

**Oracle® Mobile Field Service**

Implementation Guide

Release 12.2

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Oracle Mobile Field Service Implementation Guide, Release 12.2

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## Oracle Mobile Field Service Implementation Guide, Release 12.2

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- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

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# Preface

## Intended Audience

Welcome to Release 12.2 of the *Oracle Mobile Field Service Implementation Guide*.

This guide is intended for implementation engineers, system administrators, and any other administrator-level users who are required to implement and/or administer Oracle Mobile Field Service.

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

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## Related Information Sources

### Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

### Online Documentation

All Oracle E-Business Suite documentation is available online (HTML or PDF).

- **PDF** - See the Oracle E-Business Suite Documentation Library for current PDF documentation for your product with each release. The Oracle E-Business Suite Documentation Library is also available on My Oracle Support and is updated frequently
- **Online Help** - Online help patches (HTML) are available on My Oracle Support.
- **Release Notes** - For information about changes in this release, including new features, known issues, and other details, see the release notes for the relevant product, available on My Oracle Support.
- **Oracle Electronic Technical Reference Manual** - The Oracle Electronic Technical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for each Oracle E-Business Suite product. This information helps you convert data from your existing applications and integrate Oracle E-Business Suite data with non-Oracle applications, and write custom reports for Oracle E-Business Suite products. The Oracle eTRM is available

on My Oracle Support.

## **Guides Related to All Products**

### **Oracle E-Business Suite User's Guide**

This guide explains how to navigate, enter and query data, and run concurrent requests using the user interface (UI) of Oracle E-Business Suite. It includes information on setting preferences and customizing the UI. In addition, this guide describes accessibility features and keyboard shortcuts for Oracle E-Business Suite.

## **Guides Related to This Product**

### **Oracle Mobile Field Service User Guide**

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

### **Oracle Field Service Implementation Guide**

This guide enables you to install and implement Oracle Spares Management, Oracle Advanced Scheduler, Oracle Inventory, Oracle Order Management, Oracle Service Contracts, Oracle Depot Repair, and Oracle Complex Maintenance, Repair and Overhaul for Preventive Maintenance. Integration with these applications is necessary to automate field service activities. In addition, you define codes to justify material, labor, and expense, define billing types and associate these with service activity codes and inventory items, and define skills and skill levels of field technicians. You can also define time-based and usage-based preventive maintenance programs, and forecast usage rates.

### **Oracle Field Service User Guide**

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

## **Installation and System Administration**

### **Oracle Alert User's Guide**

This guide explains how to define periodic and event alerts to monitor the status of your Oracle E-Business Suite data.

### **Oracle E-Business Suite Concepts**

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12.2, or contemplating significant changes to a configuration. After describing the Oracle E-Business Suite architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

### **Oracle E-Business Suite CRM System Administrator's Guide**

This manual describes how to implement the CRM Technology Foundation (JTT) and use its System Administrator Console.

### **Oracle E-Business Suite Developer's Guide**

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

### **Oracle E-Business Suite Installation Guide: Using Rapid Install**

This book is intended for use by anyone who is responsible for installing or upgrading Oracle E-Business Suite. It provides instructions for running Rapid Install either to carry out a fresh installation of Oracle E-Business Suite Release 12.2, or as part of an upgrade to Release 12.2.

### **Oracle E-Business Suite Maintenance Guide**

This guide contains information about the strategies, tasks, and troubleshooting activities that can be used to help ensure an Oracle E-Business Suite system keeps running smoothly, together with a comprehensive description of the relevant tools and utilities. It also describes how to patch a system, with recommendations for optimizing typical patching operations and reducing downtime.

## **Oracle E-Business Suite Security Guide**

This guide contains information on a comprehensive range of security-related topics, including access control, user management, function security, data security, and auditing. It also describes how Oracle E-Business Suite can be integrated into a single sign-on environment.

## **Oracle E-Business Suite Setup Guide**

This guide contains information on system configuration tasks that are carried out either after installation or whenever there is a significant change to the system. The activities described include defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help.

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

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

## **Other Implementation Documentation**

### **Oracle E-Business Suite Flexfields Guide**

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

## **Training and Support**

### **Training**

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

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

## Support

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

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

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

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

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

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

# Part 1

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## Overview of Oracle Mobile Field Service



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## Introduction

This chapter covers the following topics:

- Overviews
- Technologies

### Overviews

This section provides overviews for the following:

- Oracle Field Service
- Oracle Mobile Field Service

### Overview of Oracle Field Service

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. For a complete description of Oracle Field Service capabilities, see the *Oracle Field Service Implementation Guide* and the *Oracle Field Service User Guide*.

The following table lists all the applications in the suite.

Suite Application	Description
Oracle Field Service	This application assists in assigning tasks to service technicians, creating and dispatching daily schedules, monitoring progress, and reporting on material, expense, and labor transactions.

Suite Application	Description
Oracle Advanced Scheduler	This application enables optimization of scheduling capabilities of tasks to qualified resources. It takes into account driving time, distance, and part availability, and it creates part reservations.
Oracle Spares Management	This application is used to provide additional logistics and planning features to manage a service parts inventory in a multi-location environment.
<b>Oracle Mobile Field Service Store and Forward - Multiplatform</b>	This application is a disconnected application that mobilizes enterprise field service data on various mobile platforms like iOS, Android and various form factors such as smartphone, tablet, and laptop. This multiplatform application also runs in a hybrid model that allows technicians to access additional functionality when there is connectivity.
<b>Oracle Mobile Field Service - Wireless</b>	This application is a connected application for any wireless device. This application offers a complete, automated, and streamlined field service solution to field service technicians by providing real-time wireless access to the enterprise application. Using any wireless device, the field service technicians can remotely access the latest, most accurate and critical information to perform their job.

The Oracle Mobile Field Service applications integrate with the following application modules:

- Oracle Install Base  
Tracks the products installed at customer site.
- Oracle Application Foundation components  
Oracle Application Foundation components such as Task Manager and Resource Manager manage various operations of Oracle Field Service.

## Overview of Oracle Mobile Field Service

Oracle Mobile Field Service is part of the Oracle Field Service Suite of products. Oracle

Mobile Field Service contains the following mobile applications:

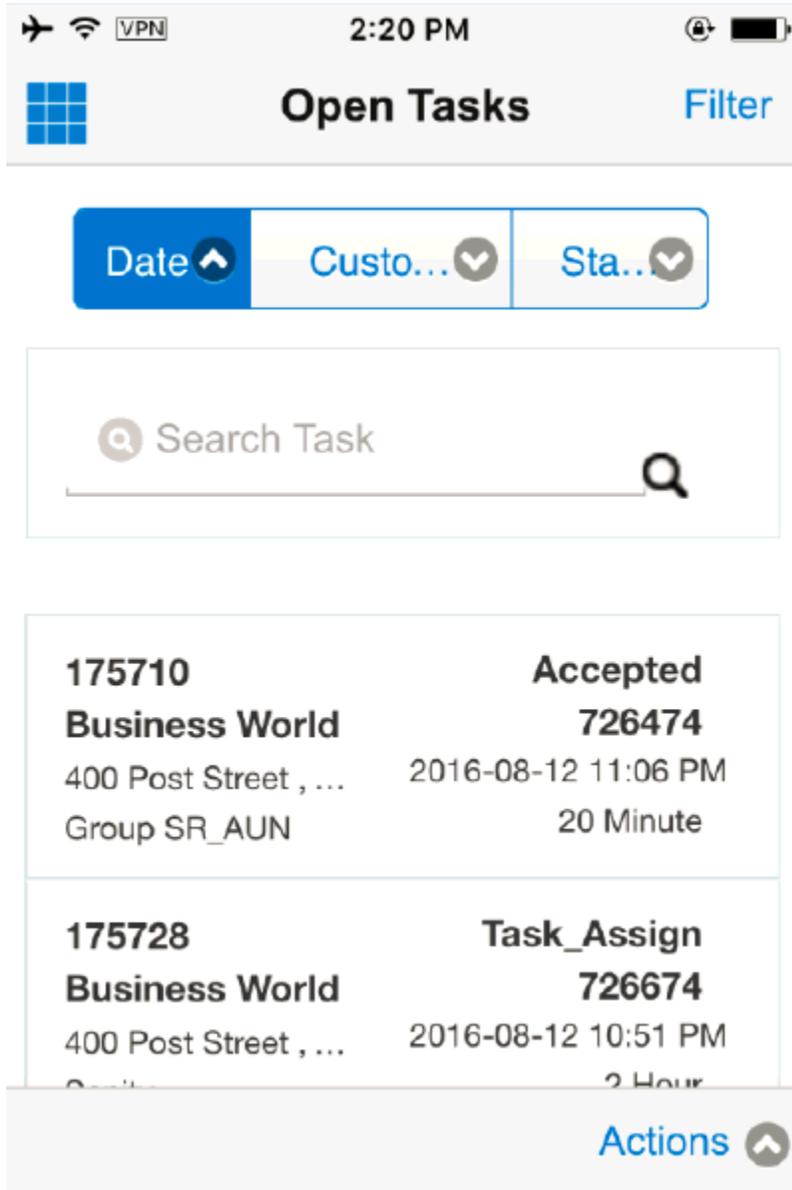
- Oracle Mobile Field Service Store and Forward - Multiplatform
- Oracle Mobile Field Service - Wireless

Additionally, in the Oracle Field Service application there is the Field Service Technician Portal that can also be considered a mobile application. For information on the Field Service Technician Portal, see the *Oracle Field Service User Guide*.

The Oracle Mobile Field Service applications convert a portable computer device into a workbench for field service technicians. The Oracle Mobile Field Service applications are the ideal solution for many service markets such as, HVAC, utilities, copier machine maintenance, telecommunications, and office supply industries. These applications enable field service technicians the ability to print service reports, view or update install base records, and much more. For a complete description on how field service technicians may use the Oracle Mobile Field Service applications in their work day, see the individual mobile application chapters in the *Oracle Mobile Field Service User Guide*.

For all Oracle Mobile Field Service applications, the first screen or page describes the schedule for the day for the field service technician. This page or screen can also describe past and future responsibilities.

The following graphic depicts a typical technicians Task List screen of the Oracle Mobile Field Service Store and Forward - Multiplatform application.



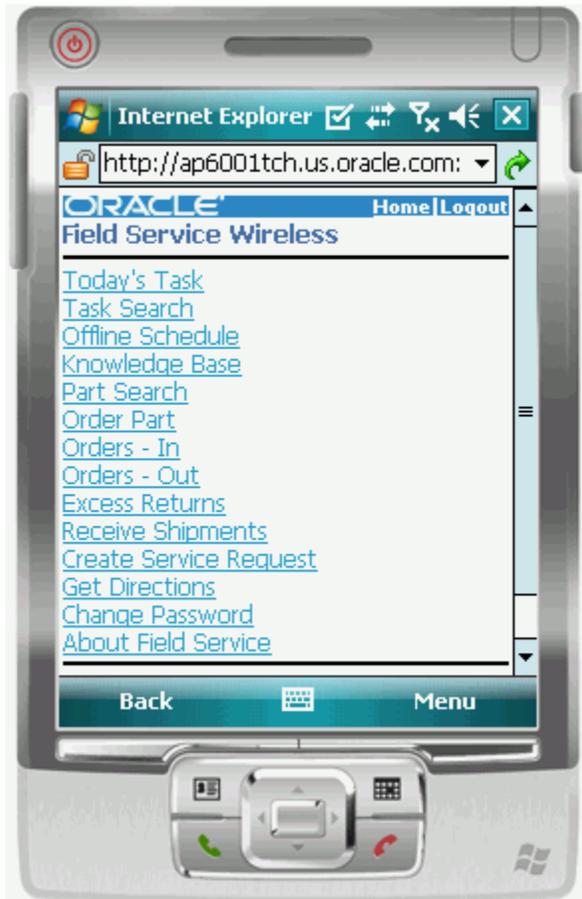
The following graphic depicts a typical Oracle Mobile Field Service Store and Forward - Laptop - Field Service Technician Dashboard page.

## Field Service Technician Dashboard Page

The screenshot displays the Oracle Mobile Field Service Technician Dashboard. The interface is divided into two main sections: 'Today's Tasks' on the left and 'Task 40293' details on the right. The 'Today's Tasks' section features a search bar and a list of tasks. Task 40293 is assigned to 'Kamer, Raigh' and 'Avery, Ms Felicia' and is for 'IO Fan LED Fix Circuit'. Task 40290 is cancelled and for 'CPU Fan Status Assembly'. The 'Task 40293' details section shows the task is assigned to 'Kamer, Raigh' and 'Avery, Ms Felicia', with 'Accepted' and 'Assigned' status buttons. Below this, there are 'Assigned' and 'Status' buttons, and a detailed view of the 'IO Fan LED Fix Circuit' task, including location '1 Alviso Street, San Francisco, CA' and contact information.

The following graphic depicts a typical Oracle Mobile Field Service - Wireless main menu. This is what the technicians see when they first enter the Wireless application:

### Main Menu



The Main Menu includes the following links:

- [Today's Task](#)
- [Task Search](#)
- [Offline Schedule](#)
- [Create Service Request](#)
- [Knowledge Base](#)
- [Parts Search](#)
- [Receive Parts](#)
- [Parts Return](#)

- Transaction History

- Mobile Queries

- Get Direction

Using this link, you can view the driving directions between any two tasks.

- Preferences

- Change Password

- About

Using this link, you can view environment details such as, technician name, responsibility, database name, and browser information.

## Technologies

This section discusses the technologies used for all of the Oracle Mobile Field Service applications.

### Oracle Mobile Field Service Store and Forward - Multiplatform

Oracle Mobile Application Framework provides the development framework for designing the Mobile Field Service Store & Forward Multiplatform application that can then be deployed to Apple's iOS, Google's Android, and Microsoft Windows 10 platforms. The multiplatform application installs on-device, can work in both connected and disconnected mode, and can access device services such as phone, camera, GPS as well a local SQLite database. This technology supports both real-time and offline data access.

Oracle Mobile Field Service Store and Forward Multiplatform application is available on:

- Small form factor devices such as Smartphones (iPhone, Android)
- Medium form factor devices (Tablet) such as iPad, Galaxy, Android tablets
- Windows OS Laptops

It is a complete job-management application that helps field service technicians to complete their daily responsibilities. These applications are part of the Oracle Field Service suite of applications. Oracle Field Service in turn is part of the Oracle E-Business Suite, which is an integrated set of applications designed to work together. Oracle Mobile Field Service Store and Forward applications synchronize with the enterprise system to receive new data such as tasks and service requests. Synchronization is also important to send changes made in the Mobile Field Service Store and Forward

applications such as newly created report items and updated task statuses. Synchronization supports both application and data download to the device. Additionally, it supports data upload to the enterprise. New version of the application and database schema changes are seamlessly downloaded during sync.

## **Oracle Mobile Field Service Wireless**

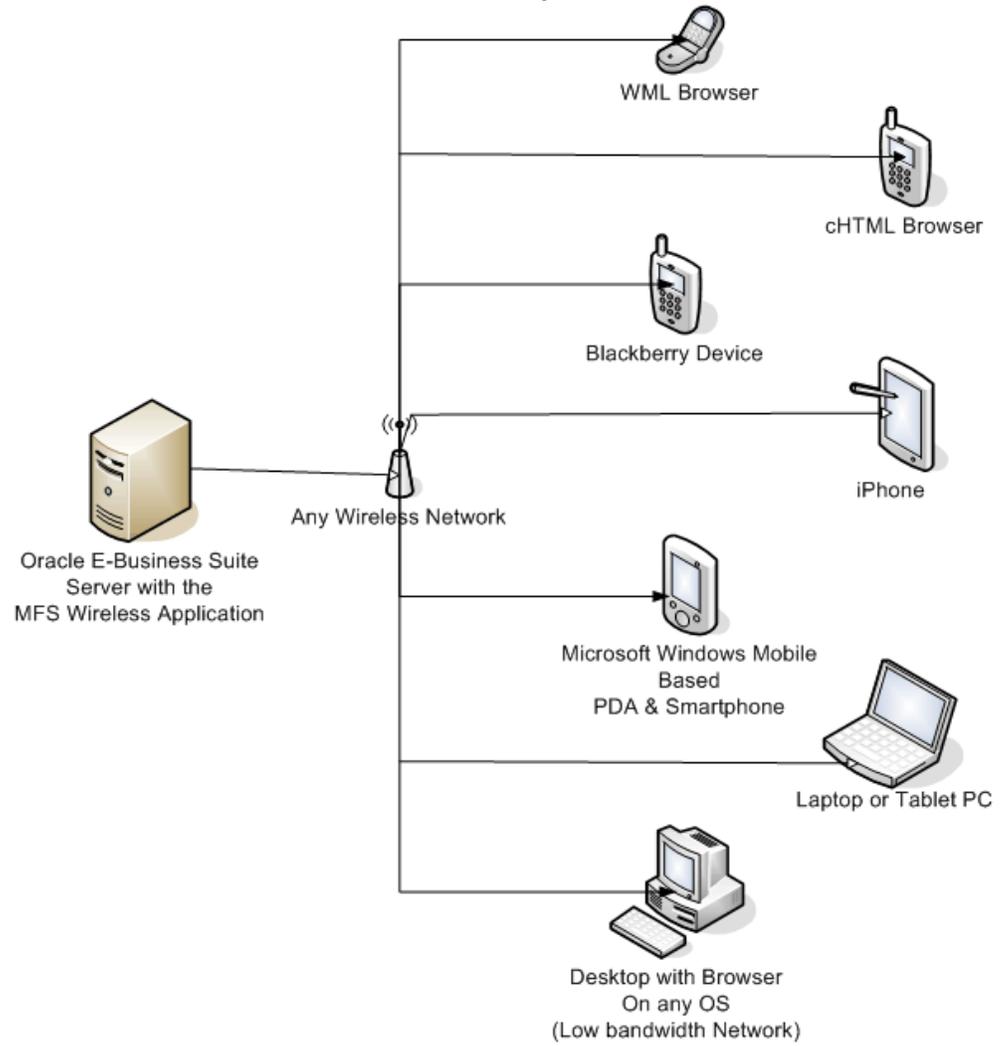
Oracle Mobile Field Service Wireless provides the most flexible, scalable, and reliable mobile infrastructure. Oracle Mobile Field Service Wireless provides browser based internet access on mobile devices independent from the underlying wireless infrastructure including networks, protocols, devices, markups, and gateways.

Refer to *Oracle E-Business Suite Installation Guide: Using Rapid Install* for details about installing Oracle Mobile Field Service applications.

Oracle Mobile Field Service supports the following technology:

- Small Form Factor: This includes WAP-enabled phones, some smaller RIM pagers, and iMode.

***MXML Transformation for WAP, iMode, and Tiny HTML***





# Part 2

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## **Implementing and Synchronizing Oracle Mobile Field Service Store and Forward Multiple Platforms**



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# Requirements and Dependencies

## Overview

This chapter describes the minimum software and hardware requirements necessary to run Oracle Mobile Field Service Store and Forward on various platforms.

## Minimum Software Requirements

### Enterprise Server

Refer to *Installing Oracle Applications* for the overall software requirements of the Oracle E-Business Suite.

**Additional Information:** After you install or upgrade Oracle E-Business Suite, access to Oracle Mobile Field Service JavaServer pages (JSPs) may be restricted by default. To enable access, add the Oracle Mobile Field Service JSPs to the allowed JSPs configuration files. See: *Allowed JSPs, Oracle E-Business Suite Security Guide*.

**Required Action:** Oracle Lite is not required for the Mobile Field Service Store & Forward application and must be uninstalled prior to installing the multiplatform application. To drop the repository, connect as system user and use the following command:

```
SQL > Drop user mobileadmin cascade;
```

### Laptop Client

- Windows 7 or later

## Smartphones/Tablets

- IOS 7.0 or later
- Android 4.0 or later

## Minimum Hardware Requirements

### Enterprise Server

Refer to Installing Oracle Applications for overall hardware requirements for the E-Business Suite.

Refer to Customization Support for the Oracle Mobile Field Service Store and Forward Applications, for details on customizing the mobile server.

### Laptop Client

- Any computer which can run Windows 7 or later

## Smartphones/Tablets

This section describes the minimum hardware requirements installing the MFS Store & Forward (Multiplatform) application on a smartphone or tablet.

- Any ios device which can run iOS 7.0 or later
- Any Android device which can run OS 4.0 or later

---

# Implementation Process

## Overview

You can install and use the Oracle Mobile Field Service (MFS) Store and Forward Multiplatform application on Windows, iOS and Android platforms.

The implementation process involves the following steps:

1. Defining the attributes required to use the MFS Store and Forward Multiplatform application
2. Installing the application on a smartphone, tablet or laptop
3. Synchronizing with the enterprise server to download application data

## Defining attributes

The following tasks must be completed prior to installing the Mobile Field Service Store and Forward application:

1. Set up profile options for Mobile Field Service.
2. Schedule concurrent programs for Mobile Field Service.
3. Create a Mobile Field Service user.

## Setting Profile Options for Mobile Field Service

Profiles control various features of the Mobile Field Service Store and Forward Multiplatform application. You can set up profiles within the Windows or Self Service applications (Functional administrator: Core Services > Profiles).

The table below indicates the profile name, a brief description, the level at which to be set, and the recommended value (the default value).

Profile Option	Description	Access Level	Default/ Recommended Values
CSF: Default Return Reason (For Material Debrief)	The return reason selected with this profile option is the default return reason during debrief.	All defined return reasons.	
ASG: Enable Mobile User	<p>You can gain access to the Mobile Field Service application, regardless of your associated responsibilities. When you are mapped to multiple responsibilities and all responsibilities have rights to access the Mobile Field Service application, you can access the application with the oldest responsibility (gained access first).</p> <p>The Responsibility's <b>Application</b> field value <i>must be populated with Field Service</i>.</p>	Site, Application, Responsibility, and User	<ul style="list-style-type: none"> <li>• <i>Yes:</i> Set this profile option to Yes at the responsibility level for the responsibility needing access to the Mobile Field Service application. All users that are associated with that responsibility are granted access rights to the Mobile Field Service application.</li> <li>• <i>No:</i> If this profile option is set to No, all users that are associated with that responsibility cannot access the Mobile Field Service application.</li> </ul>

Profile Option	Description	Access Level	Default/ Recommended Values
ASG:Synchronous Data Upload	This profile is used to determine the sync logic that is followed when field service technicians order parts.	Need input	If the profile is set to "Yes", parts requirement will be uploaded, processed immediately at the enterprise server, and the order number will be downloaded to the device during the same synchronization. If the profile is set to 'No', order number is downloaded only during the next synchronization.
CSF: Allow Overlapping Debrief Lines	Setting the profile to <b>No</b> does not allow overlapping labor lines within a task. Therefore, a field service technician cannot have two labor lines for the same time period. The second labor line starts only after the first one has finished.	<ul style="list-style-type: none"> <li>• <i>Yes:</i> The technician can enter overlapping actual start and end times for various assignments for a given day.</li> <li>• <i>No:</i> Default. The technician cannot enter the overlapping times.</li> </ul>	

Profile Option	Description	Access Level	Default/ Recommended Values
CSF: Business Process	Enables you to specify the order of task completion for the field service technician.	<ul style="list-style-type: none"> <li>• The field service technician is to work on one task at a time in a fixed order (ordered by scheduled start date).</li> <li>• The field service technician can only work on one task, but in any order. Only the task with a Working status can be updated. If no task is at a Working status, the status of all open tasks can be updated. The field service technician can select a task by setting its status to Working.</li> <li>• The field service technician can work on any number of tasks in any order. The working flag is ignored, in this scenario.</li> </ul>	
CSF: Capture travel information	This profile determines if capturing travel information is enabled, within the Debrief page.	<ul style="list-style-type: none"> <li>• <i>None</i>: Default</li> <li>• <i>Time</i></li> <li>• <i>Distance</i></li> </ul>	

Profile Option	Description	Access Level	Default/Recommended Values
CSF: Default Commit task status	This profile option defines the default status when the task is committed.	All defined task statuses. <i>Assigned</i> is the default.	
CSF: Default Labor Debrief Date/Time	<p>This profile is used to enable logic for automatically displaying information for Travel and Labor debrief. Accepted values are as follows:</p> <p><b>Status Change:</b> Automatic logic is implemented for displaying labor start and end date.</p> <p><b>Scheduled Date:</b> The labor start and end date is taken from the scheduled date.</p> <p><b>System:</b> The system date is used as the labor start and end date.</p> <p><b>None:</b> User must manually enter the labor start and end dates.</p>		
CSF: Default Debrief Service Activity Code	The service activity code selected with this profile option is the default service activity code within the Debrief page.	All defined service activity codes.	

