Desktop.

   The Planner's Desktop opens to display the Planning Parameters tab, and Planning Parameters sub tab.

8. In the Navigator window, expand Spares Management > Warehouses.

9. In the Planner's Desktop, select the warehouse being planned in WRP in the Planning Tree.

10. Click the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.

    The Warehouse Parameters sub tab opens.
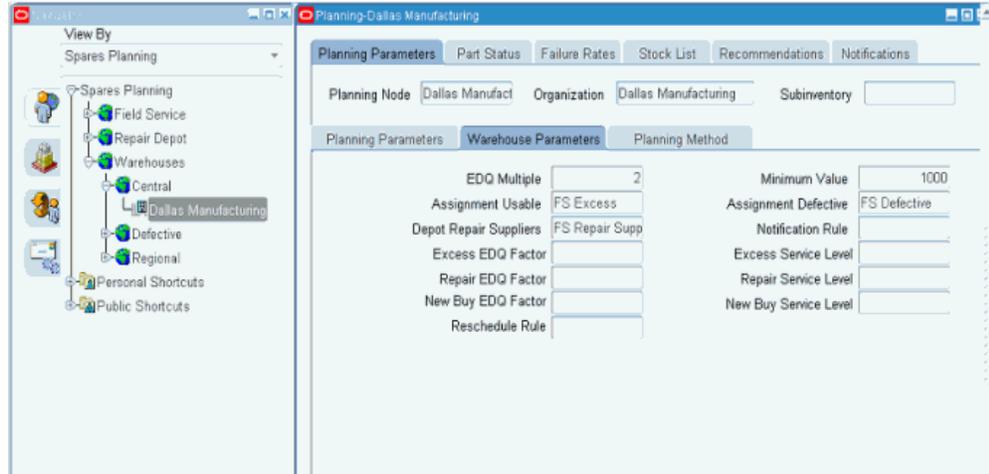
11. Enter the Assignment Set for the excess warehouses in the Assignment Usable field of the Warehouse Parameters tab.

   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 may be other warehouses whose defective inventory needs to be incorporated into the planning of the field service warehouse. The defective inventory would be repaired and used for the replenishment of the warehouse being planned in WRP. The specific defective warehouses are defined using Sourcing Rules and linked 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.

> **Note:** Defective inventory for the purpose of planning at the primary warehouse is defined as all available inventory.

To set up warehouses for defective parts and assign them to the warehouse being planned:

Prerequisites

❒ Set up the warehouse being planned as an inventory organization.

❑ Set up the defective warehouses as inventory organizations.

Steps:

1. From the Field Service Manager responsibility, navigate to the Sourcing Rules window.

   Purchasing > Supply Base > Sourcing Rules.

   The Sourcing Rule window appears.

   > **Note:** The Sourcing Rule would be created for the organization representing the warehouse being planned.

2. On the Sourcing Rule window, define a Sourcing Rule name for specific warehouses where defective inventory should be utilized for the replenishment of the warehouse being planned.

3. List the defective parts warehouse inventory organizations to *Transfer From* in the Shipping Organization region.

   See Defining Sourcing Rules, *Oracle Purchasing User's Guide*

4. Create an Assignment Set, and assign the Sourcing Rule to the primary warehouse being planned.

5. Navigate to the Sourcing Rule / Bill of Distribution Assignments window.

Purchasing > Supply Base > Assign Sourcing Rules.

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.

6. Enter the Sourcing Rule name in the Assignment Set field of the Sourcing Rule / Bill of Distribution Assignments window, and then in the Assignments region, tie the Sourcing rule to organizations or items.

   See Assigning Sourcing Rules and Bills of Distribution, *Oracle Purchasing User's Guide*.

7. From the Field Service Manager Responsibility, navigate to the Planner's desktop.

   Field Service Dispatcher > Spares Management > Planner's Desktop.

   The Planner's Desktop opens to display the Planning Parameters tab, and Planning Parameters sub tab.

8. In the Navigator window, expand Spares Management > Warehouses.

9. In the Planner's Desktop, select the warehouse being planned in the Planning Tree.

10. Click the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.

    The Warehouse Parameters sub tab opens.

11. Enter the Assignment Set for the defective warehouses in the Assignment Defective field of the Warehouse Parameters tab.

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. That integration consists of automated execution from WRP 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. There is also the same integration with the Notifications tab in the Planner's Desktop. The specific internal repair suppliers are defined using Sourcing Rules and linked 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.

To set up internal depot repair suppliers:

Prerequisites

❒ Set up the warehouse being planned as an inventory organization.

❒ Set up the internal repair supplier as an inventory organization.

Steps:

1. Create a Sourcing Rule for specific warehouses where internal depot repair suppliers should be utilized for the repair and replenishment for the warehouse being planned.

2. Navigate to the Sourcing rule window.

Purchasing > Supply Base > Sourcing rules

The Sourcing Rule window appears.

> **Note:** The Sourcing Rule would be created for the organization representing the warehouse being planned.

3. Enter the depot repair inventory organization to *Transfer From* in the Shipping Organization region.

   See Defining Sourcing Rules, in the *Oracle Purchasing User's Guide*

4. Create an Assignment Set and assign the Sourcing Rule to the primary warehouse being planned, or assign the Sourcing Rule to specific items that should be sourced to the internal depot.

5. Navigate to the Souring Rule / Bill of Distribution Assignments window.

   Purchasing > Supply Base > Assign Sourcing Rules
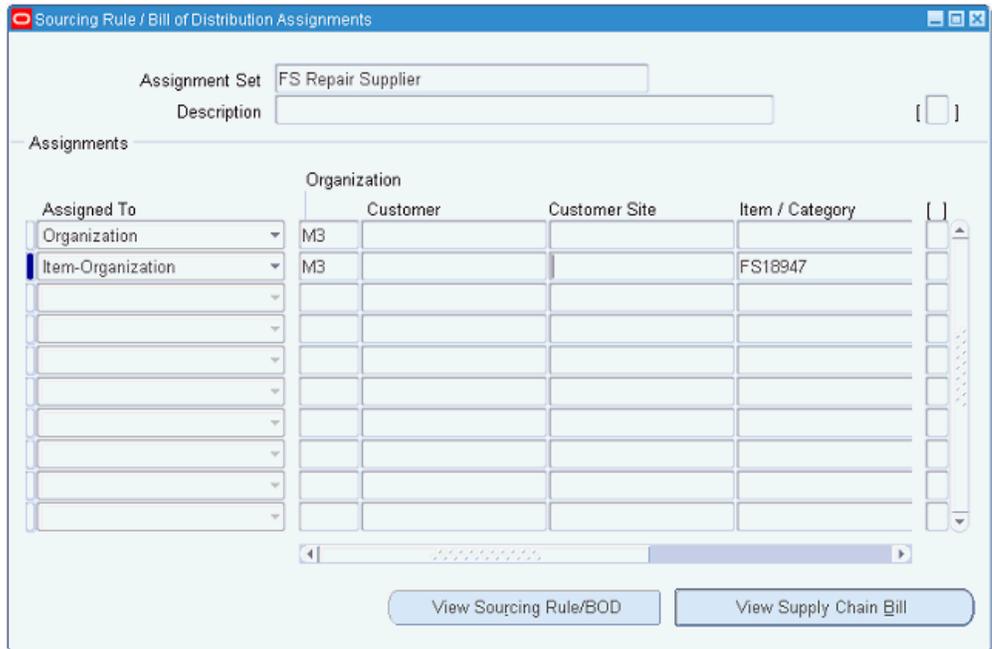
The Assignment Set is the link between the Sourcing Rule that defines the internal repair suppliers and the warehouse being planned.

> **Note:** The same Assignment Set could also be used for other Sourcing rules that define sourcing for external repair.

See Assigning Sourcing Rules and Bills of Distribution, *Oracle Purchasing User's Guide*.

6. From the Field Service Manager Responsibility, navigate to the Planner's desktop.

   Field Service Dispatcher > Spares Management > Planner's Desktop.

   The Planner's Desktop opens to display the Planning Parameters tab, and Planning Parameters sub tab.

