Oracle® Field Service

Implementation Guide

Release 11*i* (11.5.6)

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Oracle Field Service Implementation Guide, Release 11*i* (11.5.6)

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Preface

Audience for This Guide

Welcome to Release 11*i* of the Oracle Field Service Implementation Guide.

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Oracle Field Service

  If you have never used Oracle Field Service, Oracle suggests you attend one or more of the Oracle Field Service training classes available through Oracle University.
- The Oracle Applications graphical user interface.

  To learn more about the Oracle Applications graphical user interface, read the *Oracle Applications User's Guide*.

See Other Information Sources for more information about Oracle Applications product information.

How To Use This Guide

This document contains the information you need to understand and use Oracle Field Service.

- Chapter 1 provides an introduction to Field Service Suite and the Field Service applications features.
- Chapter 2 gives an architectural overview of Field Service and how it's integrated with other applications.

- Chapter 3 lists the mandatory and conditional dependencies.
- Chapter 4 provides the implementation overview.
- Chapter 5 provides task based topics on how to implement Field Service.
- Chapter 6 gives directions on how to verify the implementation.
- Chapter 7 provides solutions to common implementation errors and error messages.

Documentation Accessibility

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

Accessibility of Code Examples in Documentation

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

Accessibility of Links to External Web Sites in Documentation

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

Other Information Sources

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

If this guide refers you to other Oracle Applications documentation, use only the Release 11*i* versions of those guides.

Online Documentation

All Oracle Applications documentation is available online (HTML or PDF). Online help patches are available on MetaLink.

Related Documentation

Oracle Field Service shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other product documentation when you set up and use Oracle Field Service.

You can read the documents online by choosing Library from the expandable menu on your HTML help window, by reading from the Oracle Applications Document Library CD included in your media pack, or by using a Web browser with a URL that your system administrator provides.

If you require printed guides, you can purchase them from the Oracle Store at http://oraclestore.oracle.com.

Documents Related to All Products

Oracle Applications User's Guide

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) available with this release of Oracle Field Service (and any other Oracle Applications products). This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent processes.

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

Documents Related to This Product

Oracle CRM Application Foundation Implementation Guide

Oracle Field Service is integrated with a lot of the modules from CRM Foundation. Refer to this guide for details on the implementation of each module.

Oracle CRM Application Foundation Concepts and Procedures

Oracle Field Service is integrated with a lot of the modules from CRM Foundation. Refer to this guide for details on the usage of each module.

Oracle Scheduler Concepts and Procedures

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

Oracle Spares Management Concepts and Procedures

Use this guide to learn more about the Spares Management processes and usage. Especially when working with Scheduler as well, Field Service, Scheduler, and Spares Management are tightly integrated.

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 Field Service/Laptop application. Field Service information is send to the laptop device to be handled by the field service representative.

Oracle Field Service/Palm™ Devices Concepts and Procedures

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

Oracle Field Service/Wireless Concepts and Procedures

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

Installation and System Administration

Oracle Applications Concepts

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11*i*. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind Applications-wide features such as Business Intelligence (BIS), languages and character sets, and Self-Service Web Applications.

Installing Oracle Applications

This guide provides instructions for managing the installation of Oracle Applications products. In Release 11*i*, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications, the Oracle8 technology stack, and the Oracle8*i* Server technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to finish your installation. You should use this guide in conjunction with individual product user's guides and implementation guides.

Oracle Applications Supplemental CRM Installation Steps

This guide contains specific steps needed to complete installation of a few of the CRM products. The steps should be done immediately following the tasks given in the Installing Oracle Applications guide.

Upgrading Oracle Applications

Refer to this guide if you are upgrading your Oracle Applications Release 10.7 or Release 11.0 products to Release 11*i*. This guide describes the upgrade process and lists database and product-specific upgrade tasks. You must be either at Release 10.7 (NCA, SmartClient, or character mode) or Release 11.0, to upgrade to Release 11*i*. You cannot upgrade to Release 11*i* directly from releases prior to 10.7.

Maintaining Oracle Applications

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

Oracle Applications System Administrator's Guide

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

Oracle Alert User's Guide

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

Oracle Applications Developer's Guide

This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards for Forms-Based Products*. It also provides information to help you build your custom Oracle Forms Developer 6*i* forms so that they integrate with Oracle Applications.

Oracle Applications User Interface Standards for Forms-Based Products

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

Other Implementation Documentation

Multiple Reporting Currencies in Oracle Applications

If you use the Multiple Reporting Currencies feature to record transactions in more than one currency, use this manual before implementing Oracle Field Service. This manual details additional steps and setup considerations for implementing Oracle Field Service with this feature.

Multiple Organizations in Oracle Applications

This guide describes how to set up and use Oracle Field Service with Oracle Applications' Multiple Organization support feature, so you can define and support different organization structures when running a single installation of Oracle Field Service.

Oracle Workflow Guide

This guide explains how to define new workflow business processes as well as customize existing Oracle Applications-embedded workflow processes.You also use this guide to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes.

Oracle Applications Flexfields Guide

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

Oracle eTechnical Reference Manuals

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on Metalink

Oracle Manufacturing APIs and Open Interfaces Manual

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes APIs and open interfaces found in Oracle Manufacturing.

Oracle Order Management Suite APIs and Open Interfaces Manual

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes APIs and open interfaces found in Oracle Order Management Suite.

Oracle Applications Message Reference Manual

This manual describes Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 11i.

Oracle CRM Application Foundation Implementation Guide

Many CRM products use components from CRM Application Foundation. Use this guide to correctly implement CRM Application Foundation.

Training and Support

Training

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

Support

From on-site support to central support, our team of experienced professionals provides the help and information you need to keep Oracle Field Service working for you. This team includes your Technical Representative, Account Manager, and Oracle's large staff of consultants and support specialists with expertise in your business area, managing an Oracle8*i* server, and your hardware and software environment.

Oracle*MetaLink*

Oracle*MetaLink* is your self-service support connection with web, telephone menu, and e-mail alternatives. Oracle supplies these technologies for your convenience, available 24 hours a day, 7 days a week. With Oracle*MetaLin*k, you can obtain information and advice from technical libraries and forums, download patches, download the latest documentation, look at bug details, and create or update TARs. To use MetaLink, register at (http://metalink.oracle.com).

Alerts: You should check Oracle*MetaLink* alerts before you begin to install or upgrade any of your Oracle Applications. Navigate to the Alerts page as follows: Technical Libraries/ERP Applications/Applications Installation and Upgrade/Alerts.

Self-Service Toolkit: You may also find information by navigating to the Self-Service Toolkit page as follows: Technical Libraries/ERP Applications/Applications Installation and Upgrade.

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 Oracle Applications 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.

About Oracle

Oracle Corporation develops and markets an integrated line of software products for database management, applications development, decision support, and office automation, as well as Oracle Applications, an integrated suite of more than 160 software modules for financial management, supply chain management, manufacturing, project systems, human resources and customer relationship management.

Oracle products are available for mainframes, minicomputers, personal computers, network computers and personal digital assistants, allowing organizations to integrate different computers, different operating systems, different networks, and even different database management systems, into a single, unified computing and information resource.

Oracle is the world's leading supplier of software for information management, and the world's second largest software company. Oracle offers its database, tools, and applications products, along with related consulting, education, and support services, in over 145 countries around the world.

1

Introduction

In this chapter you will find an overview of the products in the Field Service suite as well as an overview of the Field Service application itself. An overview of the new functionality included in this release is also given.

Please address the following topics for details:

- Oracle Field Service Suite Overview
- Oracle Field Service Overview
- New in this Release

1.1 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 organization's 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 form is delivered along with the Field Service application to take the customers call for service and create a service request.
CRM Foundation	The products in CRM Foundation are essential to use Field Service. They are used to create tasks, territories, define resources, and help in the assignment of tasks to resources. CRM Foundation comes with Field Service.

Suite Product	Description
Oracle Field Service	The Oracle 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.
Scheduler	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 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 at a service representative's 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.
Field Service/Wireless	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.

1.2 Oracle Field Service Overview

Oracle Field Service is an essential part of the Field Service Application Suite. At the core of Oracle Field Service is the Dispatch Center which allows 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. The Field Service Report 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
- Field Service Report features

1.2.1 Field Service Dispatch Center Features

- Shows information for a selected task such as related service request, escalations, parts transactions, installed 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.
- Commitment of 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 representative's mobile application with information about the task, related service request, problem and resolution, customer address information, installed 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.