---

<b>Profile Option</b>	<b>Description</b>	<b>Access Level</b>	<b>Default/ Recommended Values</b>
CSF: Default Distance Unit	The default unit of measure for distance.	<ul style="list-style-type: none"><li>• <i>Miles</i>: Default</li><li>• <i>Kilometers</i></li></ul>	

---

Profile Option	Description	Access Level	Default/ Recommended Values
CSF: Default Labor Debrief Date/Time	This profile is used in the Labor Debrief screen to define labor debrief start and end times based on status updates to task assignments.	•	<p><i>Status Change:</i> Start time and end time are defaulted from the task assignment audit table. In cases where technicians select a working status more than once, the last set of transition times are defaulted. For example:</p> <ul style="list-style-type: none"> <li>• From any status to a status with a Working flag enabled defines labor start.</li> <li>• From a Working status to any other status without the Working flag defines labor end.</li> </ul> <p>• <i>Schedule Date:</i> Start time and end time are defaulted from a task's scheduled date. This is the default.</p> <p>• <i>System Date:</i> Start time and end</p>

Profile Option	Description	Access Level	Default/Recommended Values
			time are defaulted from the system date.
		<ul style="list-style-type: none"> <li>• <i>None</i>: Nothing is defaulted.</li> </ul>	
CSF: Default Service Activity Code for Labor	The service activity code selected with this profile is the default service activity code for labor within the Labor Debrief screen.	<ul style="list-style-type: none"> <li>• All defined service activity codes.</li> <li>• <i>Null</i>: default</li> </ul>	
CSF: Default Service Activity Code for Travel	The service activity code selected with this profile is the default service activity code for travel within the Labor Debrief screen.	<ul style="list-style-type: none"> <li>• All defined service activity codes.</li> <li>• <i>Null</i>: default</li> </ul>	
CSF: Default Task Status for Personal Tasks	Default task status for personal tasks.	All defined task statuses.	<p>The <i>Assignment</i> and <i>Assigned</i> attributes are set to <b>Yes</b>.</p> <p>The <i>Rejected</i>, <i>On hold</i>, <i>Cancelled</i>, and <i>Schedulable</i> attributes are set to <b>No</b>.</p>

Profile Option	Description	Access Level	Default/ Recommended Values
CSF: Mandatory Labor Debrief (Y/N)	<p>If this profile is set to Yes, technicians cannot complete or close a task until they create a labor line.</p> <p><b>Note:</b> Sometimes technicians have only travel debrief lines and no labor debrief lines. In such cases, profile CSF: Mandatory Labor Debrief honors travel debrief lines.</p>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No: default</li> </ul>	
CSF: Mandatory Resolution Code (Y/N)	<p>If the profile is set to Yes and the resolution code is not entered, technicians cannot change the task assignment status to statuses with complete or close flags enabled until they enter the resolution code.</p> <p>The Debrief Summary screen checks whether a resolution code exists for the service request when technicians change the assignment status to Completed or Closed.</p>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No: default</li> </ul>	

Profile Option	Description	Access Level	Default/ Recommended Values
CSM: Allow Free Form Installed Base Identifier	If set to Yes, this profile allows data that is uploaded from a client to be checked for free form data. If such data is present, then it is processed.	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	
CSM: Allow Free Form Item			

Profile Option	Description	Access Level	Default/ Recommended Values
CSM: Default Task Status for Synchronous Update	<p>This profile determines the task status to be used for immediate update in the server. For example, when the technician changes the task status to Accepted, which is set as the default task status for synchronous update, a remote query is fired and the task status at server side is updated synchronously. The profile values are as follows:</p> <p><b>Task Assignment Status:</b> Remote update query is fired when the technician changes to this task status. Null: Remote query is not fired and task status updates are uploaded through the regular synchronization process.</p> <p><b>Null:</b> Remote query is not fired and task status updates are uploaded through the regular synchronization process.</p>		
CSM: Enable Create Task	Enables or disables the create task functionality.	<ul style="list-style-type: none"> <li>• Yes: default</li> <li>• No</li> </ul>	

Profile Option	Description	Access Level	Default/ Recommended Values
CSM: Enable Multiple Platform	The profile enables multiple platform users to exist in the same instance.	Site, Responsibility and User	NULL : Default Yes : Recommended  <b>Note:</b> This profile must be set to "Yes" at the site level.
CSM: Labor Line Total Check	Reasonability check to ensure total time at site does not exceed total labor time plus delta.  For debrief reporting in Oracle Mobile Field Service Store and Forward - Laptop, the difference between max (last labor end date/time) and min (earliest labor start date/time) must not be more than one hour greater than the sum of labor line durations.  Max - min <= sum of labor lines + T  T is the time in hours. The profile setting provides the value for this.	<ul style="list-style-type: none"> <li>• 0: Default. The check is not valid.</li> <li>• 1: T = 1</li> <li>• 2: T = 2</li> </ul>	

<b>Profile Option</b>	<b>Description</b>	<b>Access Level</b>	<b>Default/ Recommended Values</b>
CSM: Maximum Attachment Size	A technician can upload service request attachments such as, photos, drawings, and diagnostic data, from their mobile device to the enterprise. You can view the uploaded data on the enterprise, after synchronization completes successfully. The Attachment sizes are limited to the value entered in this profile.	The value of this profile represents the size in Mega Bytes (MB) of the attachment for each service request/task for each Sync. If this profile option is not populated, the value is considered zero and you cannot upload or download attachments.	
CSM: Maximum Number of Items	The profile controls the number of items to be downloaded.	Responsibility	Default: 500
CSM:Maximum readings per counter			
CSM: Notify on Deferred Records	Provides the ability to notify administrators and technicians whenever an error occurs during the data upload process.	Set this profile option at responsibility level. Administrator can set this profile at responsibility level to any valid field service resource.  Default: Null	
CSM:Purge Interval (Days)			

<b>Profile Option</b>	<b>Description</b>	<b>Access Level</b>	<b>Default/ Recommended Values</b>
CSM: Restrict Number of Items to Search for in LOV	Limits the number of search results that are displayed in the search pages, if there are too many items. You can limit the search by using a filter to reduce the number of items retrieved in the search.	Can be <b>1</b> to any number. The default is <b>100</b> .	
CSM: Return Activity Duration	This profile sets the duration (in days) of the return activity.	Responsibility	Default: 500
CSM: Allow Counters Reset and Adjustments	Allow counters reset or adjustment.	Site	Recommended - Y  Set to 'N' if you don't want users to reset or adjust the counter readings.

Profile Option	Description	Access Level	Default/ Recommended Values
JTM: Application Conflict Rule	Enables Oracle Mobile Field Service Store and Forward - Multiplatform to handle updates to the database from the various mobile application devices.	<ul style="list-style-type: none"> <li data-bbox="971 365 1187 680">• <i>Client Wins:</i> Changes made by the mobile user are always applied to the enterprise database. No timestamp checking is executed.</li> <li data-bbox="971 722 1187 1360">• <i>Server wins:</i> Changes made by the mobile user are applied to the enterprise database if the record has not been modified since the mobile user last synchronized. If the record was modified in the meanwhile, the mobile user's change is not applied and becomes a deferred transaction.</li> </ul>	
JTM:Concurrent Program History Level			

Profile Option	Description	Access Level	Default/Recommended Values
JTM: Mobile Applications Enabled	Set the profile at the Oracle Mobile Field Service responsibility level to Y. Only after setting the profile value can you enable hooks or business events.	<ul style="list-style-type: none"> <li>Y: Yes</li> <li>N: No</li> </ul>	

### Scheduling Concurrent Programs for Mobile Field Service Store and Forward Multiple Platform

The following table lists the concurrent programs that are used in the MFS Store and Forward Multiple Platforms application:

Concurrent Program Name	Description	Default/Recommended Schedule
JTM Master Concurrent Program	The JTM master concurrent program runs all concurrent jobs registered by mobile applications. The JTM Master concurrent program accepts the lookup, transaction, inventory, and customer categories as parameters.	<p>TRANSACTION: Every five to fifteen minutes.</p> <p>LOOKUP: Once a week or on demand.</p> <p>INVENTORY : Once a day. Sub programs that must be run more frequently can be scheduled into a custom category.</p> <p>PURGE: As often as required (once per month)</p>
Manages Mobile Users	Automatically creates, removes, or updates mobile users based on assigned mobile responsibilities.	Every one hour or on demand.
Processes Uploaded Mobile Data	Processes uploaded mobile data and applies it to the enterprise system.	Every one minute.

The JTM master concurrent program runs all concurrent jobs registered by Oracle Mobile Field Service Store and Forward applications. The JTM master concurrent program uses the following category types:

- TRANSACTION
- LOOKUP
- INVENTORY

- CUSTOMER
- PURGE

For a complete description of these category types use the Mobile Field Service Administration responsibility. The Mobile Concurrent Program Summary page displays the JTM concurrent program details for all the concurrent programs related to Oracle Mobile Field Service Store and Forward. The mobile concurrent program displays how many times the program has currently run, and the maximum and the minimum times taken to finish the program.

The concurrent program screens enable you to view the status of mobile logic (PL/SQL) modules, which process the various business events for the Oracle Mobile Field Service Store and Forward applications. The mobile logic modules are grouped in various categories and the frequency of their execution is based on the category. You can change the mobile logic modules from one category to another or add a new category and hence change the frequency of execution, based on the business requirements.

These screens can also be used to understand the resources used by mobile logic modules, and identify and resolve any performance bottlenecks.

## Creating a Mobile Field User

Before you can use the Oracle Mobile Field Service Store and Forward Multiplatform application you must create a mobile field service user. The Manages Mobile Users (MMU) concurrent program creates Mobile Field Service users that are assigned the Oracle Mobile Field Service responsibility.

You must specify a value for the Create Multiple Platform User parameter in the Manages Mobile Users concurrent program. This program periodically allocates resources for users that have a mobile responsibility, so there will be a delay between the time the responsibility is assigned and the change to take effect.

The MMU program has several parameters that should be specified. In case of multiple platform application users, you must specify 'Yes' for the Create Multiple Platform User parameter.

Mobile Field Service leverages existing Field Service setup to configure a mobile user. Once an E-Business Suite user is created and assigned various sub-inventories as per Field Service requirements, the next step is to provide mobile access to this user.

*To create a user:*

1. Select an FND user who is also a CRM resource of the type Employee.
2. Add the Oracle Mobile Field Service responsibility to this user. You can also assign custom responsibilities.

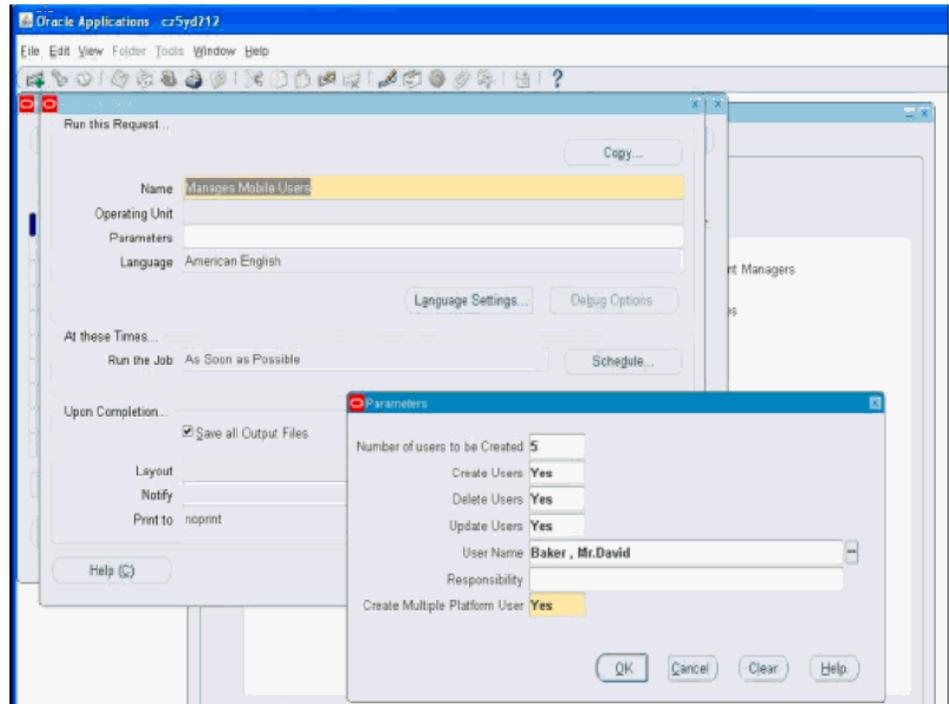
Refer Implementing Oracle Mobile Application Foundation of the 12.1.3 *Mobile Field Service Implementation Guide* for a description of the ASG: Enable Mobile User

profile.

3. Run the Manages Mobile Users concurrent program. The following parameters must be set as 'Yes' for creating users. Default values of these parameters are Yes.

- Create users
- Create multiple platform user

The remaining parameters are optional as shown below.



**Note:** If you want to create a specific user, then select a user name from the User Name LOV in the Parameters window. By default, all users with a valid mobile responsibility are created.

The mobile user is created after the successful completion of the concurrent program. The user is now ready to synchronize and access the MFS Multiple Platform application.

#### **Creating Users for Mobile Field Service (Multiplatform) multi-user Laptop:**

The Oracle Mobile Field Service Store & Forward Multiplatform application installed on a laptop can be configured such that it can be used by multiple technicians belonging to the same group. While the single user multiplatform laptop application is best suited for the individual Field engineer who does the break fix job independently, a multi-user laptop is useful when the business requires to save on hardware costs or when working

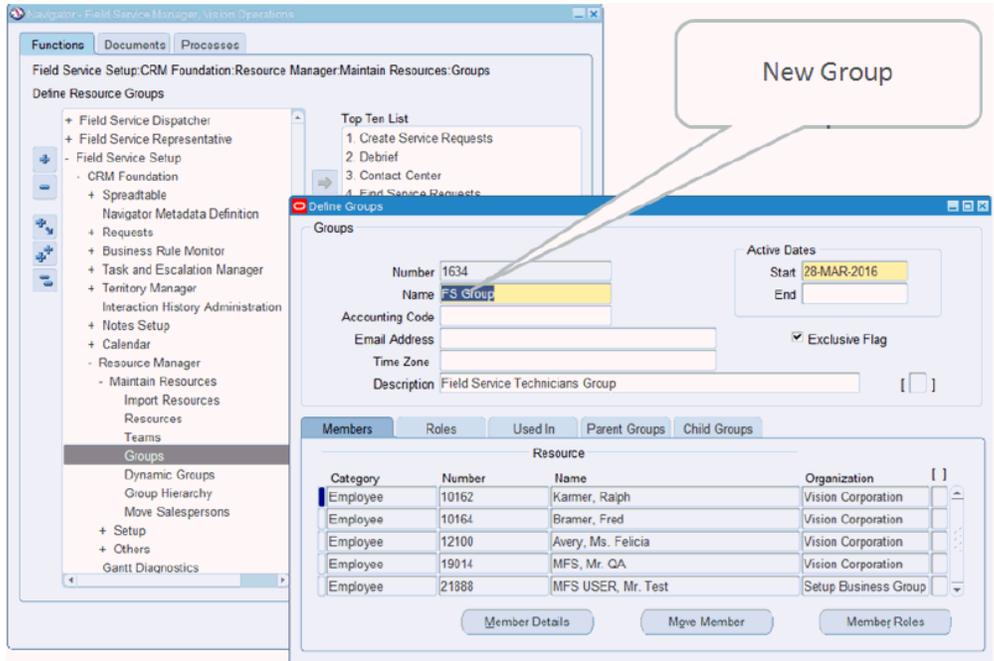
in a highly secured environments such as defense organizations where hundreds of field operations can be consolidated into one single laptop.

Implementing the multi-user laptop feature is optional. In a multi-user laptop environment, field service users must be assigned to various field service groups. A Group consists of group owner, group administrator(s) and group member(s).

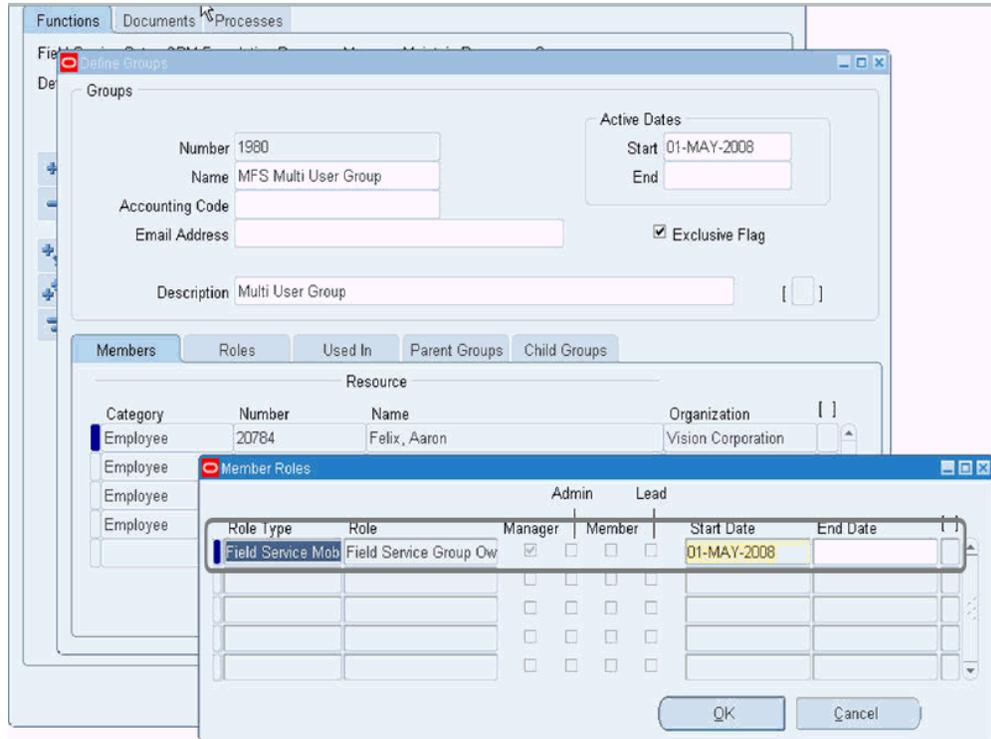
- Field Service Group Owner refers to the seeded JTF Resource role of type field service mobility. User assigned this role can install, access MFS application and synchronize all data.
- Field Service Group Administrator role refers to seeded JTF Resource role of type field service mobility. User assigned this role can access MFS application, synchronize all data for the multiple user laptop and view/reassign data to all members within their group.
- Field Service Group members are restricted to view only tasks assigned to them.

To set up users and groups for a multi-user laptop:

1. Create the Mobile Field Service User (resource) using FND users.
2. Import the resources to CRM with the proper role type and the corresponding roles.
3. Create a group as shown in the screenshot below. While creating the group, check the "Exclusive Flag" check box.

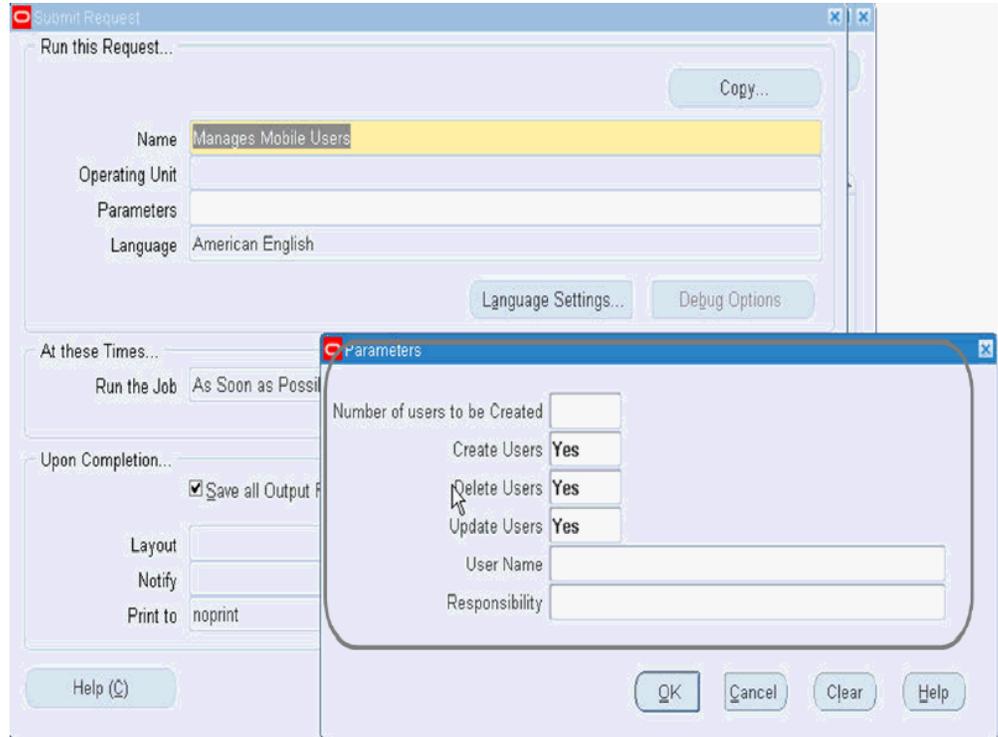


4. Assign the role types and roles to the user using Members tab. Click on Member Roles.

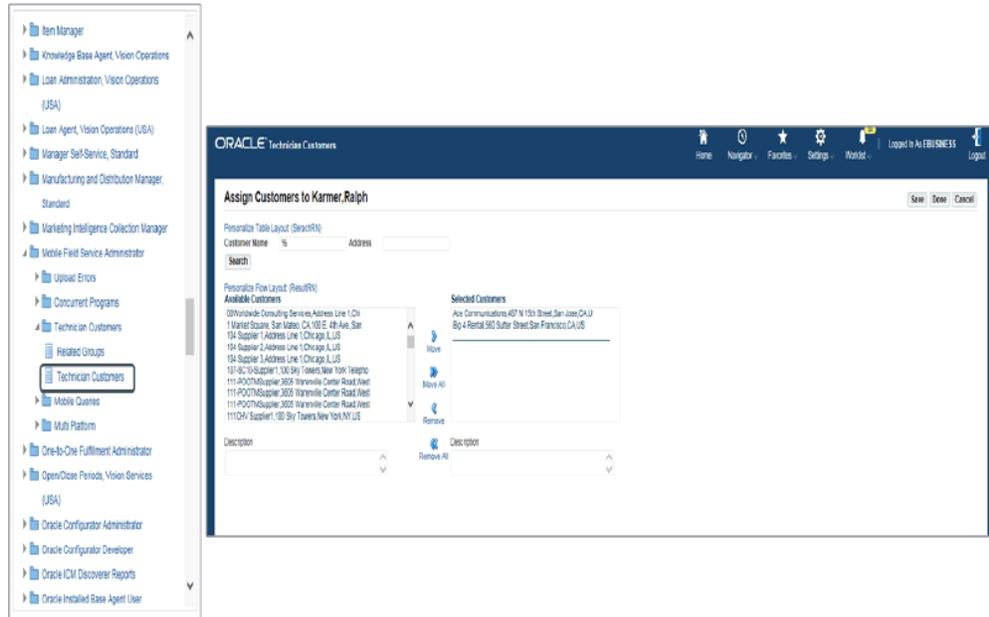


For example, if you want to create group owner, assign "Field Service Group Owner" role, if you want to create group Admin, assign "Field Service Group Administrator" role, and if you want to create group member, assign "Field Service Group Member" role.