7. In the Navigator window, expand Spares Management > Warehouses.

8. In the Planner's Desktop, select the warehouse being planned in the Planning Tree.

9. Click the Warehouse Parameters sub tab within the Planning Parameters tab of the Planning window.

   The Warehouse Parameters sub tab opens.

10. Enter the Assignment Set for the repair sourcing in the Depot Repair Suppliers field of the Warehouse Parameters tab.

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.

Setting Up Other Warehouse Planning Parameters

Other warehouse planning parameters include Economic Delivery Quantity (EDQ) 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 user interface, the planner can set unique parameters at the part–warehouse level if necessary.

This procedure documents how to set the following warehouse planning parameters:

To setup the Reschedule Rule parameter, see Setting up Reschedule Rules, page 6-19.

See also, Specifying Planning Parameters for a Warehouse Organization, in the Using Warehouse Replenishment Planning chapter of the *Oracle Spares Management User Guide* .

Steps:

1. Navigate to the Planner's Desktop.

    Field Service Dispatcher > Spares Management > Planner's Desktop

    The Planner's Desktop user interface opens.

2. From the 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. Open the Warehouse Parameters sub tab.

    The Warehouse Parameters tab displays fields for the EDQ Multiple, Minimum Value (for excess on order), Service Level by Supply Type, 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. The Excess On-Order Limit is equal to the Reorder Point (ROP) plus the EDQ Multiple times the EDQ.

        To change the EDQ multiple, enter a different number in the EDQ Multiple field in the Planning Parameters region.

- 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.

  To change Minimum Value, enter a different number in the Minimum Value field in the Planning Parameters region.

- Service Level by Supply Type: Enter as a percentage, this number is used along with the EDQ to calculate the safety stock quantity. The service level, expresses as a percent, defines on a planned basis the desired percent of demand filled when needed.

  To change Service Level, enter a different number in the Service Level field in the Planning Parameters region for the Supply Type.

- 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 varies directly with the EDQ Factor. In other words, increasing the EDQ Factor produces a larger calculated EDQ and vice versa.

  To change any of these values, enter a different number in the appropriate field in the Warehouse Planning Parameters tab for the supply yype.

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. Warehouse Replenishment Planning (WRP) does not use the planning method. A recommendation rule is optional, but can be used to identify and automate the more routine Min-Max recommendations.

Use the following procedure to specify a planning method for a warehouse.

Steps:

1. Navigate to the Planner's Desktop.

   Field Service Dispatcher > Spares Management > Planner's Desktop

   The Planner's Desktop user interface opens.

2. Select a technician (sub-inventory) or warehouse (organization) from the Planning Tree and click on the Planning Method tab.

   Field Service Setup > Spares Management > Planner's Desktop > Planning Method

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 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 tab and enter Service Level, EDQ Factor, Forecast Rule and Recommendations Rule.

- See Setting Up Other Warehouse Planning Parameters, page 6-32 for an understanding of Service Level and EDQ.

- See Defining Forecast Rules, page 6-3 for a better understanding of forecasting.

5. Save your work.

Setting Up Lead Times

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. WRP uses lead times to plan each of the three supply types: Excess, Repair and New-buy.

Excess Lead Time

Lead times for the Excess supply type are defined in the 'Intransit time' column for the Shipment Methods listed on the Inter-Org Shipping Network window.

Steps

1. Navigate to the Shipping Networks window.

    Inventory > Setup > Organizations > Shipping Networks

    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'.

2. Select a row for an Organization from-to combination.

3. Navigate to the Inter-Org Shipping Networks window.

    (M) Tools > Shipping Method

4. Specify the in-transit lead time 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.

New Buy Lead Time

Lead Times for the New-Buy supply type are defined for the Item and Organization in
the 'Processing' field on Lead Times tab of the Organization Items window.

Inventory > Items > Organization Items > (T) Lead Times
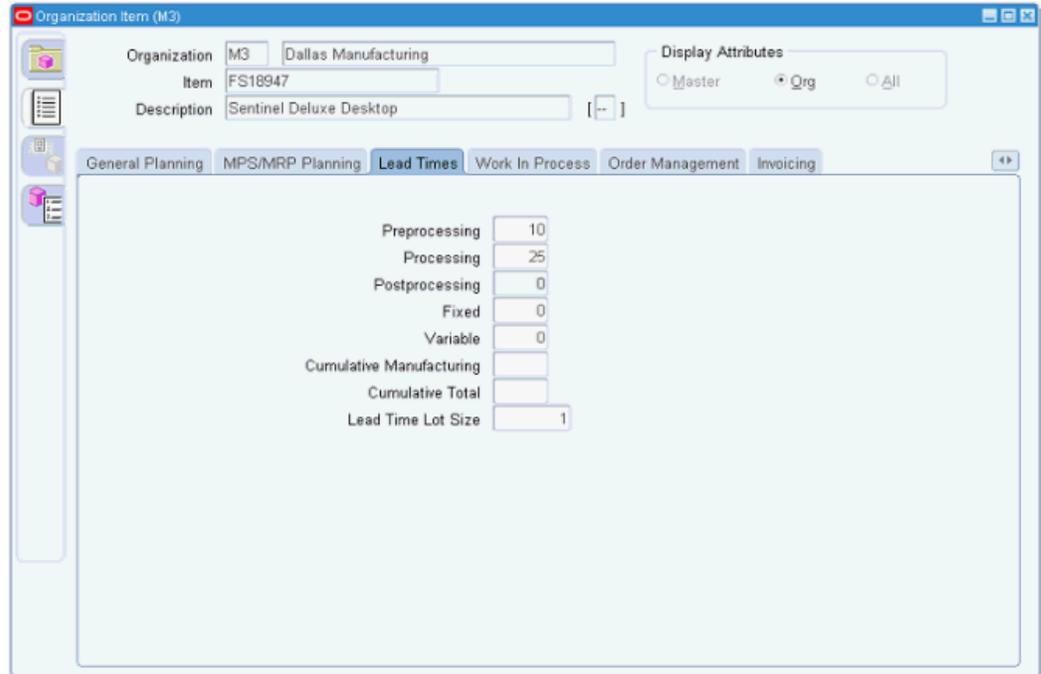
Repair Lead Time

Lead Times for the Repair supply type are divided into three 'legs':

Steps

1. Leg 1: In-transit time for defective parts from the defective warehouse to receipt at the depot repair supplier defective subinventory.

   Leg 3: In-transit time for repaired parts from the depot repair supplier usable subinventory to receipt at the Field Service warehouse.

   Leg 1 and Leg 3 lead times are defined in the 'Intransit time' column for the Shipment Method row on the Inter-Org Shipping Network window.

   Inventory > Setup > Organizations > Shipping Networks > (M) Tools > Shipping Method

   This process is identical to setting the Excess Lead Time as documented previously.

   > **Note:** Make sure one of the Shipping Methods is designated as the default. WRP uses the lead time from the default Shipping Method

2. Leg 2: The period of time from the receipt of defective parts into the depot repair supplier defective subinventory to the time of shipment from the depot repair supplier usable subinventory. Leg 2 lead times are defined for the Item and

Organization in the 'Repair Lead-time' field within the Repair region of the MPS/MRP Planning tab of the Inventory Organization Item window. The Organization is the Repair Supplier organization.