1.2.2 Field Service Report Features

- Reporting on parts, expenses, and labor for a task. Ultimately resulting in updates to Inventory, Installed Base, and Charges.
- Reporting on Counters. From Oracle Field Service Report you can easily access the Capture Counter Reading functionality from Oracle Service to capture counter readings.
- Direct access to specific Spares Management functionality such as View Move Order, Create Move Order, and View Onhand Quantity.
- Access Notes, Calendar, or Interaction History directly.

1.3 New in this Release

Address the following table to see what changed this release:

	Description
1.	The Control Tower has been renamed to Dispatch Center.
2.	The UI of the Dispatch Center has been changed completely, this is done to accommodate the integration with Spares Management, improve task management, and to provide the dispatcher with a single view on the tasks, task details, and the schedules. To use the new Dispatch Center please refer to the *Field Service Concepts and Procedures*, navigation and use is explained in detail.
3.	The Map has been replaced by the Oracle 9i AS MapViewer and the performance has been improved.
4.	Ability to access external functionality from the menu in the Dispatch Center such as: Spares Management and Service Request.
5.	Ability to handle tasks that do not conform to the general schedule, integration with Escalation Manager.
6.	Show service history based on customer and/or product.
7.	The Plan Board in the Dispatch Center shows tasks with a duration over a day.
8.	Reporting counter readings from the Field Service Report.

2

Technology, Requirements, and Performance

This chapter describes the technology stack used and gives an architectural overview of the Field Service application. Listed are the software and hardware requirements.

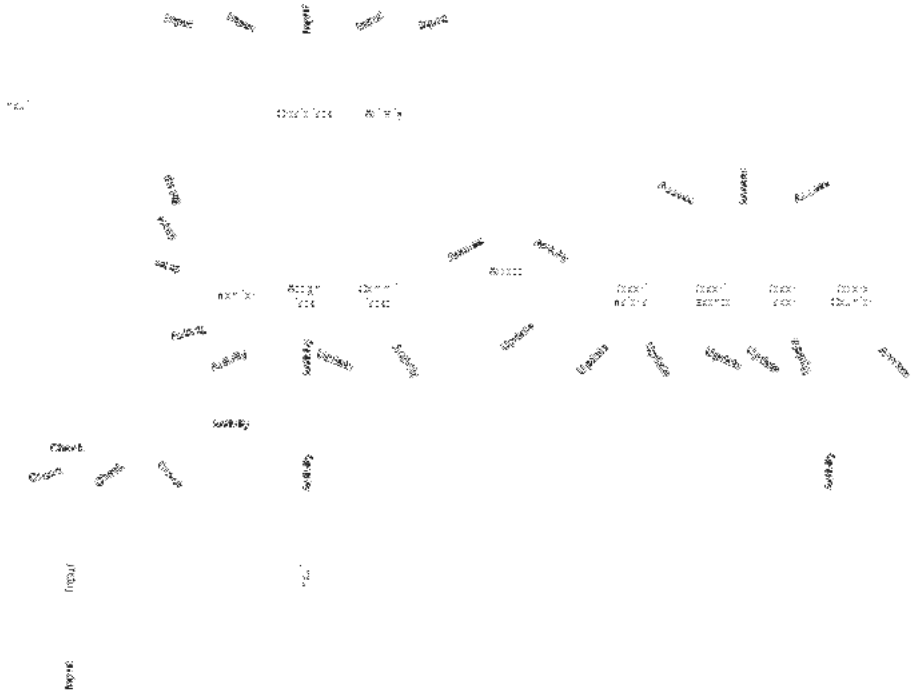
Please address the following topics for details:

- Architectural Overview
- Minimum Software Requirements
- Minimum Hardware Requirements

2.1 Architectural Overview

Field Service is compliant with the latest technology-stack and conforms to all the standard components required on client, middle, and database tiers. For more information please refer to *Installing Oracle Applications*.

Field Service is integrated with many other Oracle Applications. The following figure visualizes this integration. All applications involved and their relation are explained 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, this could be either Contracts Core or Service Contracts. Input for the service request is the response time, considered for task assignment.
- TCA, provides information on parties and contacts and their information.
- Installed Base, provides input on the installed 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 such 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 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 *CRM Foundation Concepts and Procedures*.

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 D:\documentation\11i\Fieldser\1156\Implementation Guide\chapter2.fm:

- Installed Base, a preferred service representative to perform the field visit can be recommended from the installed 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.

Scheduler

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. 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. Scheduler is tightly integrated with Spares Management.

Spares Management

Most of the times you need parts to resolve a problem at the customers site. You can access Spares Management manually to order parts for a task. When 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 Report with parts usage for a task. The update is done to maintain stock levels at different locations, the subinventories.

Escalation Management

Escalations occur for a wide variety of reasons. An escalation management system allows an organization to identify, track, monitor, and manage situations that require increased awareness and swift action.
D:\documentation\11i\Fieldser\1156\Implementation Guide\chapter2.fm summarizes and shows escalations for tasks that need to be or are scheduled.

Field Service Mobile

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

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

It is received by the service representative and he 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 Report.

Inventory

Inventory provides input for Service Request to determine what product needs service. You can update Inventory (Spares Management) from Field Service Report 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 Report once it has been transmitted successfully to Inventory.

Installed Base

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

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

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

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 Report.

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 on Update. Make sure you update each tab on the Field Service Report separately in

order to update Charges. In Charges this information is checked against any contracts and a final invoice is generated.

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

2.2 Minimum Software Requirements

Please refer to *Installing Oracle Applications* for software requirements.

2.3 Minimum Hardware Requirements

Please refer to *Installing Oracle Applications* for hardware requirements.

3

Dependency Requirements and Verification

This chapter gives an overview of the mandatory and conditional application dependencies: ERP, CRM, and 3rd-Party application that must be implemented prior to implementing Field Service.

Please address the following topics for details:

- Mandatory Dependencies
- Conditional Dependencies
- Installation and Dependency Verification

3.1 Mandatory Dependencies

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

- Oracle Human Resources
- Oracle Inventory
- Oracle Order Management
- Oracle Service
  - Charges
  - Installed Base
  - Counters
- Oracle CRM Foundation
  - Assignment Manager
  - Resource Manager

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

For information regarding the installation and implementation of these applications and components, see the appropriate documentation for each product.

The tasks that are necessary to use the additional functionality included with Field Service are described in the following chapters.

3.2 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 Contracts Core
- Oracle Contracts for Service
- Navigation Technologies (Navtech) spatial data
- Oracle Scheduler
- Oracle CRM Gateway for Mobile Devices
- Oracle Field Service/Laptop
- Oracle Field Service/Palm™ Devices
- Oracle Field Service/Wireless

For information regarding the installation and implementation of these applications and components, see the appropriate documentation for each product.

The tasks that are necessary to use the additional functionality included with Field Service are described in the following chapters.

3.3 Installation and Dependency Verification

For some of the mandatory and conditional dependencies make sure the following version has been installed.

Dependency	Installation Requirement
Oracle Service	Version 11.5.6
Oracle CRM Foundation	Version 11.5.5
Oracle Spares Management	Version 11.5.6
Oracle Scheduler	Version 11.5.6

The tasks that are necessary to use the additional functionality included with Field Service are described in the following chapters.

4

Implementation Overview

This chapter describes the implementation process and gives you a recommitted implementation task sequence to follow.

Please refer to the following topics:

- Process Description
- Implementation Task Sequence

4.1 Process Description

The implementation process is driven by the implementation task sequence.

4.2 Implementation Task Sequence

While you can implement Field Service in many different ways, the following checklist shows the recommended order. Complete the following implementation steps in sequential order.