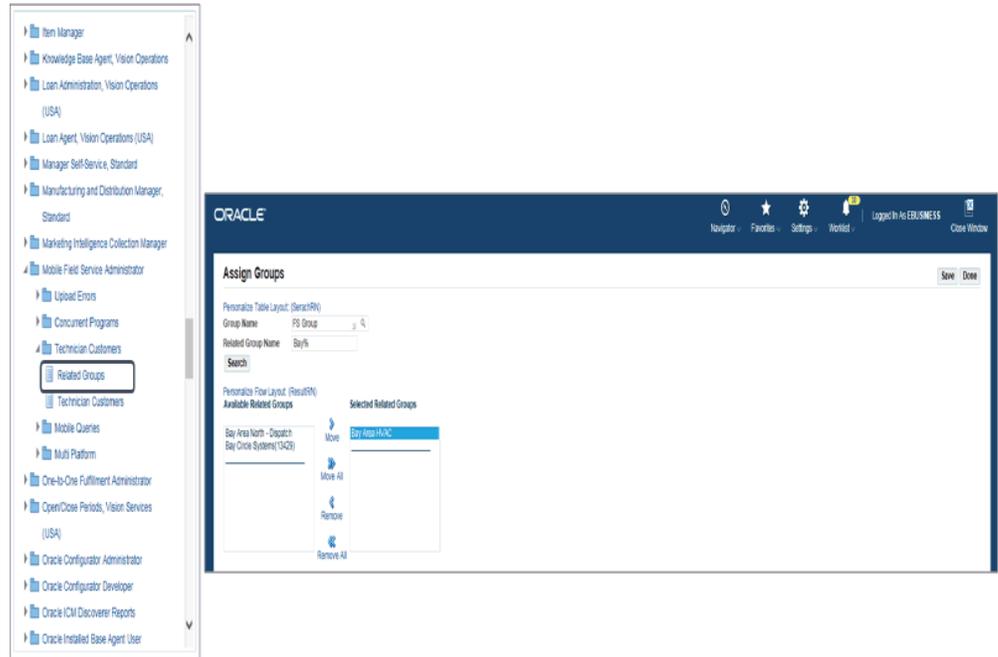
5. Submit concurrent program - Manages Mobile Users as shown in the screenshot below. You must set the Create Users parameter to Yes (which is the default value) in order to create new users. The additional parameters shown here provide various options to create users. For example, you may create n number of user under a specific responsibility. Or you can create an individual user by just mentioning the user name. Successful completion of this program will enable all mobile users.



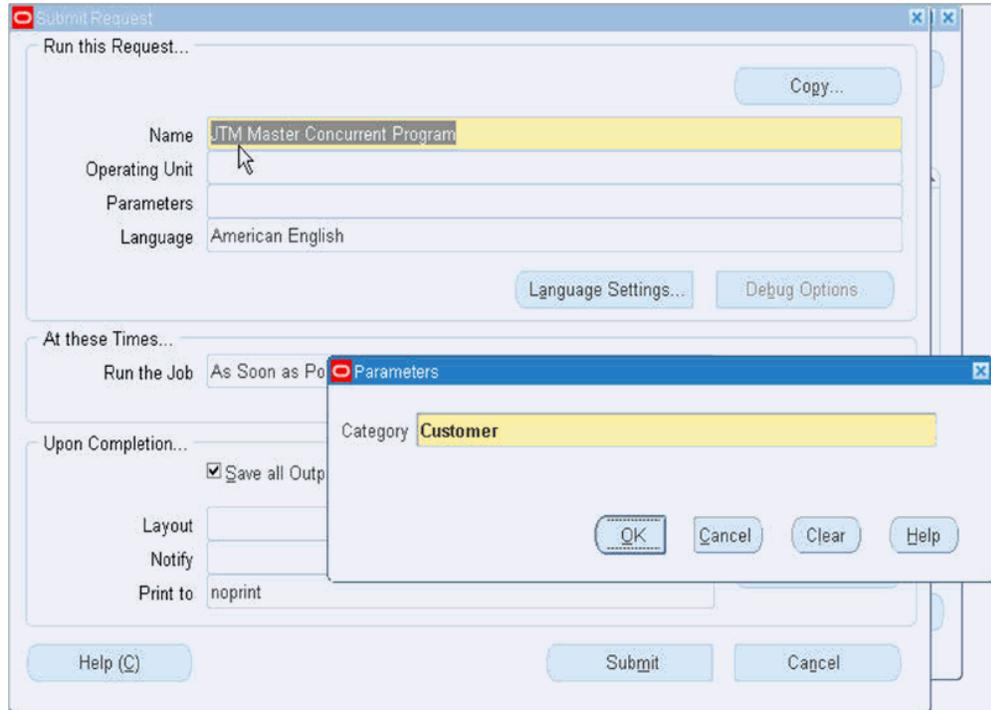
6. Optionally, using the Technician Customer UI, you can associate additional customer to your group. This feature allows the technician to create service request for any products installed at this customer site.



7. You can create relationship between two different groups. When groups are related, service requests can be transferred from one group to the second group. This is also an optional step.



8. If customers have been associated with groups, submit the Concurrent Program - JTM: Master Concurrent Program with category "Customer". This program will download the details of all customers who have been associated with the groups.

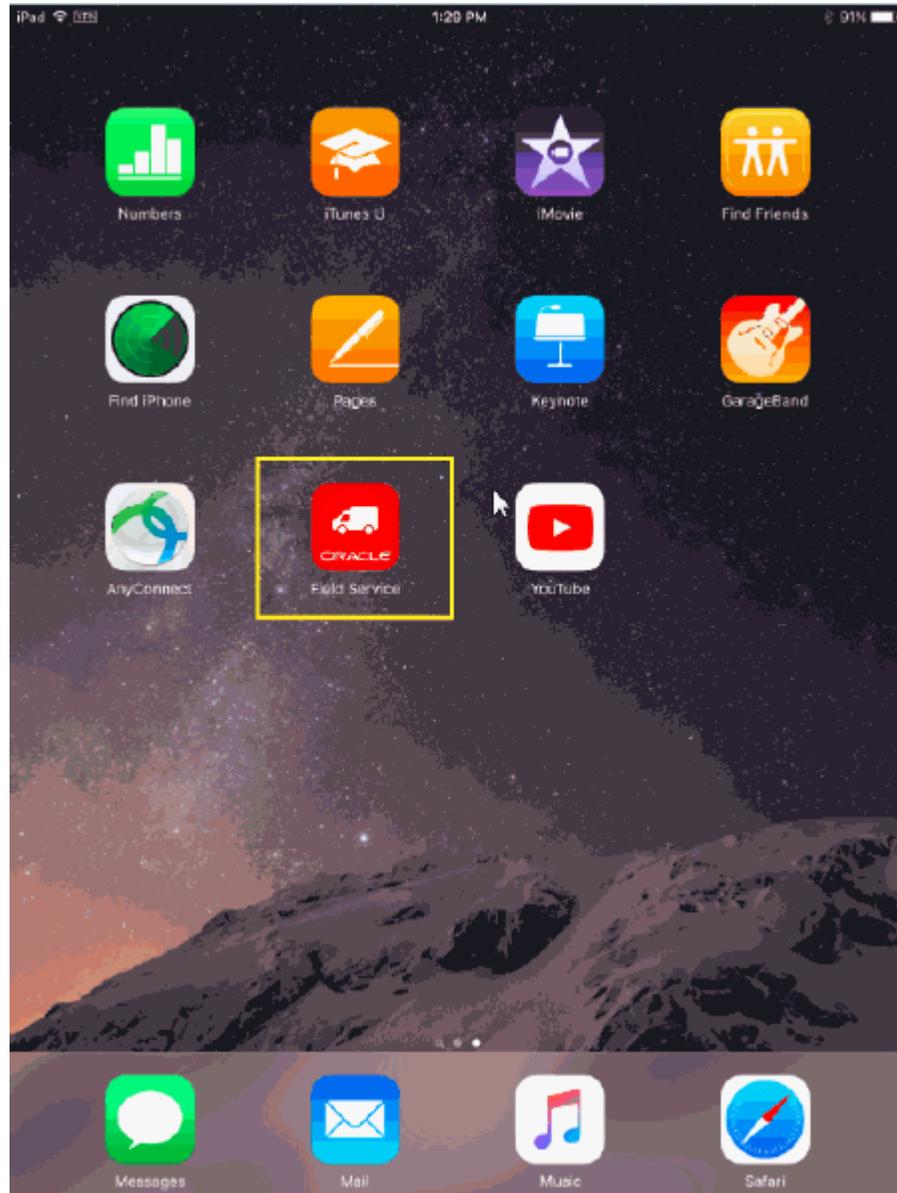


## Installing the application

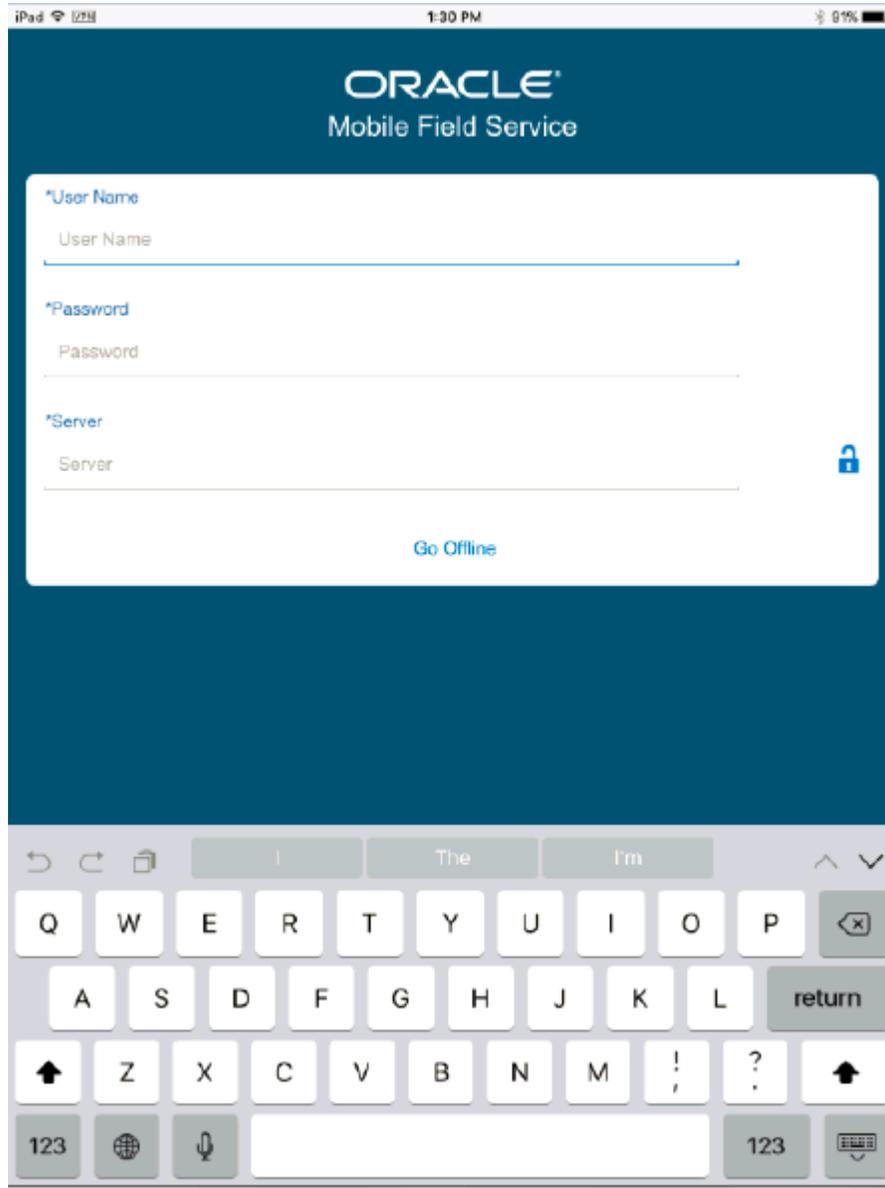
The following sections list the steps that must be followed to install and use the Mobile Field Service Store and Forward application. Post installation, users need to launch and synchronize the application with the enterprise system in order to download the application data. Upon successful synchronization, technicians will be able to access the application.

### Installing Mobile Field Service on iOS

1. Install the iOS MFS application by downloading it from the App store. The following figure shows the UI once the application is installed on an iPad.



2. Tap the Field Service icon to launch the application.  
The login screen appears.



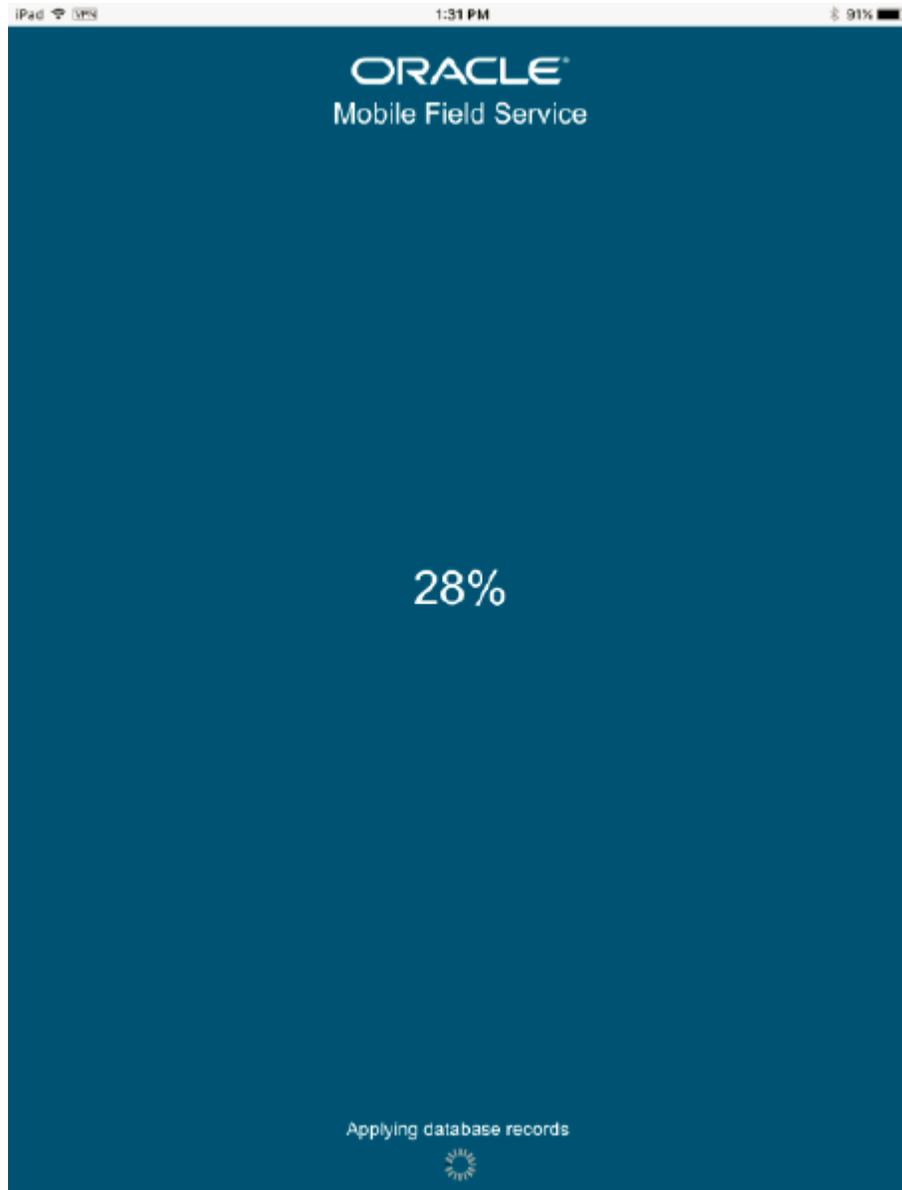
3. Enable SSL by tapping on the lock icon next to the Server text field. Once SSL is selected, the UI changes.
4. Enter the username, password, and the server information to initiate synchronization. The server field must contain both the server name and port name in the format: ServerName:Port.
5. The server name and port are the same as the server name and port of the Apache URL of the EBS instance. Synchronization progresses as shown below:

### Activity Log

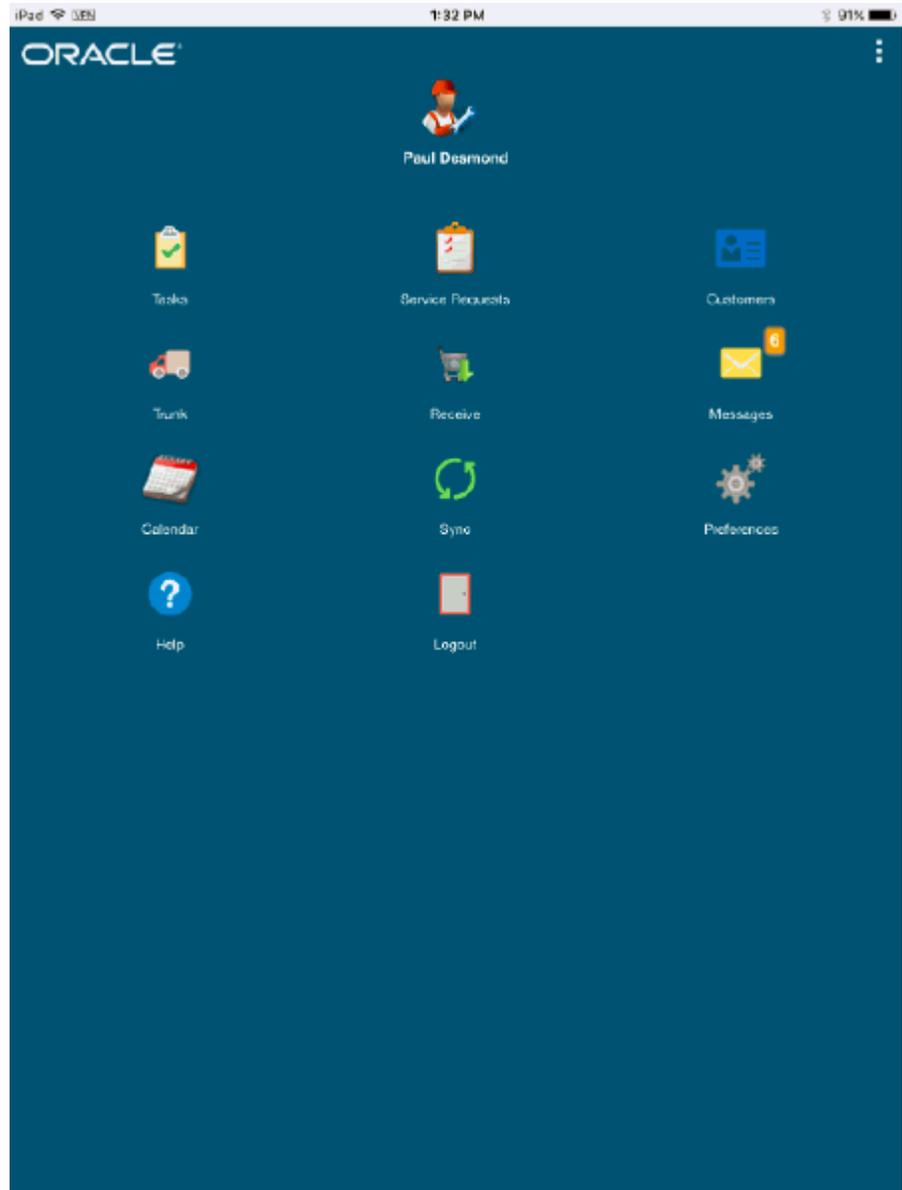
Connecting to Server [http://Rws60145rems.us.oracle.com:8078/OA\\_HTML/](http://Rws60145rems.us.oracle.com:8078/OA_HTML/) to download data.  
Launching Application. Please wait...  
Application Setup Complete.  
Application Setup In Progress...



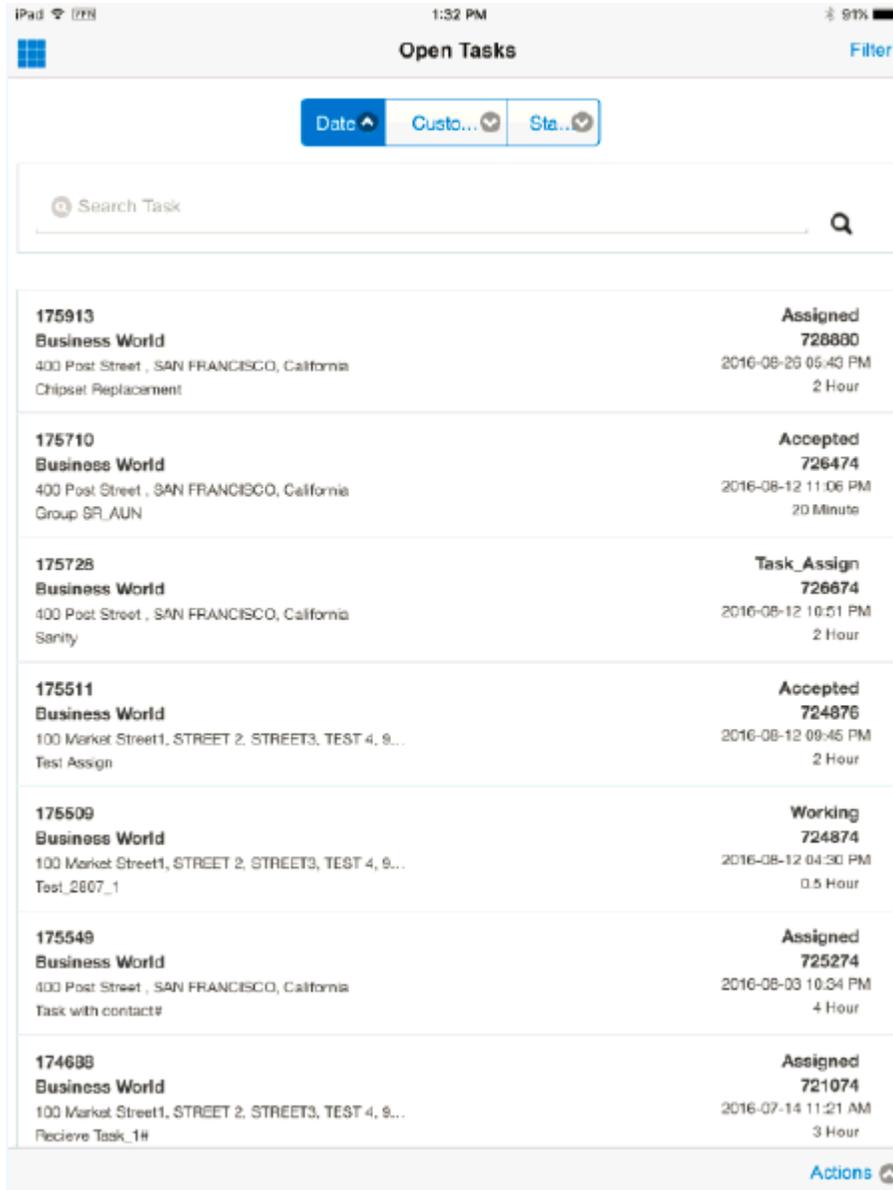
Please wait while we contact server to get offline mobile data. This may take a few minutes.