Inventory > Items > Organization Items > (T) MPS/MRP Planning
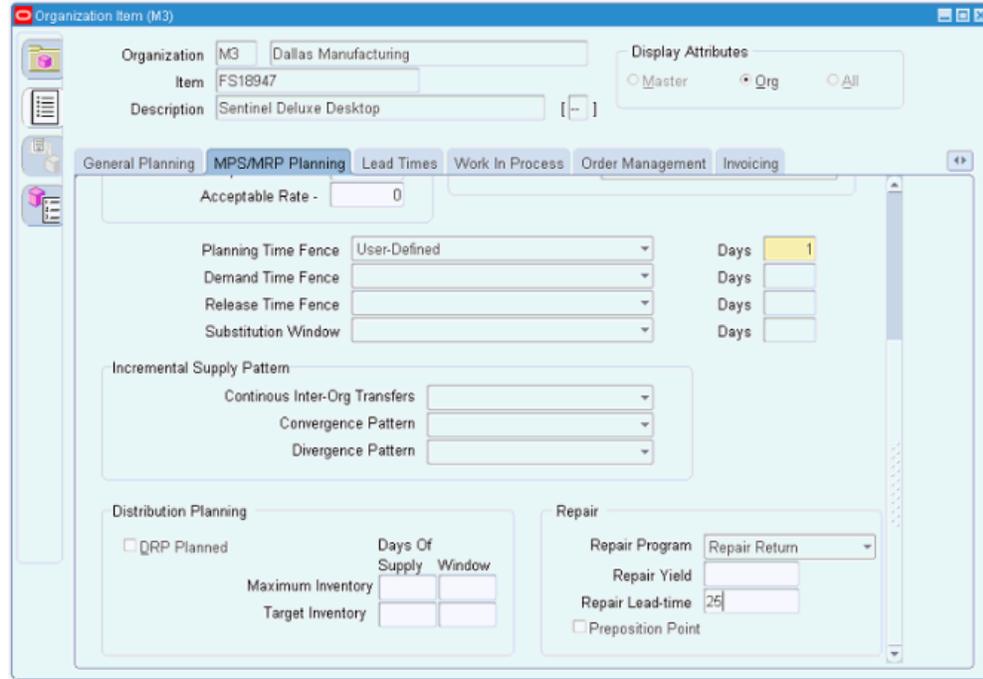
Set Up External Repair Execution

Repair Suppliers in the field service supply chain can be both internal and external. External Repair Execution (ERE) is integrated into 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.

The specific internal repair suppliers are defined using Sourcing Rules and linked 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

1. Create a Sourcing Rule for organizations where external repair suppliers should be utilized for the replenishment of the warehouse being planned.

2. From the Field Service Manager responsibility, navigate to the Sourcing Rules window for the organization used for the warehouse being planned by WRP.

   Purchasing > Supply Base > Sourcing Rules.

See Defining Sourcing Rules, *Oracle Purchasing User's Guide*.

See also: Defining and Assigning Internal Repair Suppliers, page 6-29.

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 Define and Assign Excess and Defective Warehouses, page 6-23.

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 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.

Inventory > Setup > Organizations > Shipping Networks

See Defining Inter-Organization Shipping Networks, *Oracle Inventory User's Guide*.

Shipping Methods

ERE requires that a 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.

Inventory > Setup > Organizations > Shipping Networks > (M) Tools > Shipping Method

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 form. 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 6-41.

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 6-44.

See also, Overview of Profile Options, page A-1.

Setting Up Repair Parameters

Follow this procedure to set up repair parameters for the inventory item:
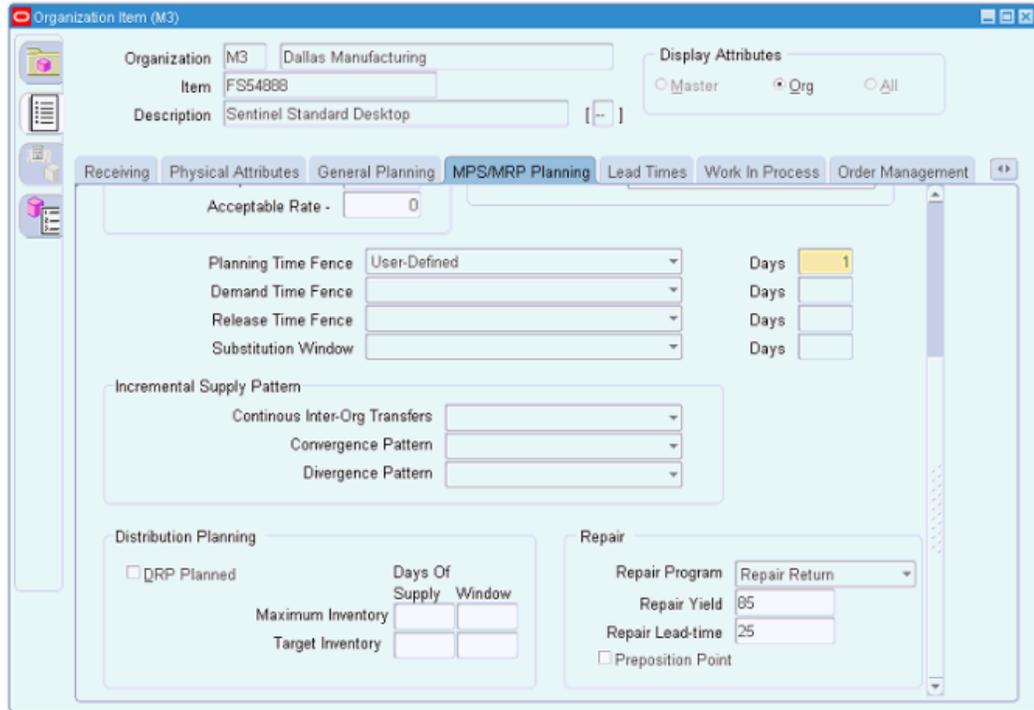
Prerequisites

❒ Set up the Inventory Item record for the repair part.

Steps:

1. From the Field Service Responsibility, navigate to the Inventory Organization Item window.

   Inventory > Items > Organization Items.

   The Organizations window appears.

2. On the Organizations window, select the repair supplier organization. Click OK.

   The Find Organization Items <Org> window appears.

3. Enter the item in the Find Organization Items window.

   The Inventory Item <Org> window appears.

4. Open the MPS/MRP Planning tab.

   Open the MPS/MRP Planning tab, and scroll down to the Repair Region.
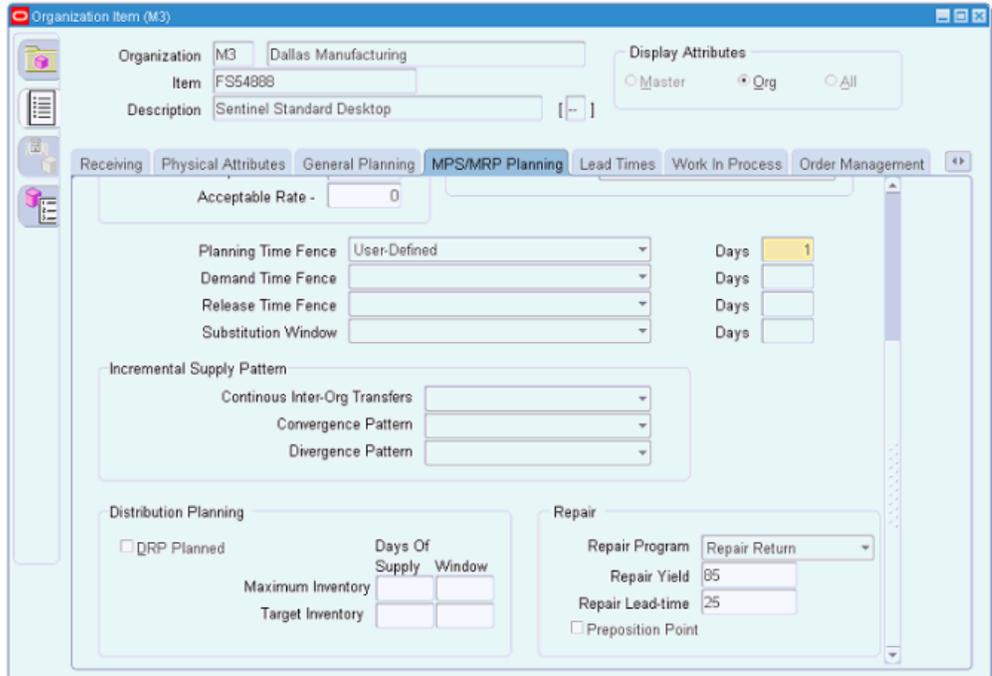
5. In the Repair region:

   • 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.

     Example
     For example: Repair and Return, Exchange or Advance Exchange.

   • Specify the Repair Yield. This is the average percentage of defectives sent to the Repair Supplier that are repairable.

   • 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 into the repair supplier and the in-transit time out from the repair supplier determines the total repair lead time. Repair lead time is used to determine the release date for the planned repair order.