Step	Required	Step Title
1.	Yes	Setting up the System Administrator
2.	Yes	Defining Key Flexfields
3.	Yes	Defining Calendar, Currency & Set of Books
4.	Yes	Confirming Setup of Employees
5.	Yes	Confirming Setup of Resource Manager
6.	Yes	Confirming Setup of Inventory

7.	No	Confirming Setup of Spares Management
8.	Yes	Confirming Setup of Order Management
9.	Yes	Confirming Setup of Service Request
10.	Yes	Confirming Setup of Customer Model 11*i* (TCA)
11.	Yes	Confirming Setup of Territory Manager
12.	Yes	Confirming Setup of Task Manager
13.	Yes	Confirming Setup of Escalation Manager
14.	Yes	Confirming Setup of Charges
15.	Yes	Confirming Setup of Knowledge Base
16.	Yes	Confirming Setup of Counters
17.	Optional	Confirming Setup of Notes
18.	Optional	Confirming Setup of Interaction History
19.	Yes	Confirming Setup of Installed Base
20.	Optional	Confirming Setup of Contracts Core
21.	Optional	Confirming Setup of Contracts for Service
22.	Yes	Confirming Setup of Assignment Manager
23.	Yes	Confirming Setup of Calendar
24.	Yes	Setting Up Field Service
25.	Optional	Setting Up the Map
26.	Optional	Setting Up Spatial Data
27.	Optional	Setting Up Scheduler
28.	Optional	Setting Up CRM Gateway for Mobile Devices
29.	Optional	Setting up Field Service/Palm™ Devices
30.	Optional	Setting Up Field Service/Laptop
31.	Optional	Setting Up Field Service/Wireless

5

Implementation Tasks

This chapter describes the implementation tasks in detail in the recommended order.

Please refer to the following implementation tasks:

- Setting up the System Administrator
- Defining Key Flexfields
- Defining Calendar, Currency & Set of Books
- Confirming Setup of Employees
- Confirming Setup of Resource Manager
- Confirming Setup of Inventory
- Confirming Setup of Spares Management
- Confirming Setup of Order Management
- Confirming Setup of Service Request
- Confirming Setup of Customer Model 11*i* (TCA)
- Confirming Setup of Territory Manager
- Confirming Setup of Task Manager
- Confirming Setup of Escalation Manager
- Confirming Setup of Charges
- Confirming Setup of Knowledge Base
- Confirming Setup of Counters
- Confirming Setup of Notes

- Confirming Setup of Interaction History
- Confirming Setup of Installed Base
- Confirming Setup of Contracts Core
- Confirming Setup of Contracts for Service
- Confirming Setup of Assignment Manager
- Confirming Setup of Calendar
- Setting Up Field Service
- Setting Up the Map
- Setting Up Spatial Data
- Setting Up Scheduler
- Setting Up CRM Gateway for Mobile Devices
- Setting up Field Service/Palm™ Devices
- Setting Up Field Service/Laptop
- Setting Up Field Service/Wireless

5.1 Setting Up the System Administrator

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

The Oracle Field Service application comes with the following seeded responsibilities:

Responsibility	Description
Field Service Administrator	Allowed to perform all administrative tasks within CRM Service, such as Setup.
Field Service Manager	Access to all applications and windows within CRM Service. Limited setup possibilities, 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 CRM Service.

- 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*.

5.2 Defining Key Flexfields

The setup of key flexfields is required.

Be sure to coordinate with other applications such as Oracle Human Resource Management or Oracle General Ledger, those products' flexfield setup before defining the key flexfields here, as it is not recommended to change flexfields frequently. For more information, see: *Oracle Applications Flexfields Guide.*

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

- Define the flexfield structure.
- Define value sets.
- Define flexfield segments.

- Define flexfield segment values.
- Define security rules.
- Assign security rules.
- Define roll–up groups.
- Define cross–validation rules.

Steps

1. Switch to the System Administrator responsibility.
2. Navigate to **Application > Flexfield > Key**.
3. 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–applications Setup. For more information, see *Oracle General Ledger User's Guide*.
4. 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. For more information, see: *Oracle Human Resources User's Guide*.
   - Grade flexfield
   - Job flexfield
   - Position flexfield
   - People Group flexfield

5.3 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
- Define a Currency
- Define a Set of Books
- Open and Close Accounting Periods

5.3.1 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.

Steps

1. Switch to the GL (General Ledger) Super User responsibility.
2. Navigate to **Setup > Financials > Calendars**.
3. Set up Calendars:
   - Define period types. For more information, see: Defining Period Types, *Oracle General Ledger User's Guide*.
   - Define accounting calendar. For more information, see: Defining Calendars, *Oracle General Ledger User's Guide*.
   - Define transaction calendar. For more information, see: Defining Transaction Calendars, *Oracle General Ledger User's Guide*. (Optional)

- Define workday calendar. For more information, see: Overview of Workday Calendar, *Oracle Bills of Material User's Guide*. (Optional)
- Define exception templates. For more information, see: Creating a Workday Exception Template, O*racle Bills of Material User's Guide*. (Optional)

5.3.2 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.

Steps

1. Switch to the GL (General Ledger) Super User responsibility.
2. Navigate to **Setup > Currencies**.
3. Set up currencies:
   - Define currencies. For more information, see: Defining Currencies, *Oracle General Ledger User's Guide*.
   - Define conversion rate types. For more information, see: Defining Conversion Rate Types, *Oracle General Ledger User's Guide*.

5.3.3 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.

Steps

1. Switch to the GL (General Ledger) Super User responsibility.
2. Navigate to **Setup > Financials > Books**.
3. Setup Set of Books:

- Assign your set of books to a responsibility. For more information, see: *Oracle General Ledger User's Guide*.
- Set up accounting code combinations. For more information, see: *Oracle General Ledger User's Guide*.

5.3.4 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*.

5.4 Confirming Setup of Employees

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

Steps

1. Switch to the HR (Human Resource) Super User responsibility.
2. Navigate to **People > Enter and Maintain**.
3. Setup employees.
   - 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 Setting Up Resource Relation as part of Setting Up Field Service.

5.5 Confirming Setup of Resources

Make sure you implement Resource Manager as described in Implementing Oracle Resource Manager in *Oracle CRM Foundation Implementation Guide*.

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

- Setup 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.
- Setup 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.

The Setup of Resources is also addressed in more detail in Setup Resource Relation as part of Setting Up Field Service.

5.6 Confirming Setup of Inventory

The implementation of Inventory is required for two purposes:

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

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

  Material tabbed page: All items that are defined in the Service tabbed page of Master Items that have the Serviceable Product flag enabled and have the billing type set to Material are displayed in the list of values for items in the Material tabbed page.

  Labor tabbed page: All items that are defined in the Service tabbed page of Master Items that have the Serviceable Product flag enabled and have the billing type set to Labor are displayed in the list of values for items in the Labor tabbed page.

  Expenses tabbed page: All items that are defined in the Service tabbed page of Master Items that have the Serviceable Product flag enabled and have the billing type set to Expense are displayed in the list of values for items in the Expenses tabbed page.

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 Sub-inventories. A standard setup is required for each sub-inventory.

The following Field Service specific setup steps are necessary.

- Define Unit of Measurement
- Check Profile Option

5.6.1 Define Unit of Measurement

You need to define the UOM for Hour and Minute. Two profile options in Field Service make use of these UOM's. 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 Field Service Report.

Steps

1. Switch to the Inventory Super User responsibility.
2. Navigate to **Setup > Units of Measure**.
3. 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.

5.6.2 Check profile Option

Make sure the following profile option is set.

Steps

1. Switch to the System Administrator responsibility.
2. Navigate to **Profile > System**.
3. Enter **MO%** at Profile.
4. Click **Find**.

   Check if the following profile option is set:

- MO: Operating Unit

5.7 Confirming Setup of Spares Management

In Spares Management you maintain the whereabouts of all material on a detailed level. The implementation of Spares Management is required for three purposes.

- To be able to order spare parts (material) from the Field Service Dispatch Center.
- To be able to schedule tasks with parts when Scheduler is installed.
- In Field Service Report to define from which subinventory materials were used or in which subinventory they are stored. This is done to maintain the level of material in the subinventories. This could be warehouses and service representatives vehicles. You update Spares Management from the Field Service Report through Inventory.

Please refer to *Implementing Oracle Spares Management* for Spares Management setup.

No additional Field Service specific setup steps are necessary.

5.8 Confirming Setup of Order Management

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

Field Service Report requires specifically that you setup Price Lists and Units of Measure (UOM) 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 Report, 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.

After setup of Unit of Measurement for an item, it is displayed automatically in the Field Service Report when the item is selected.

Perform the following steps:

- Setup Price Lists
- Setup Unit of Measurement (UOM)

5.8.1 Setup of Price Lists

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

Steps

1. Switch to Order Management Super User responsibility.
2. Navigate to **Pricing > Price Lists > Price List Setup**.
3. At **Name** enter a name for the Price list.
4. At **Description** enter a description of the Price List.
5. At **Round To** enter the rounding factor to be applied in the Price list.
   - A positive number indicates the number of digits to the right of the decimal point.
   - A negative number indicates the number of digits to the left of the decimal point.