6. Once the synchronization process is complete, the Home screen appears.



7. Tap the Tasks icon to access the current tasks view. Tap the Filter icon on the top right to change the view from Today's Tasks (default) to Open Tasks view.



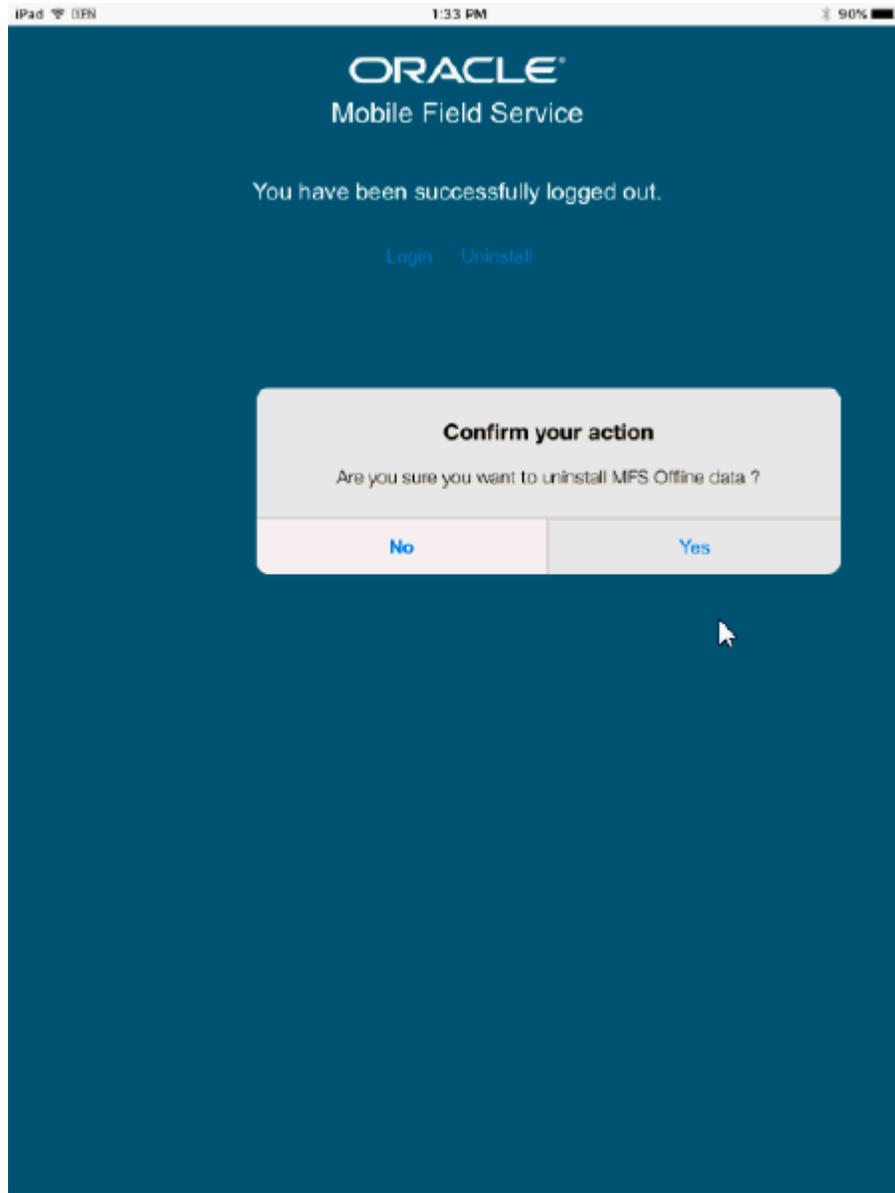
8. Tap the Home icon on the top left to access other features of the application.
9. Tap the Sync icon to initiate subsequent synchronizations. You can change the default view in the Preferences screen.
10. To log out of the application, navigate to the Home screen and tap on Logout.

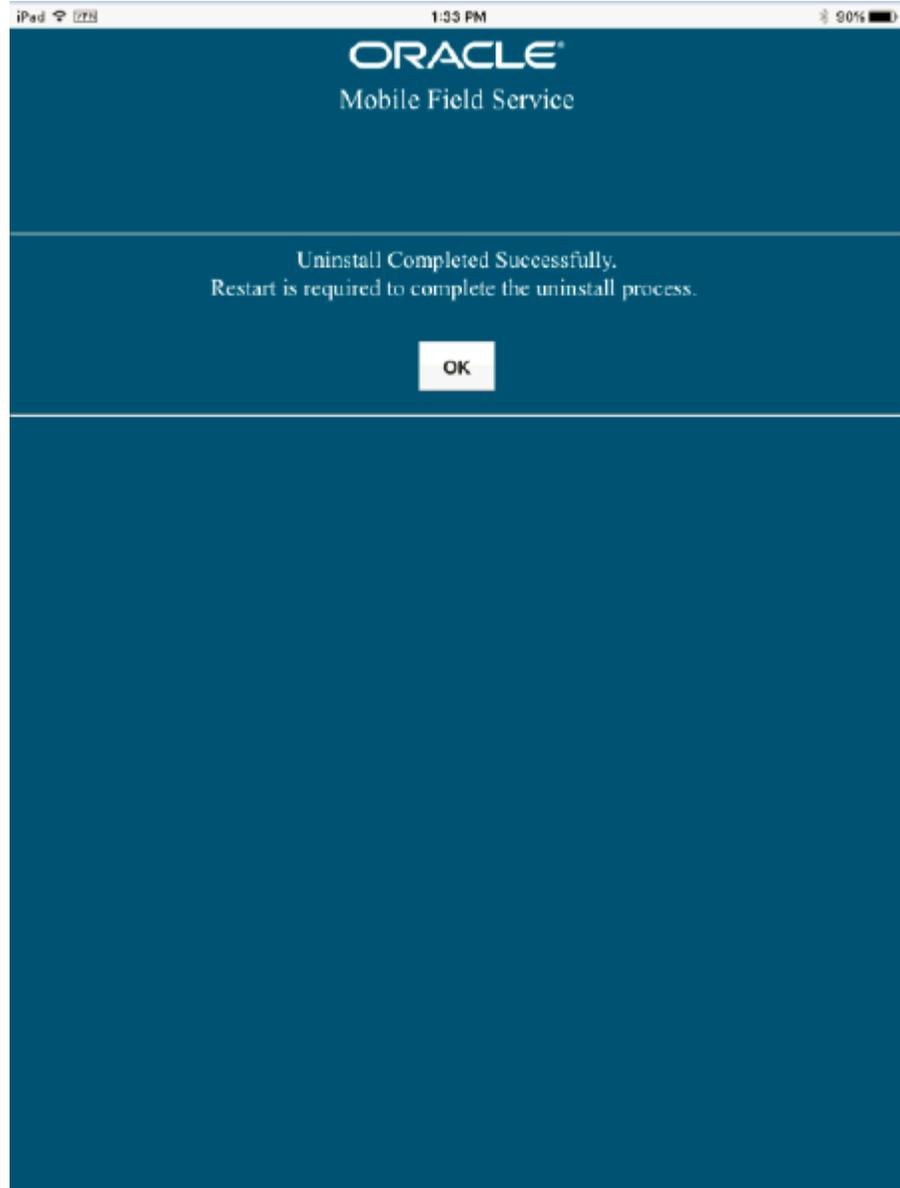


**Important:** While the app is downloading/installing for the first time, do NOT turn off the iOS device (by pressing the power button to put it in standby) as that will lead to a "Socket not connected" error and the install will not complete. If this happens inadvertently, uninstall anything of the MFS app that is left, restart the device and try again. This problem only happens when the device is manually turned off. It does not happen when the device goes to normal inactive mode automatically after a few minutes of inactivity (to save battery power). This is an issue in the Mobile

Application Framework (MAF) layer and happens because iOS cannot process any background java threads while in hibernation mode.

11. To uninstall the application, tap on the Uninstall option in the Home screen. You will need to confirm your action, following which the application will be uninstalled.





## Installing Mobile Field Service on Android

You can download the Android version of the MFS application from the E-Business Suite instance.

1. Login to the personal homepage of the E-Business Suite (from the Android device) as a mobile user and select the Oracle Mobile Field Service responsibility.
2. Click on the Android icon to download and install the APK file on the Android device. Once installed, follow the same steps as in iOS.

Mobile Users can access this link directly on their Android devices and install on their mobile devices. The client application is also available for download on the Googleplay appstore.

## Installing Mobile Field Service on Windows

1. Login to the E-Business Suite Personal Homepage (AppsLogin) with the mobile user, having the "Oracle Mobile Field Service" responsibility.
2. Navigate to "Oracle Mobile Field Service".
3. Click on the windows image to download windows installer file "OMFS.msi".
4. Install the OMFS.msi file.

**Important:** 32bit JRE 1.6 or higher should be installed on the machine.

5. Install visual studio 2012 redistributable "vcredist\_x86.exe". This file will be present in c:\OMFS folder. This needs to be done only the first time the application is installed on the windows machine.
6. Run "OMFS.exe" or "OMFS" shortcut from Desktop and choose yes/allow in all the warnings (if any).

**Additional Information:** Windows platform users must note the following:

- uninstalling data can be done by selecting the 'Logout' menu option in the applicaiton, then click Uninstall. This will remove the client database but leave the application itself. It can then be restarted to connect with a different user for example.
- uninstalling the entire application can be done through the windows Control Panel / Programs and Features -> Mobile Field Service -> Uninstall. When it is finished, manually delete all remaining files from C:\OMFS.

**Tip:** In order to troubleshoot or debug:

- Create a file "debug.txt" under c:\OMFS folder. Just create the file; it does not need to contain anything.
- Restart the application (OMFS.exe). It will create a file console.log

in C:\OMFS.

- Collect the files files from c:\OMFS folder after reproducing:  
console.log  
appsdb  
mfsapp"

## Upgrading the MFS Application

When the MFS application is changed, a notification is sent to the technician's device with a link to the respective App store. The local database is maintained during an upgrade and the application is reinstalled.

## Synchronizing with the Enterprise Server

To use the Mobile Field Service Store and Forward – Multiple Platform Support application, technicians and administrators must launch the application post installation and then synchronize with the enterprise system to download application data. Users must then synchronize regularly to receive new data that has been assigned such as new tasks. Likewise, to upload the changes that technicians make such as creating debrief lines and updating task statuses, they must synchronize the device with the enterprise system. During subsequent synchronizations, only incremental data is downloaded or uploaded. New updates, if any, to the application modules is also downloaded. The sync process is described in the previous section.

Mobile users can also set up automatic synchronization triggered by the client (ie the client decides when to initiate a synchronization based on settings). Automatic synchronization is described in detail in the Mobile Field Service User Guide.

## Confirming Required Enterprise Setups

This section describes how to set up the enterprise-side system so certain mobile features work properly on the mobile computer device.

### Setting Up Service Requests:

The following table lists the service request setups that can be used to create, view, and update tasks in an Oracle Mobile Field Service Store and Forward application.

<b>Component</b>	<b>Required or Optional</b>
Service Request Statuses	Required
Service Request Severities	Required
Service Request Types	Required
Service Request Urgencies	Optional
Problem Codes	Optional
Resolution Codes	Optional
Service Request Templates	Optional

For details, refer to the *Oracle TeleService Implementation Guide*.

### **Linking Service Request Statuses to Service Request Types**

Service request statuses have to be linked to service request types. Use the following procedure:

1. Switch to the Field Service Manager responsibility.
2. Navigate to `Field Service Setup > Service Requests > Request Types`.
3. Click to select a service request type from the table.
4. Click **Related Statuses**.
5. In the window, link Service Request Statuses to the Service Request Type.
6. Click **Save**.
7. To finish, close the window.

For more information, refer to the *Oracle TeleService Implementation Guide*.

### **Setting Up Tasks:**

The following table lists the task setups that can be used to create, view, and update tasks in an Oracle Mobile Field Service Store and Forward application.

Component	Required or Optional
Task Statuses	Required
Task Status Transitions	Required
Task Types	Required
Task Priorities	Required
Task Templates	Optional

Set up the required components listed above. For details, refer to the *Oracle Field Service Implementation Guide* for these Field Service-specific setups.

- The task status that is selected during service-task-creation is the one from the Field Service profiles: CSF: Default In Planning Status. You cannot change this.
- When a service task is created, there will be no task assignment automatically created.

### Setting Up Oracle Field Service Debrief:

Oracle Field Service Debrief is part of the Oracle Field Service application and is used to report all material, expense, and labor transactions. From the Oracle Field Service Debrief page, you can update inventory, install base, and charges.

When material, expense, and labor transactions are recorded in one of the Oracle Mobile Field Service Store and Forward applications, all transactions are shown and updated to inventory, install base, and charges from the Oracle Field Service Debrief.

Ensure that Oracle Field Service Debrief is fully implemented and set up as described in the *Oracle Field Service Implementation Guide*.

### Setting Up Install Base:

This procedure is only required if you are using Install Base. If so, Install Base should be set up to support Install Base updates when doing material transactions in an Oracle Mobile Field Service Store and Forward application. This should be set up after performing the setup steps necessary for debrief reporting.

An Oracle Mobile Field Service Store and Forward application supports two scenarios that affect Install Base:

- Removing a part
- Installing a new part

The following procedures are required to set up Install Base:

- Setting up system items for Install Base transactions
- Setting up Install Base profile options
- Removing and installing parts in Oracle Mobile Field Service Store and Forward - Laptop

See Appendix A Item Handling for the Oracle Mobile Field Service Store and Forward Applications, page A-x for complete details.

**Note:** Changing the install base replication profiles during operation becomes effective when the value is changed. Information will not be changed with retroactive effect based on the profiles.

### **Setting Up Counters:**

The set up of counters is only required if you are using Install Base. The following are the setups for counters that must be performed to report counter readings in an Oracle Mobile Field Service Store and Forward application:

- Counters
- Counter groups
- Counter properties
- Miscellaneous reading types

Refer to the *Oracle TeleService Implementation Guide*.

**Note:** Only counters of type REGULAR are supported by the Oracle Mobile Field Service Store and Forward applications. Both counter values and counter property values can be entered in an Oracle Mobile Field Service Store and Forward application.

### **Setting Up Messaging:**

Confirm that Messaging has been successfully installed and implemented.

---

## Diagnostic Testing

This chapter covers the following topics:

- Overview
- Diagnostic Testing Oracle Mobile Application Foundation
- Diagnostic Testing Oracle Mobile Field Service Store and Forward Applications
- Configuring Debug Logging
- Common Issues

### Overview

Diagnostic testing can be done for the Oracle Mobile Application Foundation and the Oracle Mobile Field Service Store and Forward applications. This chapter describes how to run these diagnostics. After your initial implementation, you should run the entire set of pre-seeded diagnostic tests to verify that the implementation has been successful. Subsequently, the tests can be run whenever a problem arises.

### Diagnostic Testing Oracle Mobile Application Foundation

Please refer to the *Oracle Applications CRM System Administrator's Guide* or the online help for the CRM System Administrator Console for instructions on how to use the Oracle Diagnostics for Applications user interface.

#### Running Pre-Seeded Tests:

Use the following procedure to run the pre-seeded Oracle Mobile Application Foundation diagnostic tests:

#### Steps

1. Log in to the CRM System Administrator Console as a system administrator.

2. Click the Diagnostics tab.
3. Select **CRM Gateway for Mobile Services** from the Application drop-down list.
4. Click **Advanced**.
5. You can run any of the following pre-seeded tests.

The following table lists diagnostic tests, their descriptions, and associated symptoms and resolutions.

<b>Test</b>	<b>Description</b>	<b>Symptom</b>	<b>Resolution</b>
Mobile Concurrent Program Setup	Checks if all the mobile concurrent programs are working.	Changes from the mobile client are not applied to the enterprise system.  Users are not able to synchronize. They might get invalid username/password errors.  Many mobile application concurrent programs are not working.	Review the diagnostic report and schedule or run the concurrent program to apply changes.
Mobile User Hook Registration	Checks if mobile applications register vertical user hooks properly and the execute flag is set to run.	Changes on JTF Notes, CS Counter, or CSI Item Instance on the enterprise do not synchronize to the mobile device.	Reapply the JTM patch to register and set up the execute flag to run.
User Summary	This test shows the User Status Summary.	Users are not created properly.	Look at the test results and rerun the MANAGES MOBILE USER concurrent program.
User Detail	This test provides detailed information about a specified mobile user.	Need to investigate user history.	View user history and take appropriate action.

# Diagnostic Testing Oracle Mobile Field Service Store and Forward Applications

Run diagnostic tests to ensure that the install and operation of the Oracle Mobile Field Service Store and Forward applications is correct.

## Steps:

Complete the following steps to access the diagnostic screens of the enterprise application:

1. Log in to the CRM System Administrator Console as a system administrator.
2. Click the Diagnostics tab.
3. Select your mobile computer device from the Application drop-down list.

The Diagnostics application displays the Test Summary table and a table showing any failures in the past week.

4. Click the Advanced tab.

In the Advanced tab, enter the parameters for the test that you want to run. From the Basic tab, you can run all non-parameter tests for the application.

Refer to the *Oracle Applications CRM System Administrator's Guide* or the online help system to learn how to use the Diagnostics Framework user interface.

The client-side tests run automatically on the mobile computer device when you open an Oracle Mobile Field Service Store and Forward application. You can also run these tests any time to verify the correct setup of the Oracle Mobile Field Service Store and Forward application.

The following table lists diagnostic tests, test descriptions, observed symptoms, and proposed resolutions for Oracle Mobile Field Service Store and Forward Multiplatform application:

<b>Test for Oracle Mobile Field Service Store and Forward Application</b>	<b>Location</b>	<b>Problem</b>	<b>Resolution</b>
JTM Master Concurrent Program	Backend	Are the concurrent programs running?	Provides detailed diagnostic information about the JTM Master Concurrent Program. If necessary, it tells system administrators which settings should be modified.
Environment Setup	Backend	Is the environment correct?	It enables the administrator to check if the recommended settings are followed correctly. It also helps in identifying common issues with external authentication, installation manager, profile option values, and so on.
Responsibility	Backend	User may not have proper responsibility.	Assign proper responsibilities.
Profile values	Backend	Profile values for Field Service Palm are not set.	Set profile values.
User Hooks Registration	Backend	Hooks registration is not done.	Contact your Oracle technical support representative.
Check Concurrent Program	Backend	All required concurrent programs might not be running.	Make sure that the concurrent programs are running.

<b>Test for Oracle Mobile Field Service Store and Forward Application</b>	<b>Location</b>	<b>Problem</b>	<b>Resolution</b>
JTM Concurrent Program registration	Backend	For JTM Concurrent Program APIs are not registered.	Contact your Oracle technical support representative.
Task diagnostic	Backend	Task is assigned incorrectly.	Assign task correctly.
Check required list of values	Backend	List of values are empty.	Create all list of values.

## Configuring Debug Logging

This section describes how to configure debug logging for troubleshooting problems with mobile operations.

Oracle Mobile Field Service Store and Forward applications use the CRM Technical Foundation logging framework to log messages to a central repository that is shared by both the database and the middle tier servers. Each log message belongs to one of the following severities:

- Statement
- Procedure
- Event
- Exception
- Error
- Unexpected

UI screens give system administrators convenient and simple controls for configuring and viewing the logs. Refer to the *Oracle Applications CRM System Administrator's Guide* or the online help for the CRM System Administrator Console to learn how to use the logging screens.

### Steps:

Complete the following steps to configure logging for all modules:

1. Log in to the CRM System Administrator Console as a system administrator.
2. Navigate to `Setting > System > Debug Logging > Configuration`.
3. Set the following values:
  - `Enabled = ON`
  - `Level = Statement`
  - `Repository = Database`
  - `Module filter = include string csm%, asg%, jtm%`
4. Click **Update** to save the values.
5. Bounce Apache (the middle-tier server).

**Note:** Turn the logger off after you finish troubleshooting. This changes the values of the above fields back to their original values. Logging at this level of detail consumes resources and could impact the performance of your system.

## Common Issues

This section describes the most common issues encountered in the implementation of the Oracle Mobile Field Service Store and Forward applications.

### Viewing Items Stocked in a Subinventory:

#### Problem

Trackable items that have been stocked in a subinventory are not displayed in the inventory list of the application.

#### Resolution

This may be a replication issue. Please check that the install base instances have been created for the stocked items in the back of the database. If the instances do exist but the items still do not display on the laptop, please contact Oracle Support.

---

## Administrative Tasks

### Overview

This chapter describes how to perform the following administrative tasks for the Oracle Mobile Application Foundation:

- Setting the Conflict Resolution Rule
- Configuring the Interapplication Bar
- Manually Creating Mobile Users
- Managing Concurrent Programs.
- Viewing User Synchronization Statistics
  - Viewing Synchronization Summary Tables on the Home Page
  - Viewing Synchronization Details on the Sync Detail Page
  - Viewing Synchronization Summary Reports
  - Viewing Engineer Synchronization Details
  - Viewing Load Distribution
- Working With Upload Errors
  - Understanding Upload Errors
  - Purging Upload Errors
  - Viewing the Upload Errors Summary

- Managing Deferred Upload Errors
  - Working With the Deferred Upload Errors of a Particular User Synchronization Session
  - Editing the Details of Deferred Upload Errors
- Managing Discarded Upload Errors
- Managing Passed Upload Errors
- Defining and Editing Mobile Queries
- Setting Profiles for E-Mail Mobile Queries

**Additional Information: Note:** There is a mobile administrator responsibility that is similar to the system administrator responsibility. Any user who has been granted the mobile administrator responsibility can perform administrative activities for the Oracle Mobile Application Foundation. You must log in as a user with this responsibility to access the Mobile Field Service Administrator Console, which is where the relevant administration screens are located.

## Setting the Conflict Resolution Rule

The profile option, JTM: Application Conflict Rule, specifies the conflict resolution rule that is used in case of updates to the same entity by both the enterprise system and the Oracle Mobile Field Service Store and Forward applications.

This profile option determines how the Oracle Mobile Field Service Store and Forward applications make updates to the database. The following are the possible types of updates:

- *Client wins.* Changes made by the mobile user are always applied to the enterprise database. No timestamp checking is done.
- *Server wins.* Changes made by the mobile user are applied to the enterprise database if the record has not been modified since the mobile user last synchronized. If the record has been modified in the meanwhile, then the mobile user's change is not applied.

## Configuring the Interapplication Bar

You can set up the Interapplication Bar to conveniently navigate between the CRM System Administrator Console and the Mobile Application Foundation Administration

Console. This is an optional procedure. Performing this setup will allow administrators to easily navigate from the Mobile Application Foundation Administration Console to the CRM System Administrator Console in order to run diagnostic tests and check error logs.

To navigate between the CRM System Administrator Console and the Mobile Application Foundation Administration Console, you will need to create a user who has both mobile administrator ("MobileAdmin") and system administrator ("CRM HTML administration") responsibilities. Log in as that user to the CRM System Administrator Console and set up the Interapplication Bar with the two applications being "CRM Gateway for Mobile Services" and "CRM HTML administration".