   • Optionally, select the Pre position Point check box to indicate whether the defective parts should 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 setup of two sub-inventories for each external repair supplier organization. The sub-inventories facilitate 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 closed.

See also, Overview of Profile Options, page A-1.

Steps:

1. To setup site profiles, from the System Administrator responsibility, navigate:

   Others > Profile System Values

   The Find System Profile Values window opens.

2. In the Profile field enter CSP:%. Click Find.

   The CSP: profile options appear in alphabetical order.

3. Scroll to the CSR: Repair Supplier Organization's Defective Subinventory profile option. In the Site column, enter the name for the Defective subinventory at the repair supplier organization.

4. At the CSR: Repair Supplier Organization's Usable Subinventory profile option, in the Site column, enter the name for the Usable subinventory.

5. Save your work.

7

Advanced Scheduler Implementation Tasks

This chapter documents tasks for implementing Oracle Advanced Scheduler.

This chapter covers the following topics:

- Oracle Advanced Scheduler Implementation Task Sequence
- Confirming Implementation of Field Service
- Confirming Setup of Spares Management
- Confirming Setup and Loading Spatial Data

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 7-1

2. Confirming Setup of Spares Management, page 7-2

3. Confirming Setup and Loading Spatial Data, page 7-3

4. Advanced Scheduler Setup Tasks , page 8-2

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 5-2.

> **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

    - Generate Field Service Trips

    - Assigning Resources to Subinventories

Set the following Field Service profile options to determine default values for your scheduling scenarios.

Field Service Profile Options for Oracle Advanced Scheduler

Profile Option Name	Description
CSF: Default Spares Availability	Default likelihood value of spare parts availability used for automatic scheduling. The possible values are "All Parts" and "No Parts."
CSF: Default Travel Duration	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.

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 automatic scheduling, an availability condition is defined at setup in the profile option, "CSF: Default Spares Availability." The possible values are "All Parts" or "No Parts." The default value is "All Parts."

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 8-22 and Field Service Profile Options, page A-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.

8

Setting Up Oracle Advanced Scheduler

This chapter documents procedures for setting up the Oracle Advanced Scheduler application. For the current release, Oracle Advanced Scheduler implementation documentation is contained in the *Oracle Field Service Implementation Guide*

This chapter covers the following topics:

- Setting Up Oracle Advanced Scheduler

- Activating Oracle Advanced Scheduler

- Setting Up Scheduling Parameters

- Setting Up Cost Parameters

- Setting Up Window to Promise

- Setting Up Tasks Longer Than a Standard Shift

- Setting Up Access Hours and After Hours Constraints

- Defining Task Access Hours or After Hours Constraints for a Specific Task

- Setting Up Access Hours or After Hours for a Customer, Site, or Location

- Marking a Task to Indicate Customer Confirmation Requirement

- Setting Up Advanced Scheduler and Time and Distance Calculations

- Geo-Coding

- Calculating Actual Travel Time and Distance (Street Level Routing)

- Calculating Estimated Travel Time and Distance (Point-to-Point or As the Crow Flies)

- Using Default Values for Travel Time and Distance Calculation

- Setting Up the Autonomous Scheduler

- Defining Task Queries for Autonomous Scheduler and Auto Commit Process

- Launching the Autonomous Scheduler

- Defining an Executable

• Setting Up the Autonomous Scheduler Concurrent Program

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 8-2.

   Set the profile option to enable Oracle Advanced Scheduler functionality

2. Setting Up Scheduling Parameters, page 8-3

   Use the Oracle Advanced Scheduler Parameter Settings setup window to define business rules for planning.

3. Setting Up the Time Distance Server (TDS), page 8-15

   The Time Distance Server provides three methods to calculate travel time and distance to task locations.

4. Setting Up the Autonomous Scheduler, page 8-23

   Start the Autonomous Scheduler concurrent program to activate automatic scheduling.

Activating Oracle Advanced Scheduler

Use this procedure to enable Oracle Advanced Scheduler functionality:

Steps:

1. To set up site profiles, from the System Administrator responsibility, navigate:

   Others > Profile System Values

   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.

Setting Up Scheduling Parameters

The Parameter Settings setup window consists of two tabs:

- Costs

  You set up cost parameters to take into account your organization's business rules while creating a schedule. See Setting Up Cost Parameters, page 8-3.

- Window To Promise

  You use the Window To Promise tab to create the time slots of service you want to offer to your customers. See Setting Up Window to Promise, page 8-5.

Setting Up Cost Parameters

Advanced Scheduler offers the capability to provide a schedule based upon constraints and costs. Information regarding these constraints and costs must be set up to enable the cost optimization mechanism.

You assign values to cost parameters to indicate your business needs and priorities. Cost values act as weights (penalty points) in the Advanced Scheduler total cost analysis. On the Costs tab, assign lower cost values to parameters with low priority and higher cost values to parameters with higher priorities.

All cost parameters having assigned values are taken into account when creating task

schedules. Advanced Scheduler calculates the cost of adding a task to the day trip of a service technician at different positions in the trip, and compares the options. The option with the lowest total relevant cost is presented to the planner. This process is repeated for each qualified service technician, up to the limit set by the profile CSR: Maximum selected resources. The schedulable options, up to the limit set by the profile CSR: Maximum number of plan options, with relevant costs are then presented to the planner. When using the Auto-schedule feature or batch scheduling by running the Autonomous Scheduler, the option with the lowest cost is used to schedule the task.

Use this procedure to set up cost parameters:

Steps:

1. From the Field Service Administrator Responsibility, navigate to Scheduler Setup, or from the Field Service Manager Responsibility, navigate:

   Field Service Setup > Scheduler Setup

   The Parameter Settings window appears.

2. Select the Costs tab.

   A list of seeded cost parameters displays under the Description heading, along with a corresponding Value field.

3. Enter a value for each of the cost parameters that you want the Advanced Scheduler to consider when scheduling. Assign a higher number (or weight) to those parameters you deem most important, and a smaller number to those parameters that are least important.

4. Save your work.

Setting Up Window to Promise
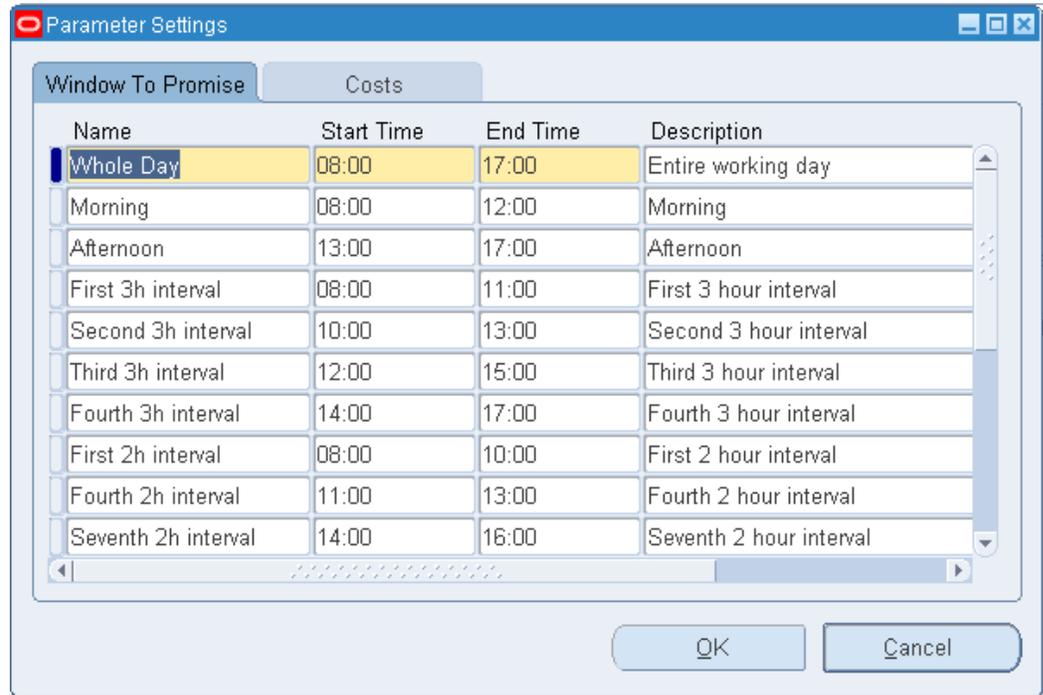
> **Note:** For information related to the Parameter Settings - Costs tab, see Setting Up Cost Parameters, page 8-3.