   The default setting is -2.
6. At **Effective Dates** enter the start and end date for the Price List to be effective.
7. Enter the default **Payment Terms**, default **Freight Terms**, and **Freight Carriers**.
8. Click on the List Lines tab.
9. Select the item from the **Product Context** and **Product Attribute** column.

   Complete at least the following fields.
10. Choose the **UOM** for the item.
11. Select the **Application Method**:
    - **Unit Price** or **Percent Price** for service items.
    - For inventory items or item categories only **Unit Price** is used.
12. For service items enter a value at **Dynamic Formula** and leave **Static Formula** open.
13. 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.
14. At **Line Type** select **Price List Line** from the list of values.
15. At **Modifier Level** select **Line** from the list of values.

16. 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.

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

18. **Save** the Price List.

19. Click on **Pricing Attributes** to define pricing attributes.

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

21. At **Operator** select **=** or **BETWEEN**.

22. At **Value**:

    - When Operator is BETWEEN, enter **To**.
    - Otherwise enter **From**.

23. **Save** Pricing Attributes.

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

5.8.2 Setup Unit of Measure

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 Report in accordance with the item that is selected.

1. Switch to Order Management Super User responsibility.

2. Navigate to **Setup > UOM**.

   Please refer to the *Oracle Order Management User's Guide* for details of setup.

5.9 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.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Service Requests**.
3. Make sure you setup the following:
   - Service Request Statuses
   - Request Severities
   - Request Types
   - Service Request Urgencies
   - Problem Codes
   - Resolution Codes
   - Message Action Requests
   - Call Types
   - Call Followup Types

   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.

5.10 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 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.

Steps

1. Switch to the Field Service Dispatcher or Order Management responsibility.
2. Navigate:
   - as Field Service Dispatcher to **Customer Management > Contact Center**.
   - in Order Management to **Customers > Standard**.
3. 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*.

5.11 Confirming Setup of Territory Manager

In Field Service territories are used for two 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 Field Service Dispatch Center.

Set up Territory Manager as described in Implementing Territory Management as part of the *Oracle CRM Foundation 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 Relation as part of Setting Up Field Service.

Perform the following Field Service specific steps:

- Set Profile Option

5.11.1 Set 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 Scheduler.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Other > Profiles**.
3. Open the Find Personal Profile Values window.
4. At **Profile Name** enter **TERR%**.
5. Click **Find**.

   Set the following profile option:

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.

5.12 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 Field Service Dispatch Center you schedule tasks.

Make sure you implement Task Manager as described in Implementing Task Manager as part of the *Oracle CRM Foundation Implementation Guide*.

Perform the following Field Service specific setup steps:

- Setup Task Status
- Setup Task Type
- Setup Task Priority
- Setup Task Manager Profile Options

5.12.1 Setup Task Status

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

Steps

1. Switch to Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Task Manager > Setup > Task Status**.
3. At **Status** enter the name of the Task Status you want to define.
4. At **Description** enter a brief description of the Task Status you are defining.
5. At **From** and **To** enter the date for the Task Status to be effective.
6. Check the task status flags you want to assign to the Task Status.

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

7. Optionally, define the transition values to determine user privileges for each status type by clicking **Define Transition**.
8. **Save** the Task Status.

5.12.2 Setup Task Type

Set up task types to make a task qualify as a field service task so it can be scheduled.

Steps

1. Switch to Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Task Manager > Setup > Task Type**.
3. At **Type** enter the name of the Status Type you want to define.
4. 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.

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

6. Select an **UOM** (Unit of Measurement) to go with the Task Type.
7. Check the task type flags you want to assign to the Task Type.
8. **Save** the Task Type.

5.12.3 Setting Up Task Priority

Set up task priorities.

Steps

1. Switch to Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Task Manager > Setup > Task Priority**.
3. At **Priority** enter the name of the Status Priority you want to define.
4. At **Importance** enter a numerical value between 1 and 4, 1 is highest priority.
5. At **Description** enter a brief description of the Task Priority you are defining.
6. At **From** and **To** enter the date for the Task Priority to be effective.
7. **Save** the Task Priority.

5.12.4 Setting 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.

Steps

1. Switch to Field Service Administrator responsibility.
2. Navigate to **Other > Profiles**.
3. Open the Find Personal Profile Values window.
4. At **Profile Name** enter **Task Manager%**.
5. Click **Find**.
6. Enter User values for the following 7 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 CRM Foundation Implementation Guide* for more information on the profile options.

5.13 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 CRM Foundation Implementation Guide* for Escalations Manager setup.

No additional Field Service specific setup steps are necessary.

5.14 Confirming Setup of Charges

Oracle Field Service requires the setup of Charges to be able to create Orders and RMA's for an Installed 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 Report. You update Charges from the Field Service Report.

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.

5.15 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.

5.16 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 Report.

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

No additional Field Service specific setup steps are necessary.

5.17 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 Report.

Please refer to the appropriate section from *Oracle CRM Foundation Implementation Guide* for Notes setup and to define source types.

No additional Field Service specific setup steps are necessary.

5.18 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 Report.

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

No additional Field Service specific setup steps are necessary.

5.19 Confirming Setup of Installed Base

The Installed 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 Installed Base.

Installed Base is a component of Oracle Service, it consolidates information for customer products in the Installed 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 Installed Base to track your serviceable and customer products.

Make sure you set up Installed 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 Installed Base Interface concurrent program
- Confirm System Administration menu setup.
- Confirm inventory item setup.
- Test the Installed Base Interface concurrent program.

Once the Installed base has been set up you maintain it using the Field Service Report to report on installed base transactions and update Installed Base from it.

Make sure the following is setup correctly:

- Confirm Setup of Business Processes

  Field Service Report 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 Report 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 Field Service specific setup steps:

- Setting up Business Processes
- Setting up Transaction Billing Types

5.19.1 Setting up Business Processes

Business Process Setup is required in order to select the transaction types in Field Service Report and to get the order type information for creating orders or returns against debrief lines.

Business Process groups the transaction types to restrict the transaction type availability. For example, Oracle has provided an out-of-box Field Service business group that enables the relevant transaction types. You can update this group because it is not a seeded value.

Steps

1. Switch to Field Service Administrator responsibility.
2. Navigate to **Setup > Installed 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 transaction types for all business processes that have this flag enabled in Field Service Report.

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

5.19.2 Setting up Transaction Billing Types

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

- How Service and Order Management transactions affect the Installed Base.
- What kinds of charges transactions taken down on the Field Service Report 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 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

To define additional transaction billing types:

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Installed Base > Transaction Billing Types**.
3. Define a Transaction Type and whether or not it affects the Installed Base. When it does, you also need to define the status for the installed and/or new customer product.

   The Installed CP Return Required flag is checked when the transaction is a replacement or an advance replacement; in other words, asking for the installed product to be returned. The New CP Return Required flag is required only in the case of replacements or advance replacements. After the original product from the customer is fixed, the new product must be returned.

If the No Charge Flag field is set to Y, the charge amount will be 0 and no charges will be passed to Order Management. Field Service doesn't require the Depot Qty Update Flag.

4. For each Transaction Type you associate a Billing Type.

   Only those transaction types that have a billing type defined will appear in the list of values on the Field Service Report. For each Transaction Type you can associate a Header and Line Type (Order Management).

5. **Save** your work.

5.20 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.

5.21 Confirming Setup of Contracts for Service

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

When you are using Contracts for Service 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 *Implementing Oracle Contracts for Service* for Service Contracts setup.

No additional Field Service specific setup steps are necessary.

5.22 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 Field Service Dispatch Center.

Please refer to the appropriate section from *Oracle CRM Foundation Implementation Guide* for Assignment Manager setup.

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

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Other > Profiles**.
3. Open the Find Personal Profile Values window.
4. At **Profile Name** enter **AC%**.
5. Click **Find**.

You can set these options in any sequence.

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 Installed Base Preferred Resource	To retrieve preferred resource information from the installed 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).
	Activate Installed Base Preferred Engineers	To retrieve preferred engineer information from the installed base application. Default set to: **Y** (yes).

5.23 Confirming Setup of Calendar (CRM Foundation)

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 Field Service Dispatch Center and are used for scheduling purposes. This is discussed in more detail in Setting Up Field Service.