Refer to the *Oracle E-Business Suite CRM System Administrator's Guide* or the online help for the CRM System Administrator Console for instructions on how to successfully set up the Interapplication Bar.

## Manually Creating Mobile Users

The Oracle Mobile Application Foundation allocates resources for mobile users when they are assigned a responsibility that is associated with a mobile application (such as the responsibility "Oracle Mobile Field Service"). The concurrent program MANAGES MOBILE USERS runs periodically and creates or removes these mobile user resources based on the assigned responsibilities. A user who recently has been assigned a mobile responsibility will not be able to synchronize until after this concurrent program runs. The user cannot change his or her password on the mobile client, and will need to do so online.

During system testing, it may be helpful to create users more rapidly. In this case, you can manually run the MANAGES MOBILE USERS concurrent program using the Concurrent Manager.

The home page of the Mobile Application Foundation Console displays the number of users who do not have the correct mobile subscriptions. To view the error messages associated with the mobile user subscription failures, run the diagnostic tests described in "Diagnostic Testing Oracle Mobile Application Foundation", page 4-1.

## Managing Concurrent Programs

The JTM master concurrent program runs all concurrent jobs registered by Oracle Mobile Field Service Store and Forward applications. The JTM master concurrent program uses the following category types:

- TRANSACTION
- LOOKUP
- INVENTORY

- CUSTOMER
- PURGE

The Mobile Concurrent Program Summary page displays the JTM concurrent program details for all the concurrent programs related to Oracle Mobile Field Service Store and Forward. The mobile concurrent program displays how many times the program has currently ran, and the maximum and the minimum times taken to finish the program.

The concurrent program screens enable you to view the status of mobile logic (PL/SQL) modules, which process the various business events for the Oracle Mobile Field Service Store and Forward applications. The mobile logic modules are grouped in various categories and the frequency of their execution is based on the category. You can change the mobile logic modules from one category to another or add a new category and hence change the frequency of execution, based on the business requirements. These screens can also be used to understand the resources used by mobile logic modules, identify and resolve any performance bottlenecks.

### Steps:

Complete the following steps to view the concurrent program summary and view the log history for a concurrent program.

1. Login as a Mobile Field Service Administrator.
2. Select the Concurrent Program tab.

The Concurrent Program Summary page appears.

### Concurrent Program Summary page

Category	Enabled	Phase	Status	Scheduled By	Apply Interval	Apply Interval Unit	Scheduled Interval	Number of Runs	Minimum Elapsed Time	Maximum Elapsed Time	Average Elapsed Time	Last Start Date	Last End Date	View Log
Customer	Y						0	0						<a href="#">View Log</a>
Inventory	Y						0	0						<a href="#">View Log</a>
Lookup	Y						0	0						<a href="#">View Log</a>
Purge	Y						0	0						<a href="#">View Log</a>
Transaction	Y						0	0						<a href="#">View Log</a>

3. Click the View Log link for a concurrent program in the table row.

The Concurrent Log page appears displaying the log details of the program from the first run of the program. The log page describes the status of the concurrent program in each run.

## Mobile Concurrent Program Details:

The Mobile Concurrent Program Detail page displays the details for each of the concurrent programs. Using this page, you can re-assign a concurrent program to another category. For example, you can re-assign a concurrent program from LOOKUP to TRANSACTION by making a selection from a drop-down list. You can also enable and disable concurrent programs by specifying YES or NO from a drop-down list. These changes can be done even in runtime and will be effective from the next run of the concurrent program.

### Concurrent Program Detail page

The screenshot displays the Oracle Mobile Field Service Administrator interface. At the top, there is a navigation bar with the Oracle logo and the text "Mobile Field Service Administrator". Below this, there are several tabs: "Home", "Sync Reports", "Upload Errors", "Concurrent Program", "Controlled Upgrade", and "Technician Customers". The "Concurrent Program" tab is currently selected. Below the tabs, there are several input fields and buttons for configuring a concurrent program. The fields include "Procedure Name", "Category", "Status", "Enabled", "Sync Start Time", and "Sync End Time". There are also "Go" and "Update" buttons. Below the configuration fields, there is a table with the following columns: "Select", "Procedure Name", "Start Date", "End Date", "Elapsed Time", "Category", "Enabled", "Status", and "View Log". The table contains 10 rows of data, each representing a different concurrent program. The "Select" column has checkboxes, and the "Enabled" column has dropdown menus with "Yes" and "No" options. The "Status" column shows "FINE" for all programs. The "View Log" column has links to view the log for each program.

Select	Procedure Name	Start Date	End Date	Elapsed Time	Category	Enabled	Status	View Log
<input type="checkbox"/>	CSM_BUS_PROCESS_TXNS_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:05:24	17-JUL-2008 04:05:30	6	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_CURRENCY_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:05:30	17-JUL-2008 04:05:31	1	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_LOOKUP_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:05:31	17-JUL-2008 04:05:44	13	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_MESSAGES_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:05:44	17-JUL-2008 04:05:57	13	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_PROFILE_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:05:57	17-JUL-2008 04:06:04	7	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_SYSTEM_ITEM_EVENT_PKG.REFRESH_ACC	17-JUL-2008 01:14:05	17-JUL-2008 01:15:12	67	Inventory	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_TXN_BILL_TYPER_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:06:04	17-JUL-2008 04:06:06	2	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_SYSTEM_ITEM_EVENT_PKG.REFRESH_MTL_ONHAND_QUANTITY	17-JUL-2008 01:15:13	17-JUL-2008 01:15:27	14	Inventory	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_UOM_EVENT_PKG.REFRESH_ACC	17-JUL-2008 04:06:06	17-JUL-2008 04:06:08	2	Lookup	Yes	FINE	<a href="#">View Log</a>
<input type="checkbox"/>	CSM_UTIL_PKG.REFRESH_ALL_APP_LEVEL_ACC	17-JUL-2008 04:06:08	17-JUL-2008 04:06:08	0	Lookup	Yes	FINE	<a href="#">View Log</a>

## Mobile Concurrent Query Summary:

The following graphic contains the details for a specific query. This information appears in table format, providing such details as the query statement, description, and last start and end dates.

## Concurrent Query Summary page

Oracle Mobile Field Service Administrator

Home | Sync Reports | Upload Errors | **Concurrent Program** | Controlled Upgrade | Technician Customers

Program Summary | Program Detail | **Query Summary** | Category Definition

Concurrent Query Summary Page

Query ID:  Enabled:   
 Access Table:  Sync Start Time:    
 Status:  Sync End Time:    
 Description Like:

Go

Query ID	Query Statement	Description	Start Date	End Date	Elapsed Time	Enabled	Status	Access Table Name	View Log
2	SELECT DISTINCT bpt.BUSINESS_PROCESS_ID, bpt.TRANSACTION_TYPE_ID, bpt.LAST_UPDATE_DATE FROM CS_BUSINESS_PROCESSES bpr, CS_BUS_PROCESS_TXNS bpt WHERE bpr.BUSINESS_PROCESS_ID = bpt.BUSINESS_PROCESS_ID AND bpr.FIELD_SERVICE_FLAG = 'Y'	This concurrent query populates/processes the access table JTM_CS_BUS_PROCESS_TXNS_ACC for pub item CS_BUS_PROCESS_TXNS	24-JAN-2006 19:44:00	24-JAN-2006 19:44:00	0	N	Fine	JTM_CS_BUS_PROCESS_TXNS_ACC	<a href="#">View</a> <a href="#">Log</a>
3	select * from cs_transaction_types_b	This concurrent query populates/processes the access table JTM_CS_TRANSACTION_TYPES_ACC for pub item CS_TRANSACTION_TYPES_VL	24-JAN-2006 19:44:00	24-JAN-2006 19:44:00	0	N	Fine	JTM_CS_TRANSACTION_TYPES_ACC	<a href="#">View</a> <a href="#">Log</a>
5	select * from cs_business_processes where field_service_flag='Y'	This concurrent query populates/processes the access table JTM_CS_BUSINESS_PROCESSES_ACC for pub item CS_BUSINESS_PROCESSES	24-JAN-2006 19:44:00	24-JAN-2006 19:44:00	0	N	Fine	JTM_CS_BUSINESS_PROCESSES_ACC	<a href="#">View</a> <a href="#">Log</a>
6	select * from cs_incident_cycle_steps	This concurrent query populates/processes the access table JTM_CS_INCL_CYCLE_STEPS_ACC for pub item CS_INCIDENT_CYCLE_STEPS	24-JAN-2006 19:44:00	24-JAN-2006 19:44:00	0	N	Fine	JTM_CS_INCL_CYCLE_STEPS_ACC	<a href="#">View</a> <a href="#">Log</a>

## Mobile Concurrent Category Summary:

The following graphic displays the definition of each category. The categories are defined in a table by such information as category type, description, and start and end active dates.

You can move queries from one category to another or create your own category and then seed queries in them.

## Category Summary page

Oracle Mobile Field Service Administrator

Home | Sync Reports | Upload Errors | **Concurrent Program** | Controlled Upgrade | Technician Customers

Program Summary | Program Detail | Query Summary | **Category Definition**

Category Summary Page

Add

Lookup Type	Lookup Code	Meaning	Description	Enabled	Start Active Date	End Active Date
CON_PROGRAM_CATEGORY	CUSTOMER	Customer	Customer	Y		
CON_PROGRAM_CATEGORY	INV	Inventory	Inventory	Y		
CON_PROGRAM_CATEGORY	LOOKUP	Lookup	lookup	Y		
CON_PROGRAM_CATEGORY	PURGE	Purge	purge	Y		
CON_PROGRAM_CATEGORY	TXC	Transaction	Transaction	Y		

Home | Sync Reports | Upload Errors | Concurrent Program | Controlled Upgrade | Technician Customers | Home | Logout | Preferences | Diagnostics

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## Viewing User Synchronization Statistics

This section covers the following tasks:

- Viewing Synchronization Summary Tables on the Home Page, page 5-7

- Viewing Synchronization Details on the Sync Detail Page, page 5-7
- Viewing Synchronization Summary Reports, page 5-9
- Viewing Engineer Synchronization Details, page 5-10
- Viewing Load Distribution, page 5-11

## Viewing Synchronization Summary Tables on the Home Page

The home page of the Mobile Field Service Administrator Console provides the following features:

- The **Sync Exceptions** table:  
This table displays a summary of critical synchronization and upload errors. You can click the links provided to display detailed error reports.
- The **Sync Summary** table:  
This table displays a summary of synchronization metrics: You can view the number of synchronizations that occurred on the current date, the average time per synchronization, and the maximum synchronization time.

To navigate to the home page of the Mobile Field Service Administrator Console, log in as Mobile Field Service Administrator. The home page will automatically display the two tables as described above.

### Screenshot

An image of the Mobile Field Service Administrator Console home page is provided below:

**Mobile Field Service Administrator Console - Home page**

Sync Exceptions			
Today's Sync Errors	Total Sync Errors	Today's Deferred Errors	Total Deferred Errors
0	19	0	9

Sync Summary		
Users Synced Today	Average Sync Time (Sec)	Maximum Sync Time (Sec)
0		

## Viewing Synchronization Details on the Sync Detail Page

Use this procedure to view details about the synchronizations of particular user sessions.

## Steps

1. In the Mobile Field Service Administrator Console, from the Home tab, click the link in the Today's Sync Errors or Total Sync Errors column.

You can click the link in the Today's Deferred Errors or Total Deferred Errors column to view the details of the deferred upload errors.

The Sync Details page appears. On the Sync Detail Page, the synchronization details for each user session are displayed.

2. Review the data provided, which includes user name, the time of the synchronization, the data set size of the last synchronization, if any exceptions occurred during the synchronization, and how many upload errors have occurred for that particular user.
3. If desired, you can filter what data appears on the Sync Detail page. At the top of the page you can search by user name, synchronization time, and whether there was an exception in the synchronization.

You can search by one or more of these parameters. To do so, enter values as desired into the fields, and then click Go to perform the search.

## Screenshot

An image of the Sync Detail page is provided below:

### Sync Detail page

User Name	Employee Name	Device Type	Sync Start Time	Sync End Time	Sync Duration (Sec)	Data Set Size (Bytes)	Sync Status
DBAKER	Baker, David	LAPTOP	24-JUL-2008 17:21:24	24-JUL-2008 17:21:26	2	4536	FAILURE
DBAKER	Baker, David	LAPTOP	21-JUL-2008 14:38:53	21-JUL-2008 14:38:55	2	4579	SUCCESS
DBAKER	Baker, David	LAPTOP	21-JUL-2008 14:34:15	21-JUL-2008 14:34:30	15	4648	SUCCESS
DBAKER	Baker, David	LAPTOP	21-JUL-2008 14:11:58	21-JUL-2008 14:16:56	298	889564	SUCCESS
DBAKER	Baker, David	LAPTOP	09-JUL-2008 05:31:13	09-JUL-2008 05:35:02	229	892528	SUCCESS
DBAKER	Baker, David	LAPTOP	09-JUL-2008 05:05:06	09-JUL-2008 05:17:26	740	172159	FAILURE
DBAKER	Baker, David	LAPTOP	24-JUL-2008 17:27:39	24-JUL-2008 17:28:58	79	677549	SUCCESS
DBAKER	Baker, David	LAPTOP	03-AUG-2008 22:23:12	03-AUG-2008 22:26:31	199	677507	SUCCESS
DBAKER	Baker, David	LAPTOP	30-JUL-2008 01:26:59	30-JUL-2008 01:31:00	241	677507	SUCCESS
DEMO_OWNER	Demo_Owner,	LAPTOP	14-JUL-2008 23:15:46	15-JUL-2008 00:09:02	3196	678492	SUCCESS

There is also a daily synchronizations report, which you can access from the Sync Reports sub tab. It offers a searchable table that lists how many synchronization attempts and failures have occurred during specified hours on a given date. It also provides metrics on the average and maximum synchronization times, upload data

sizes, and download data sizes. You can filter the table by date and device type, as well as specify the range of hours (Start Time and End Time) displayed.

## Viewing Synchronization Summary Reports

For each hour of the day, the following report summarizes the synchronization for the entire system along with a graph. Use this report to view the overall synchronizing pattern of the day.

### Sync Summary Report (Daily) page (1 of 2)

**ORACLE** Mobile Field Service Administrator

Home Logout Preferences Diagnostics

Home Sync Reports Upload Errors Concurrent Program Controlled Upgrade Technician Customers

Sync Detail Sync Reports

**Sync Summary Report (Daily)**

Day 22-AUG-2008

Sync Date:  Sync Start Time: 15

Device Platform:  Sync End Time:

Group Name:

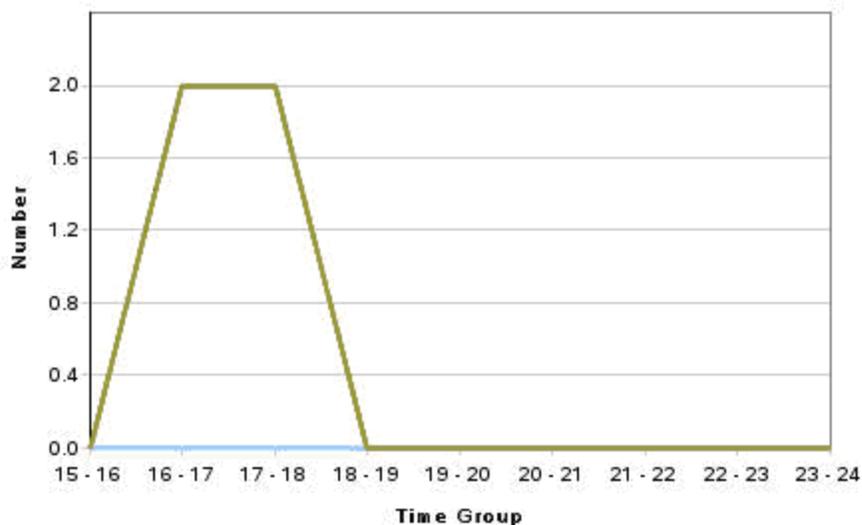
Go

Hour	Sync Attempts	Sync Failures		Sync Elapsed Time		Sync Upload Data		Sync Download Data	
		No.	%	Avg	Max	Avg	Max	Avg	Max
15 - 16	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	427	836	1322	2281	344142	687923
17 - 18	0	0	0	9	17	2281	2281	360	360
18 - 19	0	0	0	0	0	0	0	0	0
19 - 20	0	0	0	0	0	0	0	0	0
20 - 21	0	0	0	0	0	0	0	0	0
21 - 22	0	0	0	0	0	0	0	0	0
22 - 23	0	0	0	0	0	0	0	0	0
23 - 24	0	0	0	0	0	0	0	0	0
Avg				218		1801		172251	
Total	4	0							

Legend: Total (blue), Failure (light blue), Success (yellow)

### Sync Summary Report (Daily) page (2 of 2)

#### Sync Chart



The following report displays the summary of the synchronization for the entire system for each week on daily basis along with a graph. Use this report to view the overall synchronizing pattern of the week.

**Sync Summary Report (Weekly) page (1 of 2)**

**ORACLE Mobile Field Service Administrator**

Home Logout Preferences Diagnostics

Home Sync Reports Upload Errors Concurrent Program Controlled Upgrade Technician Customers

Sync Detail | Sync Reports

Sync Summary Report (Weekly)

Week from 17-AUG-2008 To 23-AUG-2008

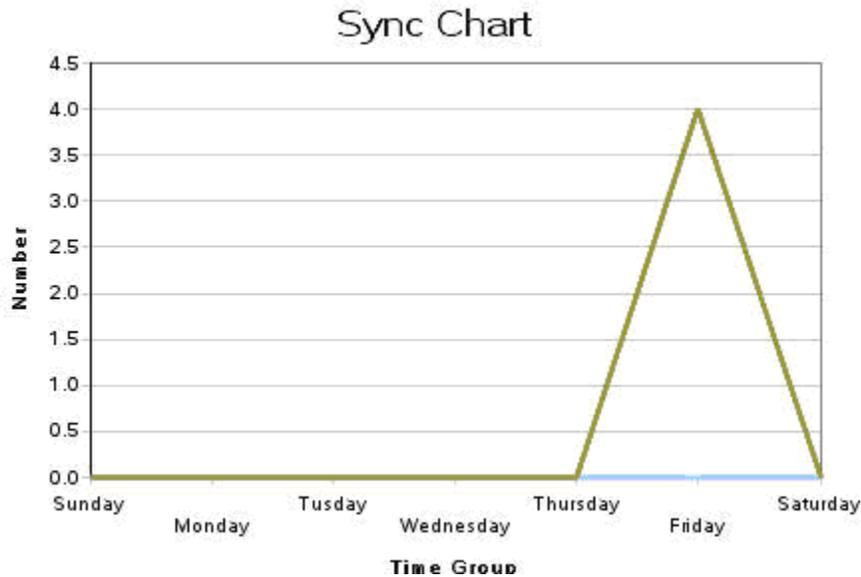
Device Type:  Sync Date:

Group Name:

Day	Sync Failures			Sync Elapsed Time		Sync Upload Data		Sync Download Data	
	Sync Attempts	No.	%	Avg	Max	Avg	Max	Avg	Max
Sunday	0	0	0	0	0	0	0	0	0
Monday	0	0	0	0	0	0	0	0	0
Tuesday	0	0	0	0	0	0	0	0	0
Wednesday	0	0	0	0	0	0	0	0	0
Thursday	0	0	0	0	0	0	0	0	0
Friday	4	0	0	218	836	1802	2281	172251	687923
Saturday	0	0	0	0	0	0	0	0	0
Avg			0	218		1802		172251	
Total	4	0							

Legend: Total (blue), Failure (light blue), Success (yellow)

**Sync Summary Report (Weekly) page (2 of 2)**



**Viewing Engineer Synchronization Details**

The following report summarizes the synchronizations for all engineers for each week. Use this report to compare the different synchronizing activities for each engineer.

## User Sync Summary Report (Weekly) page

User Name	Employee Name	Sync Attempts	No.	%	Avg	Max	Avg	Max	Sync Upload Data	Sync Download Data
DBAKER	Baker, David	4		0	0	218	836	1802	2281	172251 687923
Avg						218		1802		172251
Total		4		0						

The following report displays the details of all the synchronizations for an engineer for each week. Use this report to view the detailed statistics of all the synchronizations done by the engineer.

## User Sync Detail Report (Weekly) page

User Name	Employee Name	Status	Sync Start Time	Sync End Time	Elapsed Time	Upload Data	Byte	Download Data	Byte
DBAKER	Baker, David	SUCCESS	22-AUG-2008 16:20:49	22-AUG-2008 16:34:45	836		363		687923
DBAKER	Baker, David	SUCCESS	22-AUG-2008 16:43:37	22-AUG-2008 16:43:54	17		2281		360
DBAKER	Baker, David	SUCCESS	22-AUG-2008 17:06:44	22-AUG-2008 17:07:01	17		2281		360
DBAKER	Baker, David	SUCCESS	22-AUG-2008 17:09:37	22-AUG-2008 17:09:38	1		2281		360

## Viewing Load Distribution

The following report displays the load distribution for each hour over a span of days. This report helps you in traffic modelling and estimation of the load on the system.

**Sync Load Report (Weekly) page (1 of 2)**

**ORACLE** Mobile Field Service Administrator

Home | **Sync Reports** | Upload Errors | Concurrent Program | Controlled Upgrade | Technician Customers

Sync Detail | **Sync Reports**

Sync Load Report (Weekly)  
Week from 17-AUG-2008 To 23-AUG-2008

Device Type: [Dropdown] Sync Date: [Text Box]

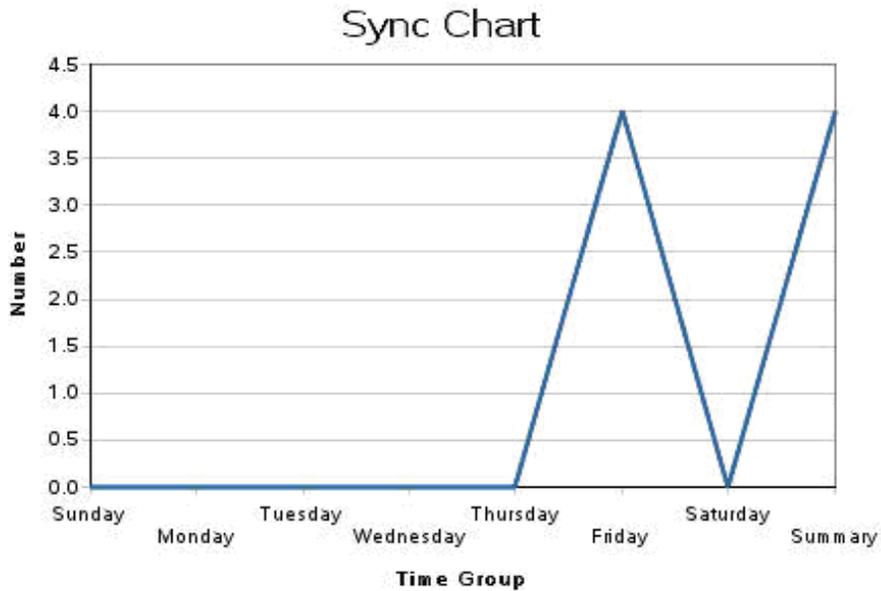
Group Name: [Text Box] [Search Icon]

[Go]

Day	Hour 0~1	Hour 1~2	Hour 2~3	Hour 3~4	Hour 4~5	Hour 5~6	Hour 6~7	Hour 7~8	Hour 8~9	Hour 9~10	Hour 10~11	Hour 11~12	Hour 12~13	Hour 13~14	Hour 14~15	Hour 15~16	Hour 16~17	Hour 17~18	Hour 18~19	Hour 19~20	Hour 20~21	Hour 21~22	
Sunday																							
Monday																							
Tuesday																							
Wednesday																							
Thursday																							
Friday																	2	2					
Saturday																							
Summary																	2	2					

[Total]

**Sync Load Report (Weekly) page (2 of 2)**



**Working with Upload Errors**

This section covers the following tasks:

- Understanding Upload Errors, page 5-13
- Purging Upload Errors, page 5-14
- Viewing the Upload Errors Summary, page 5-14

## Understanding Upload Errors

During upload, some of the data that is synchronized might not be applied to the enterprise database.