The Window to Promise scheduling option is designed to fulfill two objectives:

- Satisfy time slot needs of the service supply side (your field service operation).

- Satisfy time slot requests from the service demand side (your customers).

    > **Tip:** When setting up the available Window-to-Promise time slots, create slots that vary both in length of the time, and the time of day it occurs, so that you have flexibility to schedule in a way that works efficiently for both the customer and the field service operation.

The Window-to-Promise settings define the time boundaries by Start Time and End Time, based on a 24-hour work cycle. Setup involves carefully balancing scheduling flexibility versus customer service. Wider time-slots provide greater flexibility in scheduling, whereas smaller time-slots provide greater customer satisfaction. The Start time frame is useful for promising customers that technicians will be at their sites and start working within the agreed time slot (Start Time and End Time).

This table lists the seeded set of Window-to-Promise time slots:

WTP Time Slots Example

Name	Start time	End Time	Description
Whole Day	08:00	17:00	Entire working day
Morning	08:00	12:00	Four-hour morning slot
Afternoon	13:00	17:00	Four-hour afternoon slot

Use this procedure to set up the Window-to-Promise time slots:

Steps:

1. From the Field Service Administrator Responsibility, navigate to Scheduler Setup, or from the Field Service Manager Responsibility, navigate:

   Field Service Setup > Scheduler Setup

   The Parameter Settings window appears.

2. Select the Window To Promise tab.

3. Enter a name for the time slot in the Name column.

4. Enter the Start Time for the time slot. This time must be entered using a 24-hour clock (military time). For example, 1 p.m. is expressed as 13:00.

5. Enter the End Time for the time slot.

6. Enter a Description.

7. Repeat steps 3-6 for each time slot you want to create.

8. Save your work.

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 a 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 this procedure to set up Advanced Scheduler profile options to work with tasks longer than one shift:

Steps:

Navigating to Site Profile and Personal Profile Options

1. To set up site profiles, from the System Administrator responsibility, navigate:

   Others > Profile System Values

   The Find System Profile Values window appears.

2. Enter CSR% in the Profile field. Click Find.

   CSR profile options appear in alphabetical order.

3. To set up personal profiles, from the System Administrator responsibility, navigate:

   Others > Profiles

   The Personal Profile Values window appears.

4. Place the cursor in the Profile Name column. Press <F11>, or from the menu bar select View > Query By Example > Enter

5. Enter CSR%. Press and hold down <Ctrl> and press <F11>, or from the menu bar select View > Query By Example > Run

   CSR profile options appear in alphabetical order.

Setting the CSR: Profile Options

6. Set the following CSR profile options:

   > **Note:** You can set the CSR profile options in any sequence.

   - CSR: Qualified effort in minutes for determining task longer than a shift

     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.

- CSR: Minimum first task effort 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.

- CSR: Maximum Overtime

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).

- CSR: Distribute last task effort

You can set this profile option to avoid another day of travel when the last child task has a short duration. If this profile is set to Yes, and if the last child task effort is smaller than or equal to the value set in the CSR: Maximum Overtime profile, 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.

- CSR: Maximum number of plan options

When there are many available technicians, and many available time slots, the permutations of feasible options can become very large. Set this profile to limit the options presented on the user interface. Lowest cost options always appear. The default value is 50.

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.

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.

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.

To setup access or after hours constraints for a specific task, see Defining Task Access Hours or After Hours Constraints for a Specific Task, page 8-11

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. To set up hours constraints for a customer, site, or location, see Setting Up Access Hours or After Hours for a Customer, Site, or Location, page 8-12.

Defining Task Access Hours or After Hours Constraints for a Specific Task

Use this procedure to create access hours and after hours for a particular task.

Steps:

1. Navigate to the Access Hours window from the Dispatch Center by right-clicking the task number in the task list, and then selecting Access Hours from the right-click menu option.

   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.

Setting Up Access Hours

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.

   Hours must be entered in military time.

4. Save your work.

Setting Up After Hours

5. To define After Hours requirements, select the After Hours check box.

   This disables the Access Hours check box.

6. 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.

7. Save your work.

Restrictions

Although you can *change* Access Hours, even if the task status is Planned or Assigned, you cannot *remove* Access Hours once the task status changes to Working or Completed.

Setting Up Access Hours or After Hours for a Customer, Site, or Location

You can set up access hours or after hours constraints that apply when a task address matches the customer, site, or location you specify.

Use this procedure to set up access hours or after hours for a customer, site, location, or combination of these:

1. From the Field Service Manager responsibility, navigate to the Update Access Hours page.

   Field Service Manager > Preventive Maintenance > Access Hours

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

3. 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.

4. 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.

5. Save your work.

Setting Up After Hours

6. Click the After Hours radio button.

7. Enter instructions regarding the after hours scheduling that you want the dispatcher to consider in the Definition text box.

8. 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:

Steps:

1. From the Dispatch Center, navigate to the Customer Confirmation window. Right-click on a task in the task list, and then select Customer Confirmation from the right-click menu.

   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.

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 8-19 from geo-spatial data (street level routing).

- Calculating the Estimated Travel Time and Distance (Point-to-Point or As the Crow Flies), page 8-20 .

- Using Default Values for Travel Time and Distance Calculation, page 8-22.

Setting Up Advanced Scheduler to Use Time Distance Calculations

Profile Option CSR: TDS Mode 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

Geo-Coding

Addresses and Geo-Coding

Advanced Scheduler's Location Finder component geo-codes addresses by finding the Longitude and Latitudes, and associating road segment details so they can be used for Route Calculations. To geo-code addresses, Advanced Scheduler needs spatial data of the particular region to be available.

Addresses related to the field service tasks and technician's home location are geo-coded (if not already done) by the Scheduler and Generate Trips concurrent program respectively.

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 corresponding profile options:

- 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.

- CSR: Create location

  If Location Finder is installed, then this profile can be used to turn Geo-coding on and off as and when required. Set this profile to 'Yes' in order to call upon the location finder to create a geo-code if one does not exist for a task location or technician's address, while scheduling the field service task.

Both of these profiles should be 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 profile 'CSR: Use Fixed values for Invalid addresses' is set to Yes, and profiles for default values are set, then Advanced Scheduler will use these values in the absence of valid geo-codes.

Calculating Actual Travel Time and Distance (Street Level Routing)

In this method, the Time Distance Server calculates the actual travel time and distance between two tasks based on a road network retrieved from geo-spatial data. When the geo-code for a task or technicians address is not previously defined, the location finder will try to create one based on the task address information.

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 profile option for this method, use the following procedure:

Prerequisites

❒ Install geo-spatial data.

Steps:

1. From the Administrator responsibility, navigate to the CSR profile options:

    For details see Navigating to Site Profile and Personal Profile Options, page 8-7.

    CSR profile options appear.

2. CSR: TDS Mode

    Choose the 'Route' value 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 rode 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.

Steps:

1. From the Administrator responsibility, navigate to the CSR profile options:

   For details see Navigating to Site Profile and Personal Profile Options, page 8-7.

   CSR profile options appear.

2. Set these profile options:

   > **Note:** You can set these options in any sequence.

   - CSR: Create location

     Set this profile to Yes to call upon the location finder to create a geocode if one does not exist for a task location.

     > **Note:** A task must have a geo-code when using Oracle Advanced Scheduler to schedule it using the TDS.

   - CSR: TDS Mode

     Enter either 'Estimate' or 'Only Estimate' to enable the Location TDS to apply the estimate method to calculate travel time by using the profile option settings for segment or section boundaries and average speeds.

   - CSR: First boundary for Location TDS

     Enter the first distance (in kilometers) for which the value you set in CSR: First average speed for Location TDS applies.

   - CSR: First average speed for Location TDS

     The value you set for average speed (in kilometers per hour) applies to the first boundary distance you define in the CSR: First boundary for Location TDS profile option.