Make sure to perform the following setup steps:

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

5.23.1 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 CRM Foundation Implementation Guide*.

5.23.2 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 CRM Foundation Implementation Guide*.

5.23.3 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 CRM Foundation Implementation Guide*.

5.23.4 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 CRM Foundation Implementation Guide*.

5.23.5 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 CRM Foundation Implementation Guide*, or click here when you are using iHelp.

5.24 Setting Up Field Service

Perform the steps, listed in the following table, in sequential order:

Step	Description
1. Setting Up Resource Relations	In order to launch the Field Service Dispatch Center you need to setup resources: field service dispatchers and field service representatives.
2. Assigning Territories to Planner Groups	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. Assigning Resources to Subinventories	Use this setup screen in Field Service to relate sub inventories to service representatives.
4. Generating Shift Tasks	Use this Field Service concurrent program to create departure and arrival tasks for field service representatives based on their shifts. These tasks are used for scheduling.
5. Activating Automatic Commitment of Schedules	Use this procedure to automatically commit schedules at predefined intervals to service representatives without interference of a dispatcher.
6. Define Material Justification Code	Define justification lookup codes when reporting on material for the Field Service Report.
7. Define Expense Justification Code	Define justification lookup codes when reporting on expense for the Field Service Report.
8. Define Labor Justifications Code	Define justification lookup codes when reporting on labor for the Field Service Report.
9. Profile Options	Set all the field service specific profile options. Additionally set the following profile options: ■ TCF: HOST ■ TCF: PORT

5.24.1 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

- Create Employees (field service dispatchers, optionally field service representatives)
- Assign the Field Service Representative Role to Employees
- Create Resources with the Field Service Representative Role
- Assign a Human Resource to an Applications user (field service dispatcher)
- Assign an Applications User to a Resource (field service dispatcher)
- Create Dispatcher Groups
- Create Territories (of field service representatives)
- Create Territories (of qualifiers)
- Generate Territory Packages
- Assign Territories (of field service representatives) to a Dispatcher Group

5.24.1.1 Create Application Users with the Field Service Dispatcher Role

In order for a field service dispatcher to access the Field Service Dispatch Center create it in Applications with the following values:

Steps

1. Switch to the System Administrator responsibility.
2. Navigate to Security > User > Define.
3. Enter the Applications User Name and Password.
4. Make sure that on the responsibilities tab **Field Service Dispatcher** is selected from the list of values at Responsibility.
5. For more information on setup please refer to *Oracle Applications System Administrator's Guide*.

5.24.1.2 Create Employees

You need to define your field service dispatchers as employees (human resources). It is optional to define 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 described in Create Resources with the Field Service Representative Role. 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.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Resource Manager > Maintain Employee > Employee**. When Human Resource is installed, this will fail.
3. Switch to the HR Super User responsibility.
4. Navigate to **People > Enter and Maintain**.
5. 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 CRM Foundation Implementation Guide* or *Oracle Human Resource Management Systems* to enter and maintain employees.
6. 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.

5.24.1.3 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.

Steps

1. Switch to the Field Service Administrator responsibility.

2. Navigate to **CRM Foundation > Resource Manager > Maintain Resources > Import Resources**.
3. At Resource Category select **Employee**.
4. Enter search criteria in the Resource Category region.
5. Click **Search**. The results are shown in the Search Results region.
6. Check the resource and click **Create**. The Default Values window is opened.
7. At Role select **Field Service Representative** from the list of values.
8. Click **OK**.
9. Click **Save Resource**. A transaction number is displayed upon saving.

   For additional set up details please refer to *Oracle CRM Foundation Implementation Guide*.

5.24.1.4 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.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Resource Manager > Maintain Resources > Resources**.
3. Click **New**.
4. Enter all the appropriate information. For set up details please refer to *Oracle CRM Foundation Implementation Guide*.
5. On the Roles tab make sure the **Field Service Representative** Role Type and Role are selected.

5.24.1.5 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. We have already created a field

service dispatcher Application user at the beginning and defined the field service dispatcher as an employee in human resources.

Steps

1. Switch to the System Administrator responsibility.
2. Navigate to **Security > User > Define**.
3. Search for the relevant Applications User Name.
4. At Person choose the human resource name from the list of values.
5. Save your work.

5.24.1.6 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. We have already created a field service dispatcher Application user at the beginning and because we defined him as an employee he automatically is also defined as a resource.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Resource Manager > Maintain Resources > Resources**.
3. In the Resource region select **Employee** from the Category list of values. Optionally choose the field service dispatchers Name.
4. Click **Find**. The Resource Search results window is opened.
5. Select the field service dispatcher and click **Resource Details**. The Resource window is opened.
6. At User Name select the appropriate Applications user name from the list of values.
7. Optionally you can assign the Field Service Dispatcher Role Type and Role on the Roles tab. This is not mandatory for field service dispatchers.
8. Save your work.

5.24.1.7 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.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Resource Manager > Maintain Resources > Groups**.
3. At Name enter a name for the dispatcher group you are creating.
4. Enter a Description.
5. On the Members tab, select Employee from the Category list of values.
6. Enter the employee number for the field service dispatcher you want to add to this dispatcher group.

   For set up details please refer to *Oracle CRM Foundation Implementation Guide*
7. Save your work.

5.24.1.8 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.

Steps

1. Change to the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Territory Manager > Territory Administration**.
3. From the menu bar choose **Administration > Define Territory**.
4. On the Overview tab select **Oracle Service** from the list of values at Usage.
5. Enter a territory Name and Description.
6. At Transaction Type choose **Service Request and Task** from the list of values.
7. Select the Resources tab.

8. Enter all the field service representatives you want to add to this territory.

   For more information on setup please refer to *Oracle CRM Foundation Implementation Guide*.

9. Save your work.

5.24.1.9 Create Territories (of Qualifiers)

Here you create territories to be used by the Assignment Manager and Oracle Scheduler to assign a task to a field service representative in the most effective way.

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

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Territory Manager > Territory Administration**.
3. From the menu bar choose **Administration > Define Territory**.
4. On the Overview tab select **Oracle Service** from the list of values at Usage.
5. Enter a territory Name and Description.
6. At Transaction Type choose **Service Request and Task** from the list of values.
7. Navigate to the Transaction Qualifiers tab or Resource Qualifiers tab

   For more information on setup please refer to *Oracle CRM Foundation Implementation Guide*.

5.24.1.10 Generate Territory Packages

When you have created territories you need to generate territory packages.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Other > View Requests**.
3. Check the **All My Requests** radio button.
4. Click **Submit a New Request**. The Submit a New Request window is opened.
5. Click **Single Request**. The Submit Request window is opened.

6. At Name select the **Generate Territory Packages** from the list of values.
7. At Parameters enter the following:
   - Usage: Oracle Service
   - Qualifier Type: Service Request and Task
   - Debug flag: Y
   - SQL Trace: Y
8. Click **OK**.
9. Click **Submit**.
10. To verify whether the Territory packages have been generated navigate to Other > View Requests.
11. 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.

5.24.2 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.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Setup > Assign Territories to Planner Groups**. The Select Planner Group window is prompted.
3. Select the resource group that represents the planner group you want to assign territories to from the list of values.
4. Click **OK**. The Assign Territories to Planner Groups window is opened.

5. 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.
6. **Save** your work.

5.24.3 Generating Shift Tasks

Generate Shift Tasks is a concurrent program used to create departure and arrival tasks for each service representative. The departure and arrival tasks are used by Scheduler to schedule tasks in between and calculate the travel time and distance in the complete trip. These departure and arrival tasks are created based on the shifts defined for each service representative in Calendar, and normally use the service representative's home address for departure and arrival location.

Run this program for a specific period or choose to run it every night. When running this program for a specific period the Scheduler profile option CSR: Planscope is used to determine the length of the period for which the tasks are created in days. When running this program every night the profile option determines how many days in advance the tasks are created.

Perform the following task:

- Generate Shift Tasks

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

- Define an executable
- Setup Concurrent Program

5.24.3.1 Generate Shift Tasks

Prerequisites

Setup of shifts in CRM Foundation Calendar.

Steps

1. Logon with the Field Service Administrator responsibility
2. Open **Generate Shift Tasks**. The Parameters window is opened.
3. Enter the **Start date of time frame** if you want to run the program for a specific period. Clear the **Start date of time frame** field if you want to run the program every night.