The following situations might cause upload errors:

- **System Issues:** System issues might cause upload errors if the system is on a different mobile patch level than what is required. Administrators should verify the correct patch levels if this situation is suspected.
- **Setup Issues:** Setup issues might cause upload errors if the correct business process type or profile setting is not set on the enterprise system. For example, in an expense line, it is necessary that the expense type is set correctly. If the expense type is set as "lunch" on the enterprise system while on the mobile device the expense line is set as "dinner," then this issue might cause an upload error.
- **Faulty Data or Data Conflicts:** Faulty data or data conflicts can also cause upload errors. For example, multiple people attempting to update the same record can cause data conflicts where the server and the client to go out of sync.

The Mobile Application Foundation maintains a log of all errors that occur during the upload process. In the Upload Error pages, you can view and reapply these errors. In the case of a system or setup issue, you only need to fix the system or setup issue and then reapply the error. In the case of faulty data or data conflicts, you need to modify the data and then apply the error.

You can change data or system elements as needed and then reapply errors to the enterprise database. If they are successful, then you can delete them from the error tables. If they continue to fail, then you can choose to either modify them once more and try again, or to discard the failed errors and delete them from the error tables.

The Mobile Application Foundation logs every user synchronization session that has errors during upload, as well as the actual errors. For example, a user synchronization session could consist of uploading two service requests and three debrief lines. In this session, suppose two of the debrief lines failed to be applied to the enterprise system. This session would have two upload errors. You can choose to discard one or both of these errors. However, when you reapply even one of the errors, all the errors in the user session will be reapplied. Therefore, it is recommended that you make changes to all the errors in a synchronization session before reapplying the session.

Depending on how they are handled by the administrator, upload errors can be classified as follows:

- **Deferred:** These transactions did not go through to the main database tables. Either they have never been reapplied, or they have been reapplied multiple times and always failed.
- **Passed:** These transactions have been successfully reapplied. Only transactions that

originally failed and later were successfully reapplied are shown here. Passed upload errors can be purged (permanently deleted) from the system by an administrator.

- **Discarded:** These are transactions that you want to remove from the system because reapplying them has never been successful. Discarded upload errors are analogous to files that are in the "Recycle Bin" or the "Trash." Discarded upload errors can be purged (permanently deleted) from the system by an administrator.

## Purging Upload Errors

Administrators should periodically purge all stored upload errors, because the table in the enterprise system which holds them will grow infinitely large unless its contents are occasionally removed.

## Viewing the Upload Errors Summary

Use this procedure to view the upload errors summary.

### Steps

1. In the Mobile Field Service Administrator Console, select the Upload Errors tab.

The Upload Error Summary page appears providing summary information for deferred, discarded, and passed upload errors.

2. To view further information about the errors, click the appropriate View link in the Detail column.

Alternatively, you can click a sub tab to navigate to the respective detail page for that error type.

### Screenshot

An image of the Upload Error Summary page is provided below:

#### Upload Error Summary page

Upload Name	Sessions	Upload Errors	Detail
Deferred	9	20	<a href="#">View</a>
Discarded	0	0	
Passed	0	0	
Total	0	20	

## Managing Deferred Upload Errors

Upload errors are generated during the upload process when some of the data fails to be applied to the enterprise database. Upload errors can be caused by the following:

- System issues.

It is possible that the system is on a different mobile patch level than what is required.

- Setup issues.

The correct business process type or the correct profile setting is not set on the enterprise system. For example, it is necessary that the expense type for an expense line is set correctly.

- Faulty data or conflicts.

Oracle Mobile Application Foundation maintains a log of all upload errors. You can use the Mobile Field Service Administrator Console to view and manage these errors.

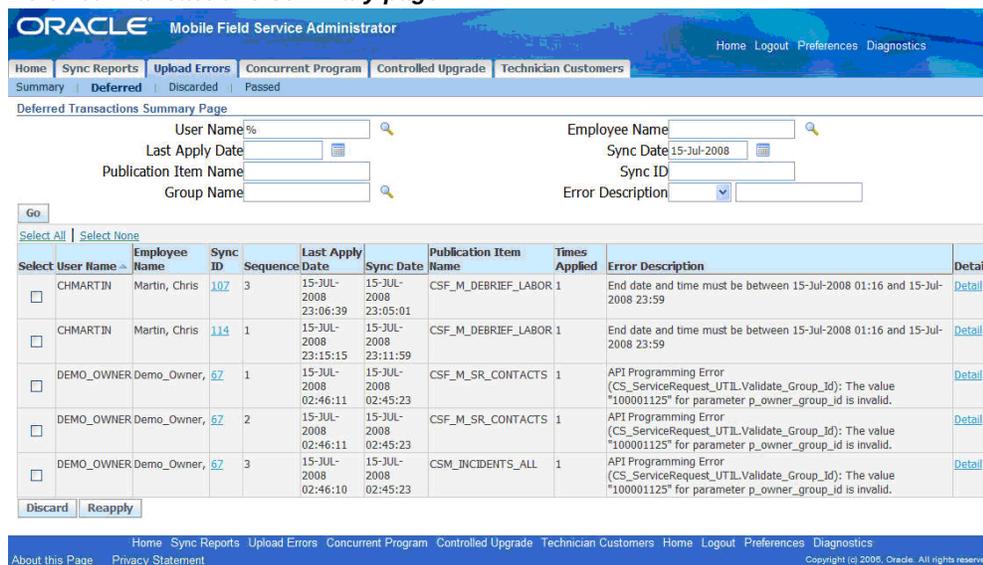
Deferred upload errors are transactions that did not go through to the main database tables. Either they have never been reapplied, or they have been reapplied multiple times and always failed.

### **To Manage Deferred Upload Errors:**

Use this procedure to manage deferred upload errors:

1. In the Mobile Field Service Administrator Console, select the Upload Errors tab and then the Deferred sub tab to navigate to the Deferred Transactions Summary page.

## Deferred Transactions Summary page



Deferred Transactions Summary Page

User Name%  Employee Name

Last Apply Date  Sync Date

Publication Item Name  Sync ID

Group Name  Error Description

Select	User Name	Employee Name	Sync ID	Sequence	Last Apply Date	Sync Date	Publication Item Name	Times Applied	Error Description	Detail
<input type="checkbox"/>	CHMARTIN	Martin, Chris	107	3	15-JUL-2008 23:06:39	15-JUL-2008 23:05:01	CSF_M_DEBRIEF_LABOR	1	End date and time must be between 15-Jul-2008 01:16 and 15-Jul-2008 23:59	<a href="#">Detail</a>
<input type="checkbox"/>	CHMARTIN	Martin, Chris	114	1	15-JUL-2008 23:15:15	15-JUL-2008 23:11:59	CSF_M_DEBRIEF_LABOR	1	End date and time must be between 15-Jul-2008 01:16 and 15-Jul-2008 23:59	<a href="#">Detail</a>
<input type="checkbox"/>	DEMO_OWNER	Demo_Owner,	67	1	15-JUL-2008 02:46:11	15-JUL-2008 02:45:23	CSF_M_SR_CONTACTS	1	API Programming Error (CS_ServiceRequest_UTIL.Validate_Group_Id): The value "100001125" for parameter p_owner_group_id is invalid.	<a href="#">Detail</a>
<input type="checkbox"/>	DEMO_OWNER	Demo_Owner,	67	2	15-JUL-2008 02:46:11	15-JUL-2008 02:45:23	CSF_M_SR_CONTACTS	1	API Programming Error (CS_ServiceRequest_UTIL.Validate_Group_Id): The value "100001125" for parameter p_owner_group_id is invalid.	<a href="#">Detail</a>
<input type="checkbox"/>	DEMO_OWNER	Demo_Owner,	67	3	15-JUL-2008 02:46:10	15-JUL-2008 02:45:23	CSM_INCIDENTS_ALL	1	API Programming Error (CS_ServiceRequest_UTIL.Validate_Group_Id): The value "100001125" for parameter p_owner_group_id is invalid.	<a href="#">Detail</a>

Home Sync Reports Upload Errors Concurrent Program Controlled Upgrade Technician Customers Home Logout Preferences Diagnostics

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2. If desired, you can search for errors by one or more of the provided parameters: user name, synchronization date, publication item name, or the error description that failed. The default result set displays all user synchronization sessions that failed. To perform a search, enter values into the appropriate fields, and then click **Go**. You can use the percent sign (%) as a wildcard character.
3. Review the Deferred Transactions Summary table, which displays a summary of user synchronization session errors. The table contains the following columns:
  - **User Name:** The name of the mobile user whose data had errors.
  - **Synch ID:** The ID of the synchronization session.
  - **Last Apply Date:** The date and time at which the user last synchronized the data.
  - **Error Count:** The number of errors that have occurred.
  - **Times Applied:** This displays the number of times the transaction was reapplied unsuccessfully, after it was deferred. For a new upload error, the value is "1."
  - **Select:** In this column you can select a check box to work with a particular error (you can reapply it, discard it, or view its details).
4. To view further details about a particular user synchronization session, click the **Sync ID** link located in that row in the table.

The Deferred Transaction Detail page appears.

5. To edit transactions details, click the **Details** link located in that row in the table.  
The Transaction Edit page appears.
6. To discard errors, select the appropriate check box(es), then click the **Discard** button.
7. To reapply errors, select the appropriate check box(es), then click the **Reapply** button.

### To Work with the Deferred Upload Errors of a Particular User Synchronization Session:

Use this procedure to work with the deferred upload errors of a particular user synchronization session:

1. To reach the Deferred Transactions Detail page, follow this navigation path in the Mobile Field Service Administrator Console:
  1. Select the Upload Errors tab.
  2. Select the Deferred sub tab.
  3. Click a **Sync ID** link.

#### Deferred Transactions Detail page

Sequence Name	Publication Name	Publication Item Name	Publication Wrapper Package Name	Last Apply Date	Sync Date	Error Detail	Detail
3	SERVICEP	CSF_M_DEBRIEF_LABOR	CSM_SERVICEP_WRAPPER_PKG	15-JUL-2008 23:06:39	15-JUL-2008 23:05:01	End date and time must be between 15-Jul-2008 01:16 and 15-Jul-2008 23:59	<a href="#">Detail</a>

The Deferred Transactions Detail page appears displaying information about the user synchronization session and the errors that occurred in that session. The error information displayed includes the following:

1. **Sequence Number:** A synchronization session includes all the records updated by the mobile user. The sequence number indicates the order of this record among the records that were applied to the enterprise database.
2. **Publication Name:** Publication name refers to a group of mobile tables which

comprise the data store for the mobile application in the mobile device. A mobile application is composed of Publications (data) and a mobile application (code).

3. **Publication Item Name:** Publication item names are the names of the mobile tables in Oracle Mobile Field Service Store and Forward application. A publication item is part of a publication.
4. **Publication Wrapper Package Name:** The wrapper name is the name of the PL/SQL packaged procedure which is responsible for applying the client changes to the enterprise database.
5. **Last Apply Date:** The date when the error was last applied.
6. **Error Detail**

2. To access the page where you can view and edit the details of a particular error, click the appropriate **Detail** link.

The Transaction Edit page appears.

### **To Edit the Details of Deferred Upload Errors:**

Use this procedure to edit the details of a particular deferred upload error:

1. To reach the Transaction Edit page where you can edit the details of deferred upload errors, follow one of these two navigation paths in the Mobile Field Service Administrator Console:
  1. Select the Upload Errors tab.
  2. Select the Deferred sub tab.
  3. Click a **Detail** link in the table, opening the Transaction Edit page.

Alternative method.

1. Select the Upload Errors tab.
2. Select the Deferred sub tab.
3. Click the **Sync ID** link in the table, opening the Deferred Transactions Detail page.
4. Click the **Detail** link in the table, opening the Transaction Edit page.

## Transaction Edit page

ORACLE Mobile Field Service Administrator

Home | Sync Reports | Upload Errors | Concurrent Program | Controlled Upgrade | Technician Customers

Summary | Deferred | Discarded | Passed

Transaction Edit Page

User Name: CHMARTIN Sync ID: 107  
Publication Item Name: CSF\_M\_DEBRIEF\_LABOR Sequence: 3  
Error Description: End date and time must be between 15-Jul-2008 01:16 and 15-Jul-2008 23:59

DEBRIEF\_LINE\_ID: 1000001000047  
INVENTORY\_ITEM\_ID: 225885  
TXN\_BILLING\_TYPE\_ID: 619  
TASK\_ASSIGNMENT\_ID: 451415  
RESOURCE\_ID: 100001526  
LABOR\_START\_DATE: 16-JUL-2008  
LABOR\_END\_DATE: 16-JUL-2008  
BUSINESS\_PROCESS\_ID: 1164  
LAST\_UPDATE\_DATE: 16-JUL-2008  
QUANTITY: 2  
UOM\_CODE: HR  
SERVICE\_DATE: 16-JUL-2008  
ITEM\_NAME: FSLaborR12  
ITEM\_DESCRIPTION: Labor Item  
TRANSACTION\_TYPE\_ID: 593  
LABOR\_REASON\_CODE: DIAGNOSIS  
ATTRIBUTE1:  
ATTRIBUTE2:

Save Discard

2. The Transaction Edit Page displays details about a particular deferred upload error. On this page, you can do one of the following:
  - Discard this error: Click **Discard**.
  - Change the values of this error: If faulty values are causing the upload error, you can edit values as desired in the fields provided, and then click **Save** to apply changes.

## Managing Discarded Upload Errors

Discarded upload errors are transactions that you want to remove from the system. Reasons for discarding transactions include the following:

- Reapplying them has never been successful.
- The mobile user entered an incorrect value and wants to undo the transaction.
- The transaction has become old due to multiple failures and the user has created more recent transactions.

Discarded errors are analogous to files in the "Recycle Bin" or the "Trash." Use this procedure to manage discarded upload errors.

### To Manage Discarded Upload Errors:

1. In the Mobile Field Service Administrator Console, select the Upload Errors tab and

then the Discarded sub tab to navigate to the Discarded Transactions Summary page.

### Discarded Transactions Summary page

The screenshot shows the Oracle Mobile Field Service Administrator interface. At the top, there is a navigation bar with the Oracle logo and the title 'Mobile Field Service Administrator'. Below this, there are several tabs: Home, Sync Reports, Upload Errors, Concurrent Program, Controlled Upgrade, and Technician Customers. The 'Discarded' tab is currently selected. Below the tabs, there is a search area with several input fields: User Name, Last Apply Date, Publication Item Name, Group Name, Employee Name, Sync Date, Publication Wrapper Package Name, and Error Description. A 'Go' button is located below the search fields. Below the search area, there is a table with the following columns: Select, User Name, Employee Name, Sync ID, Sequence, Publication Item Name, Last Apply Date, Sync Date, Times Applied, and Error Description. The table currently shows 'No results found.' and a 'Purge' button is located below the table.

2. If desired, you can search for errors by one or more of the provided parameters: user name, synchronization date, publication item name, or the name of the wrapper that failed. The default result set displays all user synchronization sessions that have been discarded. To perform a search, enter values into the appropriate fields and then click **Go**. You can use the percent sign (%) as a wildcard character.
3. Review the Discarded Transactions Summary table, which lists discarded user synchronization session errors. The table contains the following columns:
  - **User Name:** The name of the mobile user whose data had errors.
  - **Synch ID:** The ID of the synchronization session.
  - **Last Apply Date:** The date and time at which the user last synchronized the data.
  - **Error Count:** The number of errors that have occurred.
  - **Times Applied:** This column displays the number of times the transaction was reapplied unsuccessfully, after it was deferred. For a new upload error, the value is "1."
  - **Select:** In this column, you can select which errors you want to purge.
4. To purge discarded errors, ensure that the errors that you want to purge are selected in the table. Alternatively, you can purge all errors by clicking **Select All** and then **Purge**.

**Note:** Purging will permanently delete the discarded errors from

the system.

## Managing Passed Upload Errors

Passed upload errors are transactions have been successfully reapplied. Please note that only transactions that originally failed and later were successfully reapplied are shown in the Upload Errors tab. Use this procedure to manage passed upload errors.

### To Manage Passed Upload Errors:

1. In the Mobile Field Service Administrator Console, select the Upload Errors tab and then the Passed sub tab to navigate to the Passed Transactions Summary page.

#### Passed Transactions Summary page

The screenshot displays the Oracle Mobile Field Service Administrator interface. At the top, there are navigation tabs: Home, Sync Reports, Upload Errors (selected), Concurrent Program, Controlled Upgrade, and Technician Customers. Under the Upload Errors tab, there are sub-tabs: Summary, Deferred, Discarded, and Passed (selected). The main content area is titled "Passed Transactions Summary Page" and contains several search filters: User Name, Last Apply Date, Publication Item Name, Group Name, Employee Name, Sync Date, Publication Wrapper Package Name, and Error Description. A "Go" button is located below the filters. Below the filters is a table with the following columns: Select User Name, Employee Name, Sync ID, Sequence, Publication Item Name, Last Apply Date, Sync Date, Times Applied, and Error Description. The table currently shows "No results found." and a "Purge" button is located below the table. The footer of the page includes "About this Page", "Privacy Statement", and "Copyright (c) 2008, Oracle".

2. If desired, you can search for errors by one or more of the provided parameters: user name, synchronization date, publication item name, or the name of the wrapper that failed. The default result set displays all passed errors. To perform a search, enter values into the appropriate fields, then click **Go**. You can use the percent sign (%) as a wildcard character.
3. Review the Passed Transactions Summary table, which lists passed user synchronization session errors. The table contains the following columns:
  - **User Name:** The name of the mobile user whose data had errors.
  - **Sync ID:** The ID of the synchronization session.
  - **Last Apply Date:** The date and time at which the user last synchronized the data.
  - **Error Count:** The number of errors that have occurred.

- **Times Applied:** This column displays the number of times the transaction was re-applied unsuccessfully, after it was deferred. For a new upload error, the value is "1."
  - **Select:** In this column, you can select which errors you want to purge.
4. To purge passed errors, confirm that the errors you want to purge are checked off in the table. Alternatively, you can purge all errors by clicking **Select All** and then **Purge**.

**Note:** Purging will permanently delete the discarded errors from the system.

## Defining and Editing Mobile Queries

You can create and update mobile queries and then download them to technicians' mobile devices. When defining these queries, you give the query a name, assign it to a responsibility, and then specify its retention policy, input variables, output format, and the name of the work flow or BPEL Process that runs the query.

### To Define a New Mobile Query:

1. Log in as Mobile Field Service Administrator.
2. Select the Mobile Query tab and then the Create Mobile Query subtab.
3. Fill out the upper region of the Create Mobile Query page and use the following list that further explains certain fields in the region:
  - **Query Type:** LOV that consists of SQL, PL/SQL, and Workflow.
  - **Workflow Name:** Displays all valid workflow names that include a few seeded workflows. This is applicable only if you select the query type as Workflow.
  - **Query Text:** Supply a SQL statement that uses the table name defined the profile CSM: Mobile Query Schema Name. The specified schema must be a non-EBS, custom schema. It is null by default. All valid table names defined in the custom schema are possible. The default table is ASG\_USER.
  - **Enable for Email:** In this LOV, select Yes if you want to run this query from e-mail as well as from a Mobile Field Service device.. Select No if you want to run the query only from a Mobile Field Service device. For more steps for e-mail mobile queries, see Setting Up Mobile Queries Based on E-Mail, page 5-24.
  - **Access Restricted by Responsibility:** In this LOV, select Yes or No.

The mobile query access is controlled by responsibility if the flag is set to Yes. This means that this mobile query can be accessed only by users with the responsibility associated with this mobile query. In this case, you must set up this user as a FND\_USER in E-Business Suite. If you want to provide access to this mobile query to users who do not have an FND\_USER ID, such as non-employees or third party engineers, then set this flag to No. Doing so allows any user to run this mobile query.

**Caution:** Take extreme care when setting this flag to No. It is your responsibility to define any and all security logic as part of implementing this mobile query.

- **Output Format:**
    - Select Form if the output contains only one record.
    - Select Table if the output contains multiple records.
    - Select As an Attachment for output such as Word or Excel.
  - **Execution Mode:** Mode values may be Synchronous or Asynchronous, and Asynchronous is the default. With the synchronous mode, technicians are able to submit a query and receive the query response in a single sync session. With the asynchronous mode, technicians submit the query and synchronization with server. They will receive the Query response after the next synchronization.
4. Fill out the Query Variables region of the Create Mobile Query page and use the following list that further explains certain fields in the region:
  5. In the Query Variable region of the page, enter the variable name from the table whose value you want to query. Provide any desired default value for the variable name.
  6. Click Add Another Row to supply an additional row for another variable.
  7. Select the check boxes for the variables that you want to retain in the query template or click Delete to delete selected rows.
  8. Click save to save your named query template.
  9. Click Test to run the query for accuracy.

### **To Search for and Edit a Mobile Query:**

1. Log in as Mobile Field Service Administrator.

2. Select the Mobile Query tab and then the Search Mobile Query subtab.
3. In the upper part of the page, enter the desired elements of the query description for your search criteria and click Go.

The result of the search appears in the lower part of the page.

4. Select a mobile query for subsequent actions as defined by the following list:
  - Click Update to edit the query in the Update Mobile Query page.
  - Click Delete to remove a query from the list.
  - Click Clone to create a copy of an existing mobile query.
  - Click Run to execute the query.
  - Click Create to save the query.

## Setting Up Mobile Queries Based on E-Mail

Mobile queries are not limited to the synchronization process using store and forward client devices. Technicians can make such queries independent of these devices by using an e-mail client. For this method, as implementers and administrators you define and test queries much as you do for store and forward devices but now must perform additional steps unique to the requirements of e-mail processing.

### To Define a Mobile Query for E-Mail:

1. Perform the steps to define a mobile query in *Defining and Editing Mobile Queries*, page 5-22 and make sure that you select Yes in the Enable for Email LOV.

### To Set Server Profiles for E-Mail Mobile Queries:

Because these mobile queries are based on e-mail, you must define the target outgoing, SMTP, server and the retrieving, IMAP, server.

1. Log in as Mobile Field Service Administrator.
2. In the Oracle Mobile Field Service Administrator console, select the Mobile Query tab and then the Email Profiles Setup subtab.
3. Enter values for the following profiles. Refer as needed to their detailed descriptions in the list of profiles common to store and forward devices.
  - CSM: Email IMAP Host Name
  - CSM: Email IMAP User Name

- CSM: Email IMAP User Password
  - CSM: Email SMTP Host Name
  - CSM: Email SSL Enabled
  - CSM: Inbox for Email Interface
4. Click Save.
  5. Someone with system administrator responsibility must set the profile CSM: Notify on Email Mobile Query Exceptions.

### **To Set Status Environmental Profiles:**

For the application to resolve status query commands, several other profiles must be set.