   - CSR: Second boundary for Location TDS

     Specify the distance from the first boundary to the second boundary (km).

   - CSR: Second average speed for Location TDS

     The value you set here for average speed (km/h) applies to the second boundary distance you set in the CSR: Second boundary for Location TDS profile option.

   - CSR: Third average speed for Location TDS

     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. Query the CSF Profiles.

   For details see Navigating to Site Profile and Personal Profile Options, page 8-7.

   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 profile options to define default values for TDS route calculation:

- CSR: TDS Mode

- CSR: Use Fixed values for Invalid addresses

- CSF: Default travel distance for Time Distance Server

- CSF: Default travel duration for Time Distance Server

Steps:

1. From the Administrator responsibility, navigate to the CSR profile options:

   For details see Navigating to Site Profile and Personal Profile Options, page 8-7.

   CSR profile options appear.

2. Set the following profile option:

   - CSR: TDS Mode

     This profile 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.

3. You can set the following options in any sequence.

- **CSR: Use Fixed values for Invalid addresses**

  This value denotes whether the default values should be used or not. Options are: Yes or No.

- CSF: Default travel distance for Time Distance Server

  The value you set here is used as the default travel distance between two tasks.

- CSF: Default travel duration for Time Distance Server

  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 profile value of CSR: TDS Mode set to *Off* or

  - One or both of the task addresses can not be resolved through the location Finder provided profile CSR: Use Fixed Values for Invalid Addresses is set to *Yes.*

4. Save your work.

Setting Up the Autonomous Scheduler

Use the following procedures to set up and activate the Autonomous Scheduler concurrent program:

- Defining Task Queries for Autonomous Scheduler and Auto Commit Process, page 8-23

- Launching the Autonomous Scheduler, page 8-26

If the concurrent program does not execute, perform the following procedures:

- Defining an Executable, page 8-27

- Setting Up the Autonomous Scheduler Concurrent Program, page 8-28

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.	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)
Assigned	List all tasks that have the Assigned Flag set to 'YES'.	exists (select '' from jtf_task_statuses_b where task_status_id = csf_ct_tasks.task_status_id and nvl(assigned_flag, 'N') = 'Y')
Auto Rejected	List all tasks that have a status ID = 27 (27 is the seeded value given for Auto Rejected Status by JTF.)	task_status_id = 27
Auto Scheduling	List all tasks that have a status ID = 10025 (10025 is the seeded value given for Auto Scheduling Status by JTF.)	task_status_id = 10025
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')
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'

Query Name	Description	SQL of Seeded Query Definitions
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.

Prerequisites

❏ The tasks must carry a "scheduleable" status and type.

Steps:

Creating a Query

1. Navigate to the Dispatch Center.

   Field Service Dispatcher > Dispatch Center

   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

9. Navigate to the Edit Query window.

(M) Tools > Edit Query

The Edit Query window appears.

10. 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.

11. 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.

12. 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.

Steps:

1. Navigate to the Autonomous Scheduler window.

Field Service Setup > Autonomous Scheduler

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 profile CSR: Selection of tasks for Autonomous Scheduler.

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.'

Steps:

1. From the System Administrator Responsibility, navigate:

   Concurrent > Program > Executable.

2. At the Concurrent Program Executable window, enter the following values into the fields:

Executable Concurrent Program Parameter Setup

Field	Value
Executable	CSR: Autonomous Scheduling
Short Name	CSR_AUTO_SCHED
Application	Oracle Scheduler
Description	Free text entry field. For example, "Schedules tasks automatically that become scheduleable at defined time intervals."
Execution Method	Java Concurrent Program
Execution File Name	SchedulerConcurrentProgram
Execution File Path	oracle.apps.csr.concurrent

3. Click Save.

Setting Up the Autonomous Scheduler Concurrent Program

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.'

Prerequisites

❐ Define an executable. See Defining an Executable, page 8-27.

Steps:

1. From the Administrator responsibility, navigate

   Concurrent > Program > Define

2. From the Concurrent Programs window, enter the following values into the fields:

Concurrent Program Parameter Settings

Field	Value
Program	Autonomous Auto Schedule
Short Name	CSR_AUTO_SCHED
Application	Oracle Advanced Scheduler
Description	Free text entry field. For example: "Schedules tasks automatically that become scheduleable at defined time intervals."
Executable Name	CSR_AUTO_SCHED
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.

9

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 9-12

- Create Users and Add Preventive Maintenance Responsibilities , page 9-13

- Create PM Request Type and Map to Responsibilities, page 9-13

- Create Resource Group of Preventive Maintenance, page 9-14

- Create Preventive Maintenance Territory and Assign Resources, page 9-14

- Create Task Template Groups and Task Templates, page 9-15

- Create Master Items, page 9-15

- Create Counter Groups and Counters, page 9-16

- Create Preventive Maintenance Programs, page 9-17

- Create Coverage Templates for PM Programs, page 9-31

- Set Up Service Program/Warranty for Service Contracts, page 9-34

- Add Service Program/Warranty Items to Price List, page 9-35

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:

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 9-11

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.

Prerequisites

None

Responsibility

Application Developer

Navigation

Flexfield > Key > Segments

Steps

1. From the Segments form, query the Flexfield title, using "AHL Route."

   This validates the existence of the Route Flexfield and returns a record.

2. Add segments to this flexfield by clicking the Segments button and entering records for the System Flexfield Segment.

3. In order to create Value Sets to be used by the Flexfield Segments, click the Value Set button

   This opens the Value Sets form.

4. Define a Value Set Name.

5. Choose List of Values in the List Type field.

6. Choose No Security in the Security Type field

7. Choose Char as the Format Type.

8. Choose Independent as the Validation Type.

9. Update Flexfield Segments with the Value Sets you defined.

10. To create Values for the Value Sets, navigate to Flexfield > Key > Values.

11. Query the name of the Value Set that you defined in Step 4 and click Find.

12. In the Segment Values form, you can add values to the Value Set in the Values Effective tab.

13. 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:** I f 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.

Prerequisites

None

Responsibility

CRM Resource Manager

Navigation

Setup > Role Types

Steps

1. From the Role Types form, query JTF_RS_ROLE_TYPE.

2. Create a role type code for the default approval role.

3. Save your work.

4. Navigate to Setup > Role 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.

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

6. 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 Setup > Role Types

2. From the Role Types form, 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 Setup > Role 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.

Responsibility

CRM Resource Manager

Navigation

Maintain Resources > Import Resources

Steps

1. From the Selection Criterion form, select an approval employee.

2. Click Search.

3. In the results spreadtable, select the employee and click Create Resource.

   The Default Values form appears.

4. Choose the role you want to assign to the approver in the Role field from the list of values.

5. Click OK.

6. Click Save Resource.

7. If you want to assign this approver to additional roles, click Details.

8. In the Roles tab, add as many roles as you want to assign to this approver.

9. Click Save.

Adjust Default Approval Rule in CMRO

If you want to adjust the default approval rule

Prerequisites

None.

Responsibility

Preventive Maintenance

Navigation

Administration > Approvals

Steps

1. In the Search Approval Rules window, enter 'Default AHL Rule' in the Default Rule Name field and click Go.

2. In the search results spreadtable, click the hypertext name 'Default AHL Rule.'

   This opens the Update Approval Rule window.

3. 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.

4. 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.

Prerequisites

None.

Responsibility

Preventive Maintenance

Navigation

Administration > Approvals

Steps

1. From the Search Approval Rules window, click Create.

   The Create Approval Rule window opens.

2. In the Approval Rule Info section, choose either Maintenance Request or Route Management in the Create Approval Rules For field.

3. Choose Concept as the Approval Type.

4. Select a Status of Active.

5. Enter an Approval Rule Name.

6. Click Apply.

   The Update Approval Rule window appears.

7. In the Approver Details section, add roles or users in the sequence you want the objects to be approved.

8. Click Apply.

9. To map the CMRO objects to the Approval workflow, navigate to the Workflow tab.

   The Workflow Process Mapping window is displayed.

10. In the Object field, choose the object you want to map.

11. 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.