4. Click **Ok**. The Generate Shift Tasks setup window is opened.
5. The Parameters field contains the entered start date of time frame or is empty when running the program every night.
6. Click **Languages** to change the language of the created tasks.
7. Click **Schedule**. The Schedule window is opened.
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 **Help** for assistance.
11. Click **OK** when finished.
12. Click the **Options** button. The Upon Completion window is opened.
13. Click **Help** for assistance.
14. Click **Submit** when you have finished.

5.24.3.2 Define an executable

Steps

1. Logon with the System Administrator responsibility.
2. Navigate to **Concurrent > Program > Executable**.
3. Enter the following values into the fields:

Field	Value
Executable	Generate Shift Tasks
Short Name	CSFVGST
Description	Free, e.g. Generates departure and arrival tasks for field service representatives within a specific time frame.
Execution Method	PL/SQL Stored Procedure
Execution File Name	`CSF_SHIFT_TASKS_PVT.Generate_Shift_Tasks`

4. Click **Save**.

5.24.3.3 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:

Field	Value
Program	Generate Shift Tasks
Short Name	CSFVGST
Application	Field Service
Description	Free, e.g. Generates departure and arrival tasks for field service representatives within a specific time frame.
Executable Name	CSFVGST
Executable Output format	Text

4. Click **Save**.

5.24.4 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 Report 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.

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

Step	Field	Value
1.	Organization: Code	This field is populated with the code that was selected at the prompt the setup screen was opened.
2.	Organization: Name	The name of the organization will automatically be populated once the code of the organization is selected.
3.	Resource Type	Select a resource type from the list of values.
4.	Resource	Select a service representative from the list of values.
5.	Subinventory	Select the subinventory you want to assign to the service representative.
6.	Default	Select **IN** for good subinventory, **OUT** for bad subinventory and nothing for all other subinventories.
7.	Startdate	Select the start date for the assignment to be effective.
8.	Enddate	Select the end date for the assignment to be effective.

4. Click **Save**.

5.24.5 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

- Auto Commit Schedule

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

- Define an executable
- Setup Concurrent Program

5.24.5.1 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.

5.24.5.2 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.
1. Navigate to **Auto Commit Schedule**. The Parameters window is opened.
2. Enter the **Start date of time frame** to run the program for a specific period.
3. Click **Ok**. The Auto Commit Schedule setup window is opened.
4. The Parameters field contains the entered start date of time frame.
5. Click **Schedule**. The Schedule window is opened.
6. Define how often you want to commit the schedules for the time frame defined previously.
7. Click **Apply a Saved Schedule** to use the settings of a previous saved schedule.
8. Choose one of the options at **Run the Job**.
9. Click **OK** when finished.

10. Click **Submit**.

5.24.5.3 Define an executable

Steps

1. Logon with the System Administrator responsibility.
2. Navigate to **Concurrent > Program > Executable**.
3. Enter the following values into the fields:

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**.

5.24.5.4 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:

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.

Field	Value
Executable Name	CSFVCMT
Executable Output format	Text

4. Click **Save**.

5.24.6 Defining Material Justification Codes

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

Note: Please don't confuse with the Return Reason field on the Material tab from Field Service Report.

Prerequisites

None.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Field Service Report > Define Material Justification Codes**.

   The Application Object Library: CSF _MATERIAL_REASON Lookups window is opened.
3. The Type field is defaulted.
4. The User Name is displayed. It is used by loader programs.
5. The Application is defaulted.
6. In the Description field a description is given. You can modify this description.
7. 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.

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

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.

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

5.24.7 Defining Labor Justification Codes

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

Prerequisites

None.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Field Service Report > Define Labor Justification Codes**.

   The Application Object Library: CSF _LABOR_REASON Lookups window is opened.
3. The Type field is defaulted.
4. The User Name is displayed. It is used by loader programs.
5. The Application is defaulted.
6. In the Description field a description is given. You can modify this description.
7. 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.
8. Create labor justification lookup lines by entering the following information in the lower region on the window:

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.

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

5.24.8 Defining Expense Justification Codes

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

Prerequisites

None.

Steps

1. Switch to the Field Service Administrator responsibility.
2. Navigate to **Field Service Report > Define Expense Justification Codes**.

   The Application Object Library: CSF _EXPENSE_REASON Lookups window is opened.
3. The Type field is defaulted.
4. The User Name is displayed. It is used by loader programs.
5. The Application is defaulted.
6. In the Description field a description is given. You can modify this description.
7. 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.
8. Create expense justification lookup lines by entering the following information in the lower region on the window:

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.

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

5.25 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 Users Guide.*

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

Please perform the following steps after installation and setup of the Oracle 9iAS MapViewer as described in the *Oracle 9iAS Users Guide*:

- Check if the MapViewer is setup correctly and running
- Check the Profile Options

5.25.1 Check if the MapViewer is Setup 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**

5.25.2 Check the 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.

	Profile Option	Description
1.	CSF: Use eLocation Map	Indicate you are using the eLocation map.
2.	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'.
3.	CSF: eLocation Map RMI binding name	The Remote Method Invocation binding name that is used for the eLocation map server.
4.	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).
5.	CSF: eLocation Map RMI port number	The Remote Method Invocation port number that is used for the eLocation map server.
6.	CSF: eLocation Map basemap name	The basemap name for the eLocation map as found in the data source maps table.
7.	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.
8.	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.
9.	CSF: eLocation Map enable java debugging	Optionally enable additional debugging output to the Java console for the eLocation map.
10.	CSF: eLocation Map high latitude coordinate	Do not change, high latitude coordinate of the last view area of the eLocation map.

	Profile Option	Description
11.	CSF: eLocation Map high longitude coordinate	Do not change, high longitude coordinate of the last view area of the eLocation map.
12.	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.
13.	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.
14.	CSF: eLocation Map last used service area number	Do not change, the identification number of the last viewed area on the eLocation map.
15.	CSF: eLocation Map low latitude coordinate	Do not change, low latitude coordinate of the last view area of the eLocation map.
16.	CSF: eLocation Map low longitude coordinate	Do not change, low longitude coordinate of the last view area of the eLocation map.
17.	CSF: eLocation Map maps table name	The name of the maps table in the data source for the eLocation map.
18.	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.
19.	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.
20.	CSF: eLocation Map styles table	The name of the styles table in the data source for the eLocation map.
21.	CSF: eLocation Map themes table	The name of the themes table in the data source for the eLocation map.
22.	CSF: eLocation Map user identification	Leave empty, used for development purposes only.
23.	CSF: eLocation mappers count	The highest number of parallel map requests that are required to be serviced at one time for the eLocation map.

5.26 Setting Up Spatial Data

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

The supplier for Spatial Data is 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

After installation of the spatial data check the following:

- Check if the Normal and Domain Indexes are Created
- Check whether the Layer Style Sheets Tables are not Empty
- Check Map Display

5.26.1 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.