1. Verify and if necessary, reset the following profiles:
  - CSF: Default "In Planning" task status
  - CSF: Default "Accepted" task status
  - CSF: Default "Cancelled" task status
  - CSF: Planned Task Status for Planned Task
  - CSF: Default Rejected Task Status
  - CSF: Default Task Type for Personal Tasks
  - CSF: Default Working task status



---

## Troubleshooting

This chapter covers the following topics:

- Troubleshooting the Mobile User Concurrent Program
- Reviewing Upload Errors

### Troubleshooting the Mobile User Concurrent Program

This section discusses known issues regarding the concurrent program that creates mobile users, Manages Mobile Users. This Java concurrent program creates mobile users. JDK 1.3.1 is required in the concurrent tier.

#### Problems and Resolutions

##### The Concurrent Program Fails to Create Mobile Users

**Problem:** After the patch is applied and the post-installation setup is completed, the concurrent program still does not work.

**Resolution:** Restart the concurrent managers so that the new environment settings are initialized. To find out whether a concurrent request is being initialized to JDK 1.3.1 settings, use the following script:

```
select variable_name,value
from fnd_env_context e,
fnd_concurrent_processes p,
fnd_concurrent_requests r
where p.concurrent_process_id = e.concurrent_process_id
and p.concurrent_process_id = r.controlling_manager
and r.request_id=&request_id
and e.variable_name in ('AF_JRE_TOP','AFJVAPRG','AF_CLASSPATH')
```

This script accepts a concurrent request ID and prints the environment settings for that request.

### **The Concurrent Program Only Works Intermittently**

**Problem:** The concurrent program only works intermittently.

**Resolution:** Make sure all concurrent managers are restarted. It is possible that only one concurrent manager was restarted. However, a concurrent request might be started by any of the concurrent managers. If all the concurrent managers are not restarted, then some of the requests might not have the correct settings. To verify this, use the script listed above for requests that fail.

### **The Concurrent Program Log Shows the Error Message "oracle.lite.web.resource.ResourceException: java/lang/ThreadLocal"**

**Problem:** The log generated by the concurrent request shows this error.

**Resolution:** This is the clearest indication that the JDK version is not 1.3.1. The above mentioned class (ThreadLocal) is in JDK 1.2.2 or higher. Again, check if the environment settings are correct.

### **All Environment Settings Appear Correct, But the Concurrent Program Still Does Not Work**

**Problem:** The environment settings that appear in the script listed in "The Concurrent Program Fails to Create Mobile Users", page 6-1 indicate that JDK 1.3.1 is used. However, the concurrent program still fails.

**Resolution:** Look into the concurrent request's log file and look for any exceptions. Then for each of the environment variables AF\_JRE\_TOP, AFJVAPRG, and AF\_CLASSPATH, check if the files listed exist.

## **Reviewing Upload Errors**

Upload errors are generated during the upload process when some of the data fails to be applied to the enterprise database. Upload errors can be caused by the following:

- System issues.  
It is possible that the system is on a different mobile patch level than what is required.
- Setup issues.  
The correct business process type or the correct profile setting is not set on the enterprise system. For example, it is necessary that the expense type for an expense line is set correctly.
- Faulty data or conflicts.

Oracle Mobile Application Foundation maintains a log of all upload errors. You can use the Mobile Application Foundation Administration Console to view and manage these errors. See the upload errors sections in Chapter 8 Administrative Tasks, page 5-1 for further details.

# Part 3

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## Implementing Oracle Mobile Field Service - Wireless (Online)



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# Overview of Oracle Mobile Field Service - Wireless Implementation

This chapter covers the following topics:

- Oracle Mobile Field Service - Wireless Implementation Overview
- Architectural Overview
- Terminology

## Oracle Mobile Field Service - Wireless Implementation Overview

The Oracle Mobile Field Service - Wireless application enable field technicians access to mission-critical data by accessing the enterprise database through a wireless device.

The Oracle Mobile Field Service - Wireless application is a solution for field service technicians on tethered mobile devices. This means that the device has a continuous connection to the Oracle Enterprise applications. Field service technicians connect to this application by choosing a URL on their wireless device's web browser. After completing the required login, they can access real-time information from the enterprise database.

With this solution, the field service technician can carry on his daily tasks using any mobile device with internet capabilities (with a web browser).

Oracle Mobile Field Service Wireless can be deployed over any protocols, including WML, HDML, or Tiny HTML. This solution works over any wireless standard such as, CDMA, CDPD, GSM, GPRS, HSCSD, and TDMA.

## Technology Requirements

Oracle Mobile Field Service - Wireless enables read and write functions to the enterprise database through a wireless connection between a mobile device and the Internet Service Provider (ISP).

The following components are involved:

- Enterprise Database: This is the enterprise data that field service technicians will access through a wireless device.
- Enterprise Applications Web Server: This is the http server used to connect to the enterprise applications.
- Oracle AS Wireless Edition (ASwe): This server is used to transform XML to any markup language (WML or HDML.)
- WEB-enabled wireless device: This device is capable of displaying Web pages in a web-enabled browser.

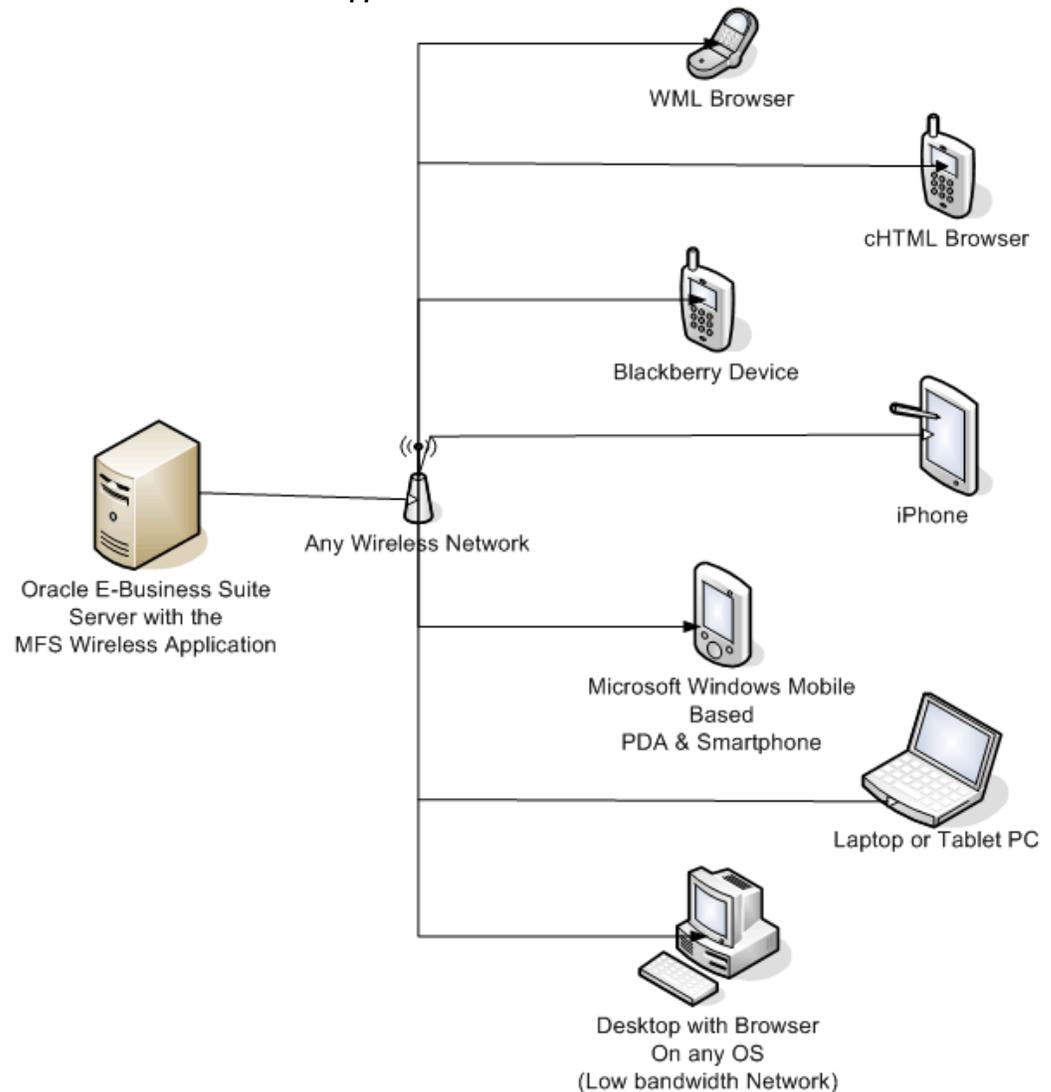
## **Architectural Overview**

This section provides an overview of the architectural structure that underpins the functionality of Oracle Mobile Field Service - Wireless.

### **Oracle Mobile Field Service Wireless**

The following diagram, Architecture of the Wireless Application, is described in the following text.

### Architecture of the Wireless Application



Oracle Mobile Field Service (MFS) Wireless is similar to any other Web-based application, but it is intelligent enough to cater to various kinds of devices like a WAP based device, cHTML (iMode) device, Blackberry, iPhone, PDA, Smartphone, laptop, tablet PC, and a normal PC.

### Application Logic for Oracle Mobile Field Service Wireless

The application logic for Oracle Mobile Field Service Wireless is as follows:

1. Device browser sends a page request.
2. Request comes to EBS MFS application over a wireless network.

3. MFS Wireless application detects the end device and requests the core EBS server for the data.
4. Core MFS Wireless application generates a Mobile XML (MXML) page with response.
5. MFS Wireless Server application has an built-in MCS server that translates the response MXML page into a mark-up language such as HTML, cHTML, or WAP, that is specific to the end device.
6. Device-specific markup page travels to the device browser over the wireless network.
7. Device browser renders the response page.

## Terminology

The following terms are used throughout this document:

- **WIRELESS\_SERVER:** This is the Web-Server for the AS Wireless Edition (for example, `http://<Wireless_Server_name>:<port number>`).
- **ENTERPRISE SERVER:** This is the web server for the Oracle Enterprise applications (e-Business applications). Typically, since there are a lot of URLs that access the Enterprise applications, depending on which applications you are using (`jtflogin.jsp`, `csfwlgnm.jsp`, and so on), this would indicate the common HTML directory.

### Example

For example, if `http://<Enterprise Host>:<Port Number>/OA_HTML/jtflogin.jsp` is the JTF URL for the Enterprise application, and `http://<Enterprise Host>:<Port Number>1/OA_HTML/csfwlgnm.jsp` is the Oracle Mobile Field Service - Wireless application, then **ENTERPRISE\_SERVER** is `http://<Enterprise Host>:<Port Number>/OA_HTML`, where `<Port Number>` is the non-ssl http port for the web server.

- **MIDDLE\_TIER:** This is the wireless option of the ASwe. The middle tier is divided into two installations: infrastructure and server. In this situation, this would refer to the Server Installation where Wireless Option is selected.
- **ORACLE\_HOME:** This is where the wireless option of the Oracle ASwe is installed. Please note there might be two **ORACLE\_HOME**s (Infrastructure Home and the middle-tier home). In this case, **ORACLE\_HOME** is used only for the middle-tier home.
- **PANAMA\_HOME:** This would be **ORACLE\_HOME/wireless**.
- **OA\_HTML** is the common html directory for all the products in the Oracle

Enterprise application.

- OA\_HTML\_URL is the URL for the Enterprise applications (Example: ENTERPRISE\_SERVER).



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## Requirements and Dependencies

This chapter covers the following topics:

- Minimum Software Requirements

### Minimum Software Requirements

The following software is required to run the Oracle Mobile Field Service - Wireless application.

- Oracle Field Service



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# Implementing Oracle AS Wireless Server

This chapter covers the following topics:

- Introduction
- Installing Oracle AS Wireless Server
- Expanding Oracle Application Server Tier for Wireless Option
- Using Single Sign On
- Setting Up an Application Link to Point to Oracle Mobile Field Service - Wireless
- Setting SSL Certificates for HTTPS Access
- Supporting Microsoft Windows Mobile 6
- Setting Proxies
- Setting Location Services

## Introduction

Currently, it is not required to implement Oracle iAS Wireless Server if you are implementing Oracle Mobile Field Service - Wireless *without* Oracle Mobile Field Service - Voice. In this case, you can skip this chapter and continue with the next chapter. No additional setup is required, and you can directly log in to the application from a device by entering URL of the form

```
http(s)://<host_name>:<port>/OA_HTML/csfw.jsp
```

Oracle Application Server Wireless which is a part of Oracle Application Server 10g R2 (10.1.2) provides access to any corporate portal, application, or data, on any wireless device on any network. Oracle Mobile Field Service - Wireless uses Oracle AS Wireless server's Multi Channel Service (MCS) to deploy the web based application which can be accessed by many mobile devices. The wireless revolution has produced many mobile devices, each with different feature sets and varying form factors. Along with this variety of devices has come a variety of markup languages for authoring applications such as HTML, WML, cHTML, XHTML and more. OracleAS Wireless abstracts the

developer from device specific markup languages and provides a single development model and environment for building browser-based, and messaging applications.

## Installing Oracle AS Wireless Server

The Oracle Application Server 10g R2 (10.1.2) is delivered with these components:

- J2EE and Web Cache middle tier
- OracleAS Infrastructure
- Portal and Wireless middle tier
- Business Intelligence and Forms middle tier

The minimum hardware requirements for OracleAS Wireless components are:

- OracleAS Infrastructure
  - Memory: 1GB
  - Disk Space: 3.7 GB
  - Space in TEMP directory: 400MB
  - Swap Space: 1.5 GB
- Portal and Wireless middle tier
  - Memory: 1GB
  - Disk Space: 1.2 GB
  - Space in TEMP directory: 400MB
  - Swap Space: 1.5 GB

To use the Oracle Mobile Field Service - Wireless application you have to install the Portal and Wireless middle tier.

To set up the Portal and Wireless Developer Topology, you need to install:

- OracleAS Infrastructure
- Portal and Wireless middle tier

It is possible to install both the OracleAS Infrastructure and the Portal and Wireless middle tier on same hardware if the hardware requirements are met but you will have to install them on different ORACLE HOMES.

For information on the platform specifics steps on how to install OracleAS infrastructure and the Portal and Wireless middle tier, see the *Oracle Application Server Installation Guides for Oracle Application Server 10g R2 (10.1.2)*.

## Expanding Oracle Application Server Tier for Wireless Option

In the case where you have already implemented Oracle Lite for the Mobile Field Service Store and Forward (Offline) solution using Oracle Application Server 10.1.2 'J2EE and Webcache', and you want to use that same installation for wireless as well, you can expand the middle tier. As mentioned earlier, the Wireless option has a dependency on the Oracle Infrastructure, one has to install the Oracle Infrastructure first on a different ORACLE HOME before expanding.

Use this high-level procedure to expand the middle tier:

### Steps:

1. Install the Oracle Infrastructure. For example, Oracle Home ora\_infra
2. Expand "J2EE and Webcache" middle tier installation to "Portal and Wireless Option". For example, Oracle Home ora\_mid

For more information on the exact steps to expand a middle tier, see the Expanding a Middle Tier section in the *Oracle Application Server Installation Guide*.

3. Verify you can access the Oracle AS Wireless Portal page by using this URL:

`http(s)://<wireless server host name>:<port>>/ptg/rm`

For example, `http://mycompany:7777/ptg/rm`

## Using Single Sign On

If you are planning on using the single sign on (SSO) for the Oracle Mobile Field Service - Wireless application, you will have to configure that same SSO server for OracleAS Wireless as well.

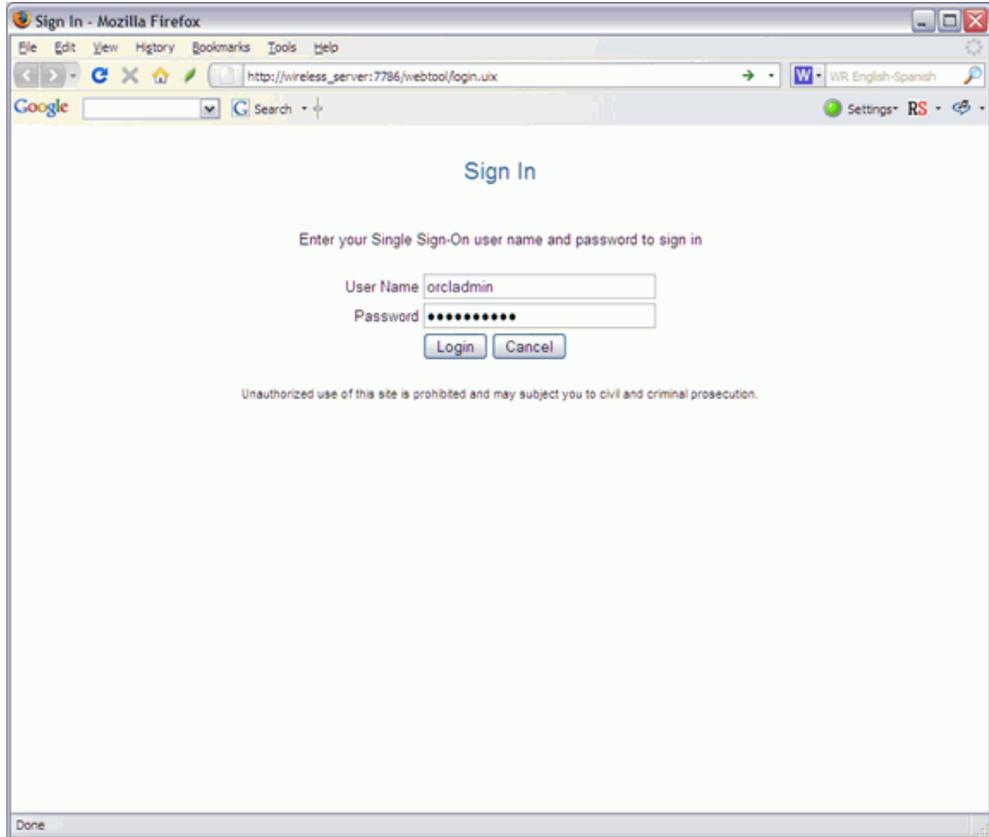
For more information on single sign on, see the *Oracle Application Server Wireless Administrator's Guide (10g Release 2 (10.1.2))*.

## Setting Up an Application Link to Point to Oracle Mobile Field Service - Wireless

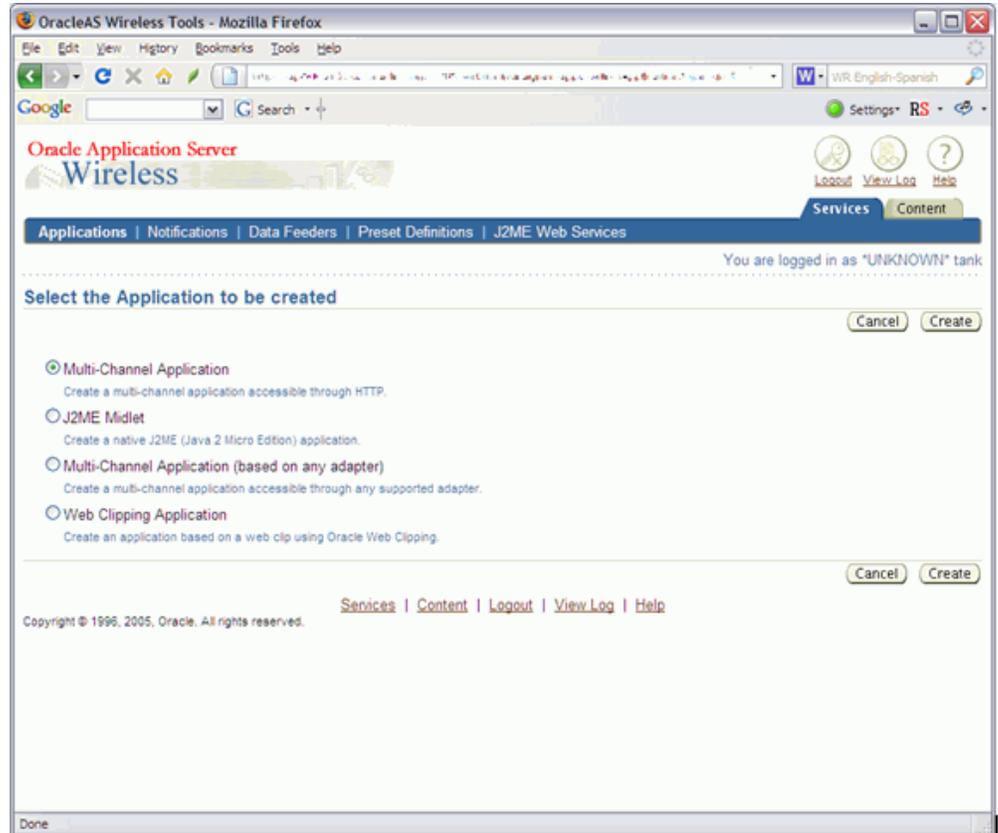
The following procedures enable you to set up an application link to point to Oracle Mobile Field Service - Wireless:

## To Set Up Mobile Field Service - Wireless Application for Local Login:

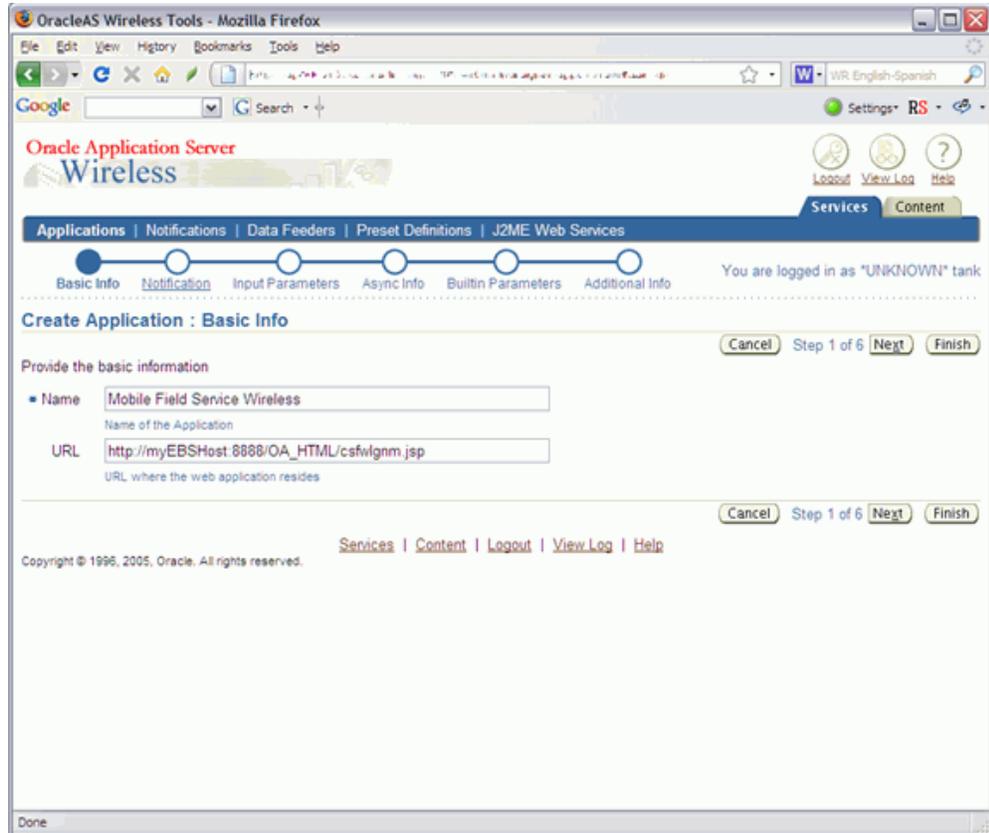
1. Open the AS Wireless Server Webtool using URL: `http(s)://<host name>>:<<port>>/webtool/login.uix`



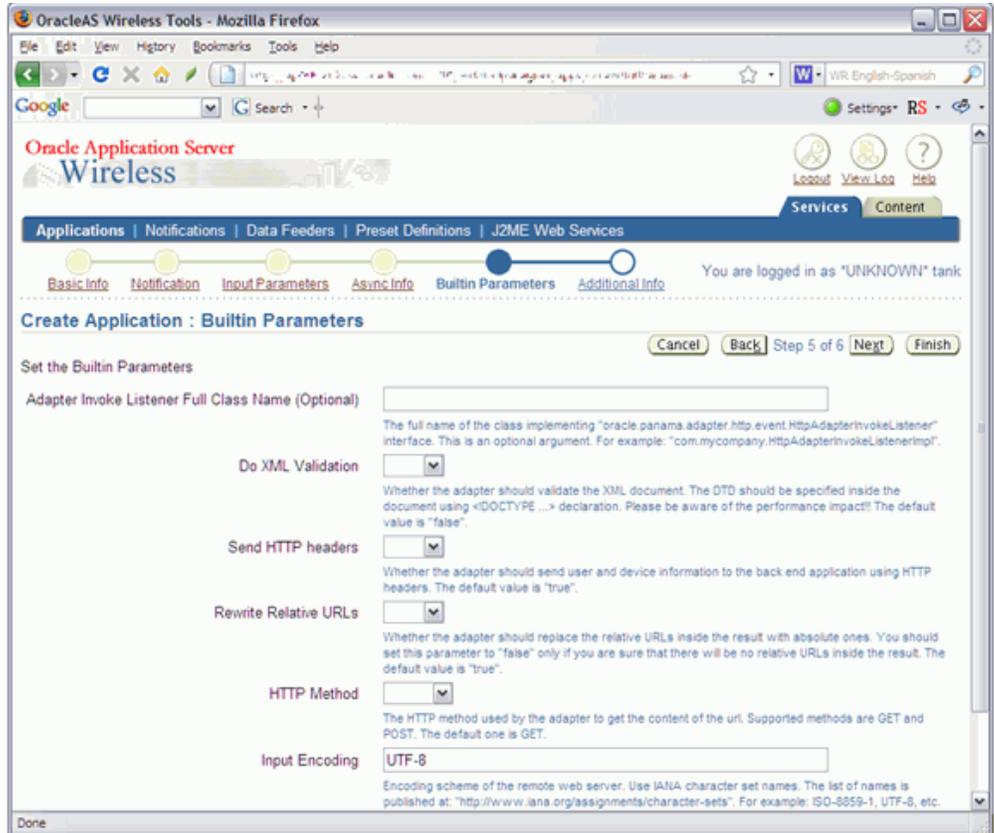
2. Login using the *orcladmin* user.
3. Click Services and then click Create Application.
4. Select Multi-Channel Application.