12. 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 9-13

2. Create PM Request Type and Map to Responsibilities, page 9-13

4. Create Resource Group of Preventive Maintenance, page 9-14

5. Create Preventive Maintenance Territory and Assign Resources, page 9-14

6. Create Task Template Groups and Task Templates, page 9-15

7. Create Master Items, page 9-15

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 4-4.

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 4-24.

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."

Responsibility

Field Service Manager

Navigation

Field Service Setup > Service Requests > Request Types

Steps

1. From the Request Types form, query for the Request Type of "Preventive Maintenance" in the Type field and select it.

2. Click the Map Types button.

   The Mapping Service Request Types form opens.

3. Select Preventive Maintenance in the Request Type field.

4. In the Responsibility Field, choose Preventive Maintenance from the list of values.

5. Create a second line and repeat steps 3-4 and choose Preventive Maintenance Reports from the list of values.

6. 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 4-10.

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 Commom 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*.

Prerequisites

None.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Field Service Setup > CRM Foundation > Task and Escalation Manager > Tasks > Task Templates

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 4-16 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.

Prerequisites

None.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Items > Master Items

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.

Prerequisites

Items must be set up in order to associate them with counter groups.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Field Service Setup > Counters > Define Counters

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 9-18

- Create Routes, page 9-20

- Create PM Programs, page 9-20

- Add Effectivities and Interval Thresholds to a Program, page 9-22

- Create Activities, page 9-24

- Associate Routes to Activity, page 9-26

- Add Effectivity and Interval Thresholds to Activities, page 9-27

- Associate Activities to Program, page 9-29

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 Maintainence

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.)

Profile Option Name	Descriptions	Value
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.

Prerequisites

None

Responsibility

System Administrator

Navigation

Profile > System

Steps

1. 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.

2. Select profile option you want to set from the list of profile options displayed.

3. In the Site field, select the value you want to set to the profile option.

4. Save your work.

5. Repeat steps 1-4 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.

Prerequisites

Task Template Groups and Task Templates must be set up.

Responsibility

Preventive Maintenance

Navigation

Engineering > Route Management > Routes > Create

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.

Responsibility

Preventive Maintenance

Navigation

Fleet Management > Overview > Create > Create Maintenance Program

Steps

To set up a Preventive Maintenance Program, follow these required steps:

1. 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.

2. Enter a name for the program in the Title field.

3. 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.

4. 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.

5. 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).

6. 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.

7. 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.

8. Enter an Effective From Date.

9. 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.

Responsibility

Preventive Maintenance

Navigation

Fleet Management > Overview > Maintenance Program > Search Maintenance Program

Steps

To add effectivities and interval thresholds to an existing Preventive Maintenance Program, follow these steps:

1. 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 form. (If you go to the Update form, click the Effectivities hypertext link on the side navigation bar.)

2. Click the Add More Rows button to create some blank rows in the Effectivities List table.

3. In the Effectivity field, enter a text name.

4. 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.

5. Select the item from the list of values.

6. 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.

7. To add the Interval Threshold for the effectivity, click the icon.

   The Update Interval Threshold form appears.

8. 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.

9. 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.

10. Enter the value that you want the program to End in the Stop field.

11. Choose the Counter that you want to associate with this interval threshold from the list of values.

    The UOM defaults from the Counter.

12. Click Apply to save your work

13. Repeat steps 3-12 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 form 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.

Responsibility

Preventive Maintenance

Navigation

Fleet Management > Overview > Create > Create Maintenance Program

Steps

To set up a Preventive Maintenance Activity, follow these required steps:

1. 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.

2. Enter a name for the activity in the Title field.

3. 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.

4. 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.

5. 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).

6. 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.

7. 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.

8. Enter an Effective From Date.

9. 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.

Responsibility

Preventive Maintenance

Navigation

Fleet Management > Overview > Maintenance Program > Search Maintenance Program

Steps

To add routes to an existing Preventive Maintenance Activity, follow these steps:

1. 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.

2. On the left-hand side navigation, click the Routes hypertext link.

   The Update Attached Routes form appears.

3. In the Routes List table, click Add More Rows to create blank rows.

4. 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.

5. Select the Route Number from the list of values.

    The Route Description, Product Type, Operator, and Revision Number default from the Route Number.

6. 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.

Responsibility

Preventive Maintenance

Navigation

Fleet Management > Overview > Maintenance Program > Search Maintenance Program

Steps

To add effectivities and interval thresholds to an existing Preventive Maintenance Activity, follow these steps:

1. 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.)

2. Click the Add More Rows button to create some blank rows in the Effectivities List table.

3. In the Effectivity field, enter a text name.

4. 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.

5. Select the item from the list of values.

6. 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.

7. To add the Interval Threshold for the effectivity, click the icon.

   The Update Interval Threshold form appears.

8. Click the Add More Rows button to create blank rows in the Interval Threshold List table.

9. 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.

10. Click Apply to save your work.

11. Repeat steps 3-10 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.

Responsibility

Preventive Maintenance

Navigation

Fleet Management > Overview > Maintenance Program > Search Maintenance Program

Steps

To associate activities to programs, follow these steps:

1. 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.)

2. Click Add More Rows to create some blank rows in the Maintenance Requirements List table.

3. In the Title field, search for the Activity you want to associate with the program and select it from the list of values.

4. 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.

5. Repeat steps 3-4 for each activity you want to associate with the program.

6. 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 form 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 Concepts and Procedures* guide.

The following topic related to the Preventive Maintenance Schedule is covered in this section:

- Setting Up Preventive Maintenance Schedule, page 9-32

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.

Responsibility

Service Contracts Manager

Navigation

Coverage Templates

Guidelines

When creating a coverage template for Preventive Maintenance, choose a Preventive Maintenance Program Name from the list of values. The Program Description field will automatically populate.

Once 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 form 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 form, 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 form:

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 9-17 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 9-17 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.

Responsibility

Service Contracts Manager

Navigation

Coverage Templates > Schedule (B) > Preventive Maintenance Schedule

Steps

To set up Stream Levels for PM Programs, follow these steps:

1. In the Stream Levels block, 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.

2. 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."

3. 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."

4. 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.

5. 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.

6. Repeat steps 1-5 for each Stream Level you want to associate to the Program for this coverage template.

7. If you want to add Stream Levels to the Activity Schedule, click the Activity Schedule tab.

8. 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.

9. Click OK to save the values and return to the Coverage Template form.

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*.

Prerequisites

Coverage templates must be set up

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Inventory > Items > Master Item

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 4-21.

Prerequisites

Service Program/Warranty items must be set up in Oracle Inventory.

Responsibility

Field Service Manager

Navigation

Field Service Dispatcher > Spares Management > Order Management Pricing > Price Lists > Price List Setup

A

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 Advanced Scheduler, Spares Management, and Preventive Maintenance modules.

> **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)

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

Timeout in minutes for reminder 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

Timeout in minutes for 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	• 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 to Task Skill Requirements

The profile enables auto generation of task skills from the product on the service request, when creating the task.

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	• 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	• 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	• 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	• 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.

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	• Debrief page • Mobile Field Service Wireless Debrief	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 Feild Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
Customer, Site, Item, and Instance No user defined values	Customer	Field Service Dispatch Center	S/A/R/U

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 Spares Availability

Default value for the spares availability condition. Likelihood value of spare parts

availability used for automatic scheduling.

LOV Values	Default Value	Where Used	Supported Levels
All Parts, No Parts, and User Defined Values	No Parts	Autonomous Scheduler concurrent program	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 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
All task statuses with the following task status attributes enabled: 1. Task Status 2. Assignment Status 3. Assigned and the following status attributes not enabled: 1. Rejected 2. Onhold 3. Cancelled 4. Schedulable The enabling of the other attributes is optional	Null	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.	Null	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 travel distance for Time Distance Server

If no geographic data exists this profile option is used to substitute the travel distance.

Used to default distance (in Kilometers), when the address is missing or not resolvable or when Default TDS is turned on. Gets stored on the task.

LOV Values	Default Value	Where Used	Supported Levels
Number (in Kilometers)	25	Scheduler/TD Server	S/A/R/U

CSF: Default travel duration for Time Distance Server

If no geographic data exists this profile option is used to substitute the travel duration. Used in the following two cases as the default travel time between two task addresses:

• Default Time Distance Server is being used.