5.26.2 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';
```

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

5.26.3 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.

5.26.4 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.

5.27 Setting Up Oracle Scheduler

Oracle Scheduler is used to optimize scheduling capabilities. It is bought separately.

When Oracle Scheduler is installed make sure you set up Scheduler as described in Implementing Oracle Scheduler from the *Oracle Scheduler Implementation Guide*. Ensure that all the steps have been reviewed and completed as necessary.

5.28 Setting Up CRM Gateway for Mobile Devices

When you are going to use one of the following applications you need to setup the CRM Gateway for Mobile Devices:

- Oracle Field Service/Laptop
- Oracle Field Service/Palm™ 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.

Make sure you set up the CRM Gateway for Mobile Devices as described in *Oracle CRM Gateway for Mobile Devices Implementation Guide*. Ensure that all the steps have been reviewed and completed as necessary.

5.29 Setting Up Field Service/Palm™ Devices

Make sure you set up Oracle Field Service/Palm™ Devices as described in *Oracle Field Service/Palm™ Devices Implementation Guide* and the *Oracle Field Service/Palm™ Devices Installation Guide*. This includes the following setup screens on the CRM Enterprise database:

- Resources Subinventories Assignment
- Configuration Parameters

5.30 Step 30: Setting Up Field Service/Laptop

Make sure you set up Field Service/Laptop as described in *Oracle Field Service/Laptop Implementation Guide*.

No additional Field Service specific setup steps are necessary.

5.31 Setting up Field Service/Wireless

Make sure you set up Field Service/Wireless as described in *Oracle Field Service/Wireless Implementation Guide*.

This involves the following steps:

- Setting up the User with Wireless Responsibility
- Setting up the Profile Options for the Wireless User
- Setting the Profile Options for the Task Summary Display Screen Date Format
- Setting up the System for Route Directions
- Setting up the E-mail Server

6

Verifying the Implementation

6.1 Oracle Field Service Implementation Verification Tasks

Oracle Field Service can be implemented in many different ways. We recommend to use the flow defined specific for your business needs to be used to verify the implementation.

The next chapter describes common implementation errors to help you analyze problems that might occur during verification of your flow.

7

Diagnostics and Troubleshooting

In this chapter an overview of common implementation errors, error messages, and a possible resolution is given. Because of the tight integration, Field Service as well as Scheduler errors are discussed.

7.1 Common Implementation Errors

The following implementation errors are known:

7.1.1 Generate Shift Task doesn't Generate any Tasks

This could be due to one of the following:

- Have you completed the Calendar setup as described in the Implementation Steps?
- Are the effective dates for Calendar, Shifts and assigning to resources valid for the date range you try to generate?
- Did you create valid addresses for the resources? If not Generate Shift Task will fail.
- Have you looked at the log file of Generate Shift Tasks?

7.1.1.1 Generate Shift Task doesn't Generate any Tasks, the Log Complains about Bad UOM

The UOM is not defined for the organization in the Inventory unit of measurement table.

Resolution:

1. Choose a responsibility where inventory is defined.
2. Navigate to **Inventory >Setup > Unit of Measurement.**
3. Choose an organization for which Field Service is setup.
4. Check whether a Unit Of Measurement exist with UOM, if not create one with Name = Minute, UOM = MIN, Description minute.
5. Set the conversion for this UOM to a minute.

7.1.2 I can see my resources in the Plan Board but they are not shown on the Gantt

Currently, there are two possible resolutions to this problem:

- Check Territory Setup
- Check Calendar Setup

7.1.2.1 Check Territory Setup

Steps

1. Logon with the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Territory Manager > Territory Administration**.
3. In the Territory Navigator navigate to **Territories > Catch All > Oracle Service**.
4. Double click on the territory in question. The Territory Details window is opened.
5. Select the Resources tab. From the Access Type list of values choose **Service Request and Task**. Repeat this for each of your resources.
6. **Save** your changes.

7.1.2.2 Check Calendar Setup

Removing all exceptions from Calendar Setup can also resolve the problem.

Steps

1. Logon with the Field Service Administrator responsibility.
2. Navigate to **CRM Foundation > Calendar > Calendar Setup > Assign Shifts / Exceptions.**
3. Select the Exceptions tab.
4. Delete all of the exceptions. From the Menu select **Edit > Delete** for each exception.
5. **Save** your changes.

7.1.3 How do I Find the Task_id of a Task that's Shown in the Dispatch Center?

Steps

1. Logon with the Field Service Manager responsibility.
2. Navigate to **Dispatch Center.**
3. Get the SR number and the Task description.
4. Connect to the database with sqlplus and query the view `csf_ct_tasks`.

```
'select task_id, task_name from csf_ct_tasks where source_object_name like
'<SR Number from Dispatch Center>'
```

5. Find the desired task_id looking for the task description that you got from the Dispatch Center.

7.1.4 Unable to Calculate Travel Time and Distance Using Scheduler

This is a Time Distance Server (TDS) error. Usually this means that no geographic data has been loaded, or that an address that was entered for a task could not be resolved to a point on the map.

The error message reads: "CSR_NO_TIME_DIST_BETWEEN_TASKS: Unable to determine travel time and travel distance between task numbers: &TASKID1 and &TASKID2.

To resolve: check the addresses of these tasks for spelling errors and retry the operation.

As a test-fix you can circumvent the TDS by setting the Scheduler profile options CSR: Default Travel Duration and CSR: Default Travel distance to a value greater

than 0 (e.g. default travel distance = 25 (kilometers) and default travel duration = 20 (minutes)). Close the Dispatch Center if it is still active, and reopen. This will allow the scheduling activities to continue with the default travel values.

7.2 Log Files and Error Messages

The following error messages are discussed:

- Field Service/Scheduler gives APPS-CSR-254029 Error when Loading Resource Information
- Error Messages when Scheduling with Oracle Scheduler Installed

7.2.1 Field Service/Scheduler gives APPS-CSR-254029 Error when Loading Resource Information

Field Service and in particular Scheduler, require a quite elaborate setup for resources, tasks, calendar, and territories as described in this document. When done the probable cause for the error No Resources Found is to be sought in the territory setup or the calendar setup. In the former case, there is no territory whose qualifiers match the data of the task at hand. In case of a calendar problem, the system can find a territory, but the resources assigned to that territory don't work (shift setup) at the times demanded by the task (i.e. the task planned_start_date and the tasks planned_end_date). For instance when the task has to be done in the weekend, but no resources are available in that weekend.

Check the following two resolutions for the problem:

- Check if Task Matches Territories
- Check Calendar Setup

7.2.1.1 Check if Task Matches Territories

To check that the task to be scheduled matches a territory use the following procedure.

Steps

1. Logon with the Field Service Manager responsibility.
2. Navigate to **Dispatch Center.**
3. Get the SR number and the Task description.
4. Connect to the database with sqlplus and query the view `csf_ct_tasks`.