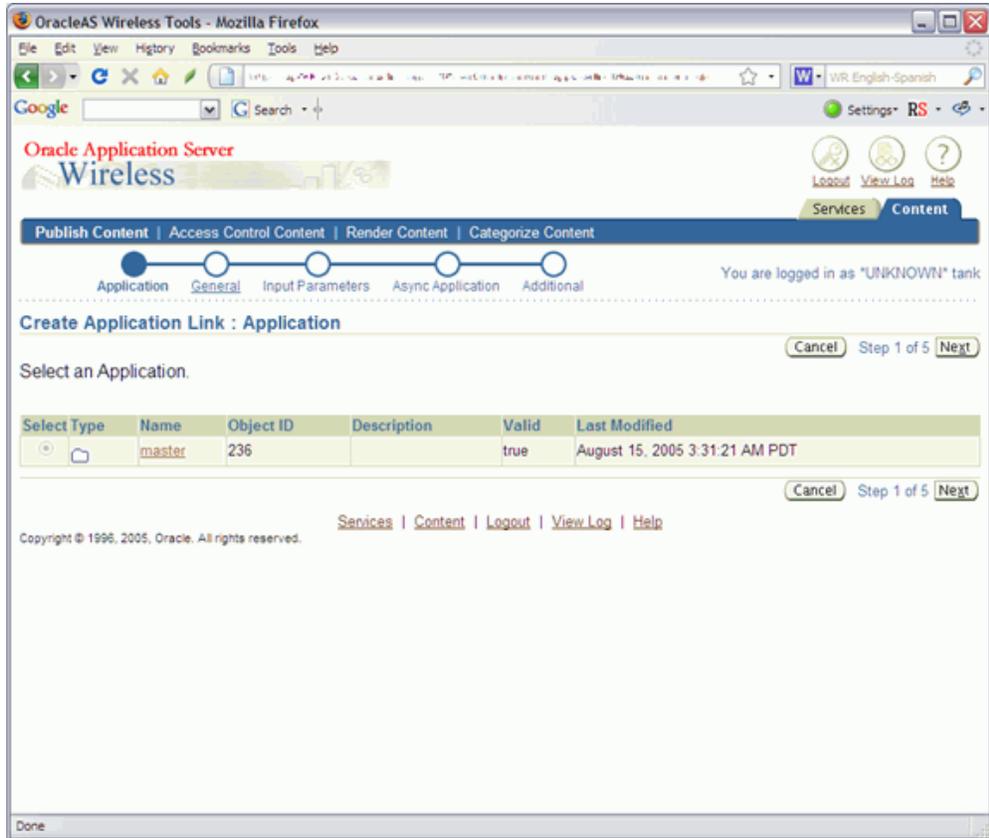
5. Enter the name of the application.  
For example, Mobile Field Service Wireless.
6. Enter the URL which points to the Oracle E-Business Suite node.  
The URL for the Mobile Field Service - Wireless local login is: **http(s)://<<EBS host name>>:<<port>>/OA\_HTML/csfwlgnm.jsp**



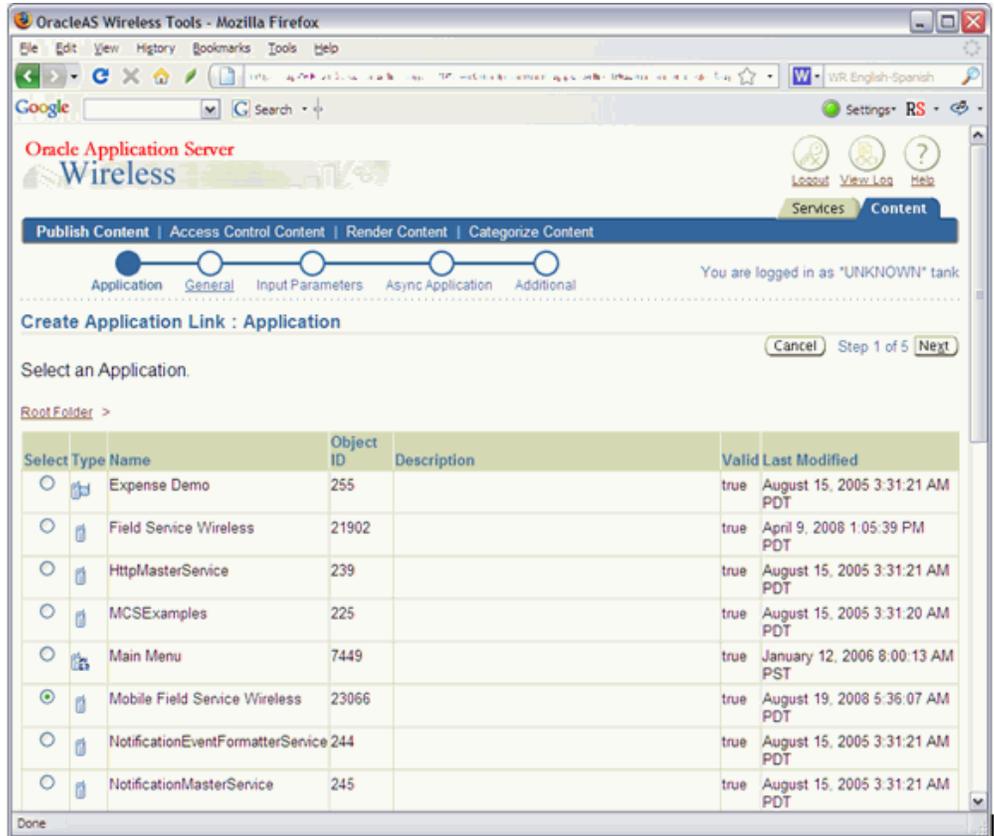
7. Click the Next button until you reach the Builtin Parameters page.
8. (Optional) If you are going to use National Language Support (NLS) languages enter UTF-8 in the Input Encoding field.



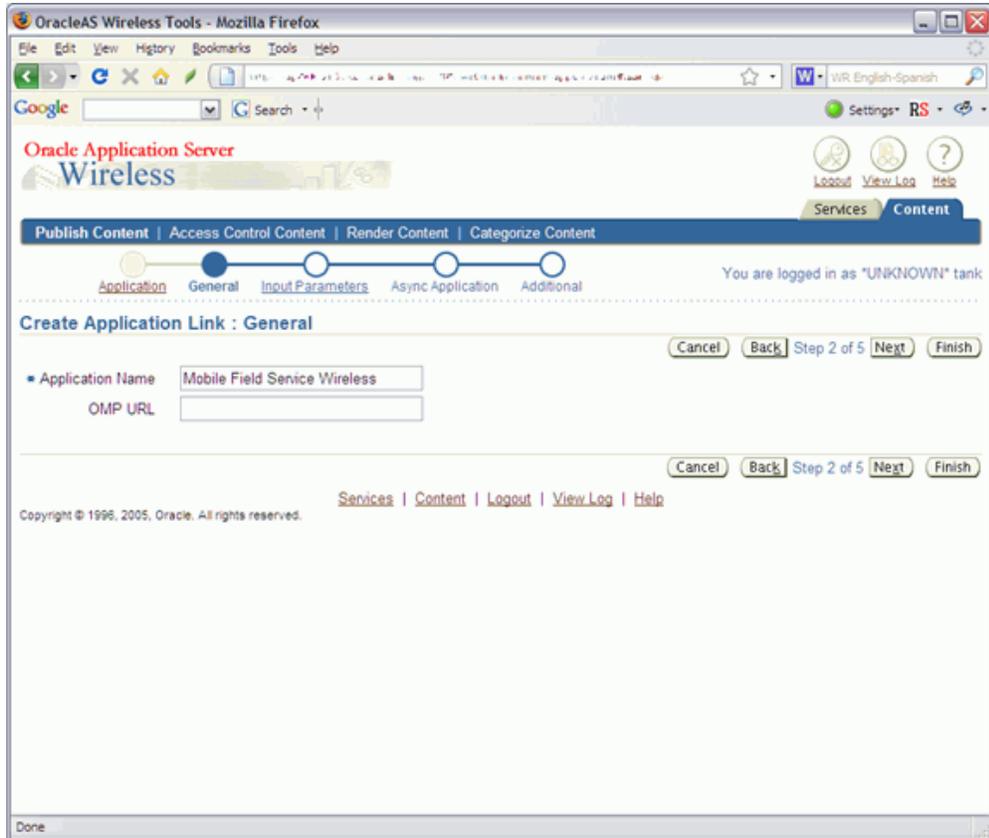
9. Click Finish.
10. To enable this application, select the Content tab and then click Add Application link.



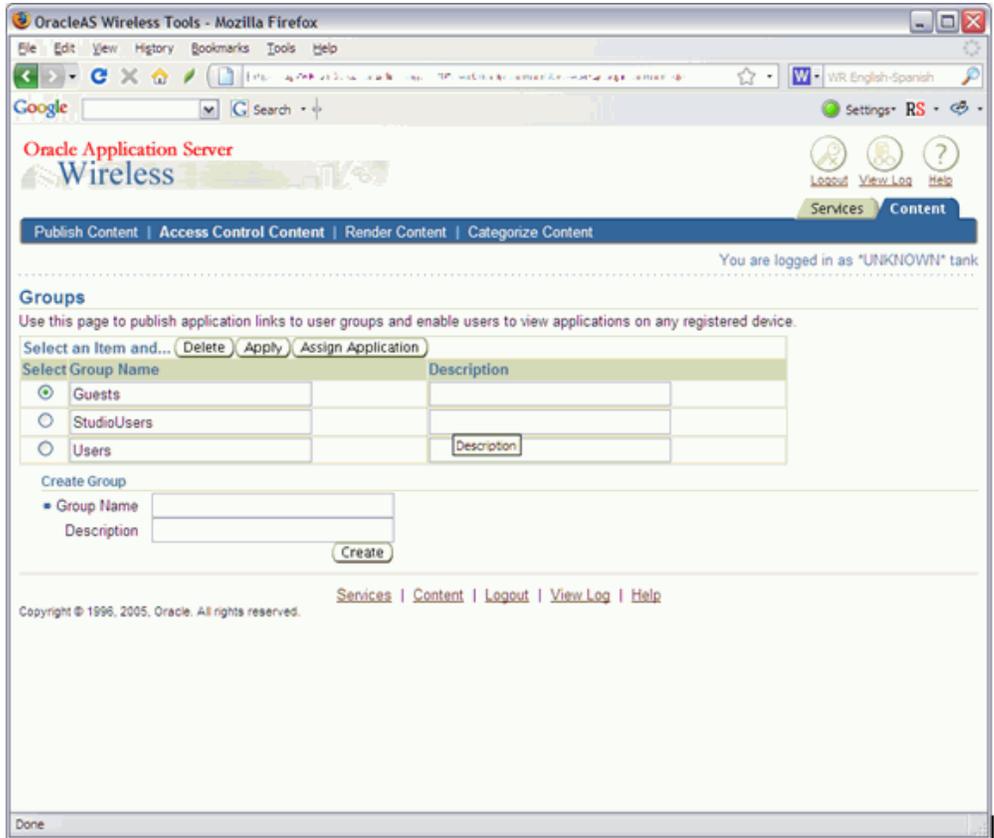
11. Select the application which you created by clicking "Master" application and then click Next.



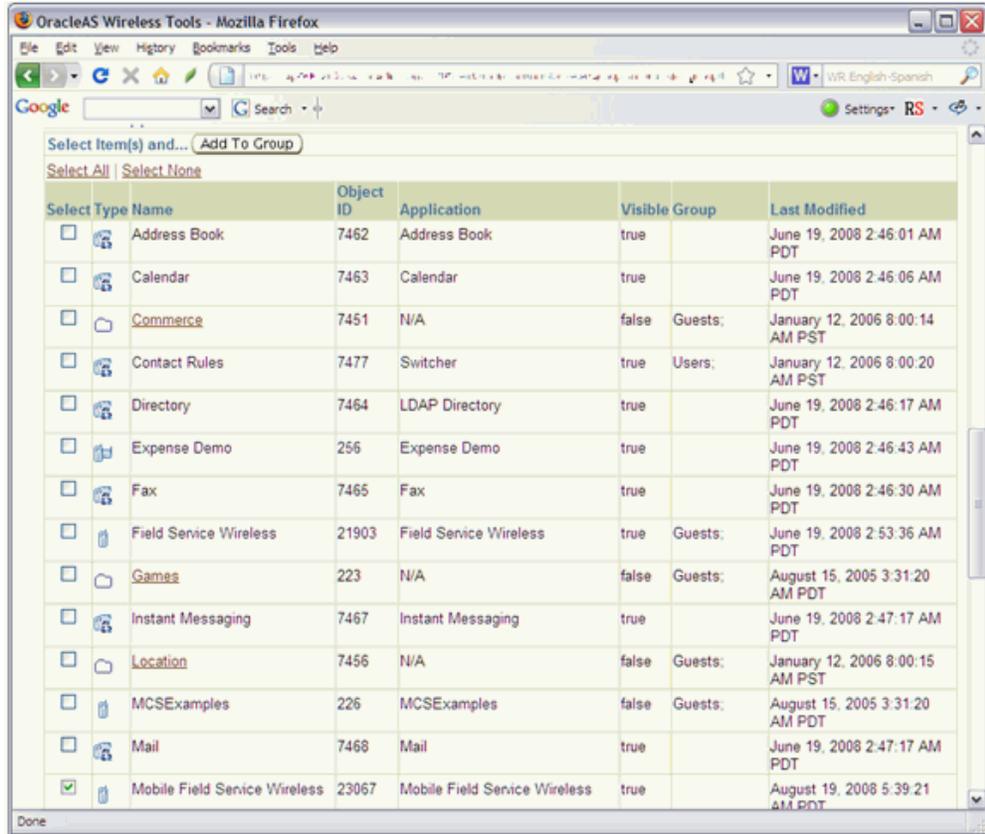
12. Enter the Application Link name for your application.  
For example, Mobile Field Service Wireless.



13. To make this link available to all users, select the Content tab again and then select the Access Control Content sub tab.
14. Select "Guests" group and click Assign Application button.



15. From the Available Applications table select the application link which you created and click the Add to Group button.



16. Click Finish.

### To Set Up Mobile Field Service - Wireless Application for Single Sign On Login:

To use single sign on (SSO) authentication for the Mobile Field Service - Wireless application, perform all the steps as mentioned above in the procedure "To Set Up Mobile Field Service - Wireless Application for Local Login" but in Step 6 provide this URL: **http(s)://<<EBS host name>>:<<port>>/OA\_HTML/csfwSSO.jsp**

## Setting SSL Certificates for HTTPS Access

The OracleAS Wireless Server is a middle tier between mobile devices and mobile content. Some devices use the HTTP(S) protocol to communicate with the OracleAS Wireless Server. The OracleAS Wireless Server uses the HTTP(S) protocol to retrieve content from content providers. This means that there are two HTTP(S) hops between a mobile device and mobile content. They both can be configured to use HTTPS. To support HTTPS between a mobile device and the Wireless Server, you must configure the Oracle HTTP server to accept HTTPS requests.

For more information, see the *Oracle HTTP Server Administrator's Guide*.

For content providers, the OracleAS Wireless Server functions as a virtual browser. Like other browsers, the OracleAS Wireless Server uses certificates to positively identify certification authorities and publishers. Before you can use HTTPS to connect to a content provider, you must download the content provider's SSL root certificates. After you download the certificate, copy it to the OracleAS middle-tier machine.

**Important:** If you have more than one middle tier, then you should copy the file to all middle-tier machines. The file must be in the same location on all of the middle-tier machines.

After you have copied the certificate file to the middle-tier machine, you must configure the OracleAS Wireless Server to use that certificate. If you have more than one middle-tier machine, you must configure only the first middle tier; all middle tiers will use the same settings (that is why the certificate file must be in the same location on all middle-tier machines).

Use this procedure to set a certificate for the Oracle AS Wireless Server:

#### **To Set a Certificate for the Oracle AS Wireless Server:**

1. Navigate to the Oracle Enterprise Manager 10g Application Server Control.
2. From the Oracle Enterprise Manager 10g Application Server Control, select the OracleAS Wireless middle-tier node on the Farm page and then click Wireless on the Application Server Home page to access the OracleAS Wireless system management functions.
3. Click the Site Administration tab of the OracleAS Wireless Home page. From the General Configuration section, select HTTP, HTTPS Configuration.

The HTTP, HTTPS Configuration screen appears.

The SSL section enables you to add a certificate. The OracleAS Wireless Server supports two certificate file formats: Base64 or PKCS#7.

4. Enter the absolute path to the certificate file in the SSL section on the screen. You can set more than one certificate by clicking Add Another Row.
5. Click OK.
6. After you have setup the SSL certificate, restart the Wireless process before you start to use it.

## **Supporting Microsoft Windows Mobile 6**

Oracle Mobile Field Service - Wireless (11.5.10 to 12.1) is supported on the Microsoft Windows Mobile 6 based PDA/Smartphone browser.

All the functionality supported in earlier versions of Microsoft Windows Mobile PDA/Smartphone is also supported for Microsoft Windows Mobile 6 including Signature Capture.

## Setting Proxies

To properly set the proxy settings for the portal server, use the following procedure. This procedure is used to support the Directions module in the Oracle Mobile Field Service - Wireless application.

### Steps:

1. Log into Enterprise manager of ASwe using the URL `http://WIRELESS_SERVER:portName` (default 1810).
2. Log into Enterprise Manager as `ias_admin`. After login the screen would have at least two stand alone instances, one being the Infrastructure and the other being the middle tier.
3. Click on the Stand-alone middle tier instance.
4. Navigate to the configuration page by clicking on Wireless > Site Administration.
5. Click on the HTTP or HTTPS configuration. Enter the appropriate values.
6. Save your settings when you are finished.

## Setting Location Services

Use the following procedure to set the location services for the server. eLocation is the recommended provider. This procedure is used to support the Directions module in the Oracle Mobile Field Service - Wireless application.

### Steps:

1. Log into Enterprise manager of ASwe using the URL `http://WIRELESS_SERVER:portName` (default 1810).
2. Log into Enterprise Manager as `ias_admin`. After login the screen would have at least two stand alone instances, one being the Infrastructure and the other being the middle tier.
3. Navigate back to Middle tier Instance > Wireless > Site Administration.
4. Click on Location Services under Component Configuration.

5. Set up the Geocoding configurations.
6. Set the Routing Configuration.
7. Set the Map Provider Configuration.
8. When you have completed the Map Provider configuration, restart all the services for the Middle tier.



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## Implementing Oracle Mobile Field Service - Wireless

This chapter covers the following topics:

- Overview of the Implementation Tasks for Mobile Field Service - Wireless
- Confirming Setup of Other Oracle Applications
- Setting Up Mobile Field Service – Wireless Administrator Dashboard
- Setting Up the User with Wireless Responsibility
- Setting Up the Profile Options for the Mobile Field Service Wireless User
- Setting Up Default Organization and Subinventory
- Setting Profile Options for Task Summary Display, Date Format
- Setting Up the Spares Management Order Parts Profile Option
- Setting Up Task Scheduling and Assignment Profile Options
- Setting Up the Email Server Profile Option
- Setting Up Signature Control
- Using Functional Security for Personalization
- Personalizing Oracle Mobile Field Service – Wireless (Online)
- Verifying the Implementation

### Overview of the Implementation Tasks for Mobile Field Service - Wireless

To implement the Oracle Mobile Field Service - Wireless application several steps need to be performed. These steps are outlined in the section below.

### Mobile Field Service - Wireless Implementation Task Sequence

To successfully implement the Mobile Field Service - Wireless application, complete

these steps in the order shown in the following table:

Required	Step Title
Yes	Confirm Setup of Other Oracle Applications.
Yes	Set Up the User with Wireless Responsibility
Yes	Set Up the Profile Options for the Mobile Field Service Wireless User.
Yes	Set Up Default Organization and Subinventory.
Optional	Set Profile Options for Task Summary Display, Date Format.
Optional	Set Up the Spares Management Order Parts Profile Option.
Optional	Set Up Task Scheduling and Assignment Profile Options.
Optional	Set Up the Email Server Profile Option.
Optional	Set Up the System for Route Directions.
Optional	Set Up Signature Control.
Optional	Verify the Implementation.

## Confirming Setup of Other Oracle Applications

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

- Oracle Field Service

This includes all the Oracle applications necessary for a fully operational Field Service application. For more information on the specific steps necessary for Field Service implementation, see the *Oracle Field Service Implementation Guide*.

Optionally, you'll need to implement the following applications to run all the functionality available for Oracle Mobile Field Service - Wireless:

- Oracle Spares Management

This application is necessary if you are using any of the parts order or parts search