• One or both of the addresses is invalid or could not be resolved through the location finder against the spatial data set.

LOV Values	Default Value	Where Used	Supported Levels
Number (in minutes)	30	Scheduler/TD Server	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 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 shifts in scheduling results

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: eLocation Map basemap name

The basemap name identification for the map definition in the maps table for the eLocation map.

The Map table can have more than one theme setup. This profile is used to identify, which theme setup has to be used for loading the Map.

LOV Values	Default Value	Where Used	Supported Levels
None	CSFMAP	Field Service Dispatch Center Map	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 host name

The connect string host name of the data source for the eLocation map. Used to identify the host and port for communicating the maps. Typically the same as the database server machine name.

LOV Values	Default Value	Where Used	Supported Levels
Host Name	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map icon URL

The URL of the directory where the image files are stored for the eLocation map markers. Location for icons used on the Map. The images are used to show instant status of the resource on the Map in the Field Service Dispatch Center.

LOV Values	Default Value	Where Used	Supported Levels
URL	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 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 Map RMI binding name

The Remote Method Invocation binding name that is used for the eLocation map server. RMI binding name is passed to the Mapviewer for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
Remote Method Invocation Binding Name	mapviewer	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map RMI host name

The Remote Method Invocation host name that is used for the eLocation map server (typically the machine name where the map server is running). Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
Host Name	Null	Field Service Dispatch Center Map	S/A/R/U

CSF: eLocation Map RMI port number

The Remote Method Invocation port number that is used for the eLocation map server. Used for rendering the Map.

LOV Values	Default Value	Where Used	Supported Levels
Port	Null	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: 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 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.

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: 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	• Field Service Dispatch Center • Scheduler	S/U

CSF: Selected Territories

List of resources is controlled by this profile option setting.

LOV Values	Default Value	Where Used	Supported Levels
None	Null	• Field Service Dispatch Center • Scheduler	U

CSF: Selection of Tasks for Auto Commit

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	• Field Service Technician Portal • Debrief 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: 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: 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)	• Debrief	S/A/R/U
		• Field Service Dispatch Center	
		• Mobile Field Service Store and Forward	
		• Mobile Field Service Wireless	

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)	• Debrief	S/A/R/U
		• Field Service Dispatch Center	
		• Mobile Field Service Store and Forward	
		• Mobile Field Service Wireless	

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

Enables the map display within the Field Service Dispatch Center.

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

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	• 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	• 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	• 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

CSR: Calculation type of TDS

Set the calculation type of the Time Distance Server (TDS): 1 = fastest, 2 = shortest, 3 = cost based. Used during street level routing. Not used in point-to-point estimates.

LOV Values	Default Value	Where Used	Supported Levels
1, 2, and 3	1 (fastest)	Scheduler/TD Server	S/A/R/U

CSR: Contracts based resource selection for auto-schedule and autonomous scheduler

If set to 'YES' contracts based preferred resources are taken into account by auto-schedule and the Autonomous Scheduler program. This profile 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.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

CSR: Create location

To call upon the location finder when a task has no geocode. Indicates whether the location information is saved to the database when it is non existing in the task. Used to turn the geo-code on or off.

> **Note:** A task must have a geo-code to enable Oracle Advanced Scheduler to schedule it with the TDS.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Scheduler and Task Generation	S/A/R/U

CSR: Distribute last task effort

If the profile 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 profile CSR: Max Overtime. Used to decide how to handle the last child task if it is small and less than the overtime.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Scheduler	S/A/R/U

CSR: First average speed for Location TDS

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (Kilometers/Hour)	30	Used in Travel Time calculations by the Scheduler	S/A/R/U

CSR: First boundary for Location TDS

This boundary defines the maximum travel distance for which the first average speed value is used. Used with the profile CSR: First average speed for Location TDS to calculate travel time for the first portion of the travel distance.

LOV Values	Default Value	Where Used	Supported Levels
Number (Kilometers)	7.6	Used in Travel Time calculations by the Scheduler	S/A/R/U

CSR: Functional class 0 delay 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.

LOV Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/A/R/U

CSR: Functional class 1 delay 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.

LOV Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/A/R/U

CSR: Functional class 2 delay 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.

LOV Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/A/R/U

CSR: Functional class 3 delay 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.

LOV Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/A/R/U

CSR: Functional class 4 delay 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.

LOV Values	Default Value	Where Used	Supported Levels
1	1	Advanced Scheduler	S/A/R/U

CSR: Include Commutes 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 this profile option must be set to 'Yes.'

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Scheduler	S/A/R/U

CSR: Installed base resource selection for auto-schedule and autonomous scheduler

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.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

CSR: Log Activated

Defines whether internal Scheduler log messages are shown on the server window. Used to gather statistics on various scheduling operations.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	• Field Service Dispatch Center • Scheduler	S/A/R/U

CSR: Maximum calculation time

The maximum number of milliseconds Oracle Advanced Scheduler is allowed to calculate schedule advise. Scheduler will restrict the calculation time to this value for schedule advice.

LOV Values	Default Value	Where Used	Supported Levels
Number (milliseconds)	30000	Scheduling	S/A/R/U

CSR: Maximum number of plan options

The maximum number of plan options returned for regular tasks. Lowest cost options are always returned.

LOV Values	Default Value	Where Used	Supported Levels
Number	50	Scheduling	S/A/R/U

CSR: Maximum overtime

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	120	Scheduling	S/A/R/U

CSR: Maximum selected resources

The maximum number of resources considered for creating plan options. Resources that are closest to the task are always considered.

LOV Values	Default Value	Where Used	Supported Levels
Number	10	Scheduling	S/A/R/U

CSR: Minimal travel time

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	10	Scheduler	S/A/R/U

CSR: Minimum first task effort 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.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	240	Scheduler	S/A/R/U

CSR: Plan scope

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (days)	Null	Scheduling	S/A/R/U

CSR: Qualified effort in minutes for determining task longer than a shift

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (minutes)	480	Scheduler	S/A/R/U

CSR: Rejected by Autonomous Scheduling Status

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 profile and assign it to the task.

LOV Values	Default Value	Where Used	Supported Levels
Task Statuses	AutoReject	Autonomous Scheduler concurrent program	S/A/R/U

CSR: Second average speed for Location TDS

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (Kilometers/Hour)	65	Used in Travel Time calculations by Scheduler	S/A/R/U

CSR: Second boundary for Location TDS

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 profile CSR: Second average speed for Location TDS, to calculate travel time for the second portion of the travel distance.

LOV Values	Default Value	Where Used	Supported Levels
Number (Kilometers)	25.3	Used in Travel Time calculations by Scheduler	S/A/R/U

CSR: Selection of tasks for Autonomous Scheduler

This profile defines the query that must be used to select the tasks for the Autonomous Scheduler. Default query for the Autonomous Scheduler program.

LOV Values	Default Value	Where Used	Supported Levels
Query Name	Auto Scheduling	Autonomous Scheduler concurrent program	S/A/R/U

CSR: Skill based resource selection for auto schedule and autonomous scheduler

If set to 'YES' skill based resources are taken into account by auto schedule and the Autonomous Scheduler program. This profile 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.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

CSR: TDS Mode

This profile 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.

LOV Values	Default Value	Where Used	Supported Levels
Off, Estimate, Only Estimate, Route, and Only Route	Off	Scheduler	S/A/R/U

CSR: Territory based resource for auto schedule and autonomous scheduler

If set to 'YES' territory based resources are taken into account by auto schedule and the Autonomous Scheduler program. This profile has the same function as the Territories check box in the Schedule Task window - Preferences tab when using Intelligent mode.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	No	Autonomous Scheduler concurrent program	S/A/R/U

CSR: Third average speed for Location TDS

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.

LOV Values	Default Value	Where Used	Supported Levels
Number (Kilometers/Hour)	95	Used in Travel Time calculations by Scheduler	S/A/R/U

CSR: Use Fixed 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.

LOV Values	Default Value	Where Used	Supported Levels
Yes and No	Yes	Scheduling	S/A/R

CSR: 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.

LOV Values	Default Value	Where Used	Supported Levels
Number	0	Scheduler: WTP mode	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

B

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