```
'select task_id, task_name from csf_ct_tasks where source_object_name like
'<SR Number from Dispatch Center>'
```

5. Find the desired task_id looking for the task description that you got from the Dispatch Center.
6. Use view `cs_sr_task_territory_v` to find the task values that are used to match this task to territory qualifiers.
7. Close the Dispatch Center.
8. Navigate to **Field Service Setup > CRM Foundation > Territory Manager > Territory Administration**.
9. In the Territory Navigator navigate to **Territories > Catch All > Oracle Service.**
10. Check the territories listed there one by one to see if the territory has qualifiers that match the data from the task. If none of the territories match. That's it. The task data is incomplete. If you find a matching territory, go to the Resources tab and check for any resources assigned to this territory.

7.2.1.2 Check Calendar Setup

Use the data retrieved from the previous step.

Steps

1. Logon with the Field Service Manager responsibility.
2. Navigate to **Field Service Setup > CRM Foundation > Calendar**.
3. Starting with the planned_start_date and planned_end_date from the task, you might try to figure out if there exits a calendar that overlaps these times. If so, see if the calendar is assigned to one of the resources you found in the previous section.

7.2.2 Error Messages when Scheduling with Oracle Scheduler Installed

The following error messages might occur when scheduling with the Scheduler installed:

- APP-CSR-254003: Error loading task: xxxx (Autoassign, Intelligent or WTP Mode)
- Unexpected Error APP-CSR-254000, regarding a MethodInvoker.java Occurs

- APP-CSR-254029. Error calling Task Manager API. Scheduler error: CALENDAR API. Return Status: E. INVALID RESOURCE resource_id 0, resource_id = 0, resource_type = null
- APP-CSR-254029 APP-CSR-254032 (Autoassign, Intelligent Mode)

7.2.2.1 APP-CSR-254003: Error loading task: xxxx (Autoassign, Intelligent or WTP Mode)

A probable cause of this is that the task is not returned by the view `csr_tasks_v`. The view selects from table jtf_tasks_b. Three conditions are checked for by the view:

- task_type_id has to have a valid value from jtf_task_types_b
- task_status_id has to have a valid value from jtf_taks_statuses_b
- the location has to be non-null

7.2.2.2 Unexpected Error APP-CSR-254000, regarding a MethodInvoker.java Occurs

Your system has been patched with a Scheduler patch. However to fully use the new code, the TCF server has to be restarted.

Ask your system administrator to stop the TCF server and then restart the TCF server.

7.2.2.3 APP-CSR-254029. Error calling Task Manager API. Scheduler error: CALENDAR API. Return Status: E. INVALID RESOURCE resource_id 0, resource_id = 0, resource_type = null

Caused by task status "In Planning" (id = 1) and task status "Assigned" (id = 14) they should have

- cancelled_flag = 'N' or null
- completed_flag = 'N' or null
- closed_flag = 'N' or null

When one of these flags is 'Y' on either the "In Planning" status or the "Assigned" status, the error mentioned above occurs. This is most likely a setup issue in a production system. Be sure that the profile options CSF: Default In Planning Status and CSF: Default Assigned Status" have values that point to statuses with the cancelled_flag, completed_flag and closed_flag set to 'N'.

It occurred in the development environment when someone updated the jtf_task_statuses_b table and modifies one of the statuses above (task_status_id 1 or 14).

7.2.2.4 APP-CSR-254029 APP-CSR-254032 (Autoassign, Intelligent Mode)

There has been several problems reported fro this error message. Because of the way how the JTF API's work, Scheduler catches all JTF errors but displays the same error message.

Described here is the resolution to one particular problem: P_UOM Duration. How to check you have this problem?

Steps

1. Generate Shift Tasks returns P_UOM Duration, complaining about JTF_TASK_INVALID_UOM N P_UOM Duration.
2. Check the TCF server log file, you will see that the scheduler has, the following output:

   Begin create Shift Tasks ...

   api error CSR_API_ERROR/CREATE_SHIFT_TASKS/U/1/JTF JTF_TASK_INVALID_UOM N P_UOM Duration

   App JTFError JTF_TASK_INVALID_UOM

   Load Resource error
3. This is a UOM setup problem that has to be streamlined.
4. Check that all the CSF UOM profiles are streamlined with the inventory UOM.
5. Check that the JTF UOM is correctly setup. The JTF UOM profile does not work if this is set to **TIME**, but only works if it is **Time**. Even setting the JTF profile to Time does not work. The reason for this is that the JTF validation only supports UOM from MTL that are uppercase. By having all UOM like Min to MIN. This made things work again.

A

Profile Options

The following profile options are unique to Field Service.

> **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.

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.

	Profile Option	Description
1.	CSF: Default New tasks status	Default status that is assigned to a new task.
2.	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.
3.	CSF: Default Assigned task status	Default status that is assigned to tasks that are set to "Assigned" in the Field Service Dispatch Center.

	Profile Option	Description
4.	CSF: Default Cancelled tasks status	Default status that is assigned to tasks that are set to "Canceled" in the Field Service Dispatch Center.
5.	CSF: Address of the Database machine	Enter the address of the hosting database machine.
6.	CSF: Address of the Map server	Enter the address of the MapXtreme server.
7.	CSF: Allow overlapping labor lines	Allows creation of overlapping labor lines on Field Service/Laptop Classic and Field Service/Palm™ Devices.
8.	CSF: ConflictRule_L	Profile option for the Field Service/Laptop Classic application to handle updates to the CRM database from the mobile devices. Options are: ■ **Client wins**. No timestamp checking is done, mobile record always overwrite record in CRM database. ■ **Timestamp**. When the last update date of the CRM record is greater then the last sync date (date when the mobile device originally got the record), the mobile record won't be applied to CRM. When the last update date of the CRM record is smaller or equal to the last sync date the mobile record will be applied to CRM.
9.	CSF: ConflictRule_M	Profile option for the Field Service/Palm™ Devices application to handle updates to the CRM database from the mobile devices. Options are: ■ **Client wins**. No timestamp checking is done, mobile record always overwrite record in CRM database. ■ **Timestamp**. When the last update date of the CRM record is greater then the last sync date (date when the mobile device originally got the record), the mobile record won't be applied to CRM. When the last update date of the CRM record is smaller or equal to the last sync date the mobile record will be applied to CRM.
10.	CSF: Conform to schedule	To define whether the service representative must conform to the schedule or is allowed to do the tasks in any sequence on his or her Laptop or Palm device.
11.	CSF: Default Query	Select what query is defaulted in the Dispatch Center to View Tasks by in the task list.

	Profile Option	Description
12.	CSF: Return Reason	Used to default a Return Reason on the Field Service Report window for a material line created. Select which one should be defaulted from the list of values. It's a mandatory field for Order Management. Especially use this profile option when working with one of the mobile applications.
13.	CSF: Default Spares Availability	Default likelihood value of spare parts availability used for automatic scheduling.
14.	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.
15.	CSF: Default travel distance for Time Distance Server	The value is used as the default travel distance between two tasks.
16.	CSF: Default travel duration for Time Distance Server	The value is used as the default travel duration between two tasks.
17.	CSF: History_L	Define the number of days for data to remain on Field Service/Laptop Classic without editing it. When the number of days has expired it is removed from the Field Service/Laptop by the CRM Gateway for Mobile Devices.
18.	CSF: History_M	Define the number of days for data to remain on Field Service/Palm™ Devices without editing it. When the number of days has expired it is removed from the Field Service/Palm™ Devices by the CRM Gateway for Mobile Devices.
19.	CSF: InstalledBaseProduct_L	Define what information from the Installed Base you want to send to Field Service/Laptop Classic: ■ **1** for just the product related to the Service Request. ■ **2** for the product related to the Service Request and the parent products. ■ **3** for the product related to the Service Request, the children, and parent products.

	Profile Option	Description
20.	CSF: InstalledBaseProduct_M	Define what information from the Installed Base you want to send to Field Service/Palm™ Devices: ■ **1** for just the product related to the Service Request. ■ **2** for the product related to the Service Request and the parent products.
21.	CSF: Laptop Item Organization	All system items from the inventory organization are always replicated to the mobile client of Field Service/Laptop Classic.
22.	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.
23.	CSF: Map Move Factor (between 0.1 and 1)	Define how much you want the Field Service Map to move when using the navigation left/right and up/down arrows. Choose a value between 0.1 and 1.0 (centimeters).
24.	CSF: Material Transfer History	Define the number of days to replicate the history of specifically material transfers to the Field Service/Laptop Classic application, if beyond date set they are not replicated anymore.
25.	CSF: Palm Item Organization	All system items from the inventory organization are always replicated to the mobile client
26.	CSF: Port of the Map Server	TCP/IP port for the Map server.
27.	CSF: Replicate_Categories_L	Define if you want to replicate item categories to Field Service/Laptop: ■ **1** is Yes. ■ **2** is No.
28.	CSF: Resource progress delay margin	Add a value for the period of time, minutes, a resource is allowed to be late in his trip before it is escalated. This affects the instant shown status of the resources on the Field Service Map.
29.	CSF: SID of the database	Enter the database name for the MapInfo map.
30.	CSF: Time distance server cache radius	Leave empty.
31.	CSF: Time distance server calculation factor	If the factor is set the Time Distance Server calculates travel distance and duration faster but less accurate.

	Profile Option	Description
32.	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. Default setting is HR (hours).
33.	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. Default setting is MIN (minutes).
34.	CSF: Update planned/scheduled times allowed	Laptop HTML. To define whether a service representative is allowed to change the planned/schedules times of the tasks he received on his laptop device.
35.	CSF: Use eLocation Map	Indicate if you are using the eLocation map or the MapInfo map.
36.	CSF: Web server address where the images are stored for the map	Enter the address of the web server where the images are stored. The images are used to show instant status of the resource on the Map on the Field Service Dispatch Center.
37.	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'.
38.	CSF: eLocation Map RMI binding name	The Remote Method Invocation binding name that is used for the eLocation map server.
39.	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).
40.	CSF: eLocation Map RMI port number	The Remote Method Invocation port number that is used for the eLocation map server.
41.	CSF: eLocation Map basemap name	The basemap name for the eLocation map as found in the data source maps table.
42.	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.
43.	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.
44.	CSF: eLocation Map enable java debugging	Optionally enable additional debugging output to the Java console for the eLocation map.

	Profile Option	Description
45.	CSF: eLocation Map high latitude coordinate	Do not change, high latitude coordinate of the last view area of the eLocation map.
46.	CSF: eLocation Map high longitude coordinate	Do not change, high longitude coordinate of the last view area of the eLocation map.
47.	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.
48.	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.
49.	CSF: eLocation Map last used service area number	Do not change, the identification number of the last viewed area on the eLocation map.
50.	CSF: eLocation Map low latitude coordinate	Do not change, low latitude coordinate of the last view area of the eLocation map.
51.	CSF: eLocation Map low longitude coordinate	Do not change, low longitude coordinate of the last view area of the eLocation map.
52.	CSF: eLocation Map maps table name	The name of the maps table in the data source for the eLocation map.
53.	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.
54.	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.
55.	CSF: eLocation Map styles table	The name of the styles table in the data source for the eLocation map.
56.	CSF: eLocation Map themes table	The name of the themes table in the data source for the eLocation map.
57.	CSF: eLocation Map user identification	Leave empty, used for development purposes only.
58.	CSF: eLocation mappers count	The highest number of parallel map requests that are required to be serviced at one time for the eLocation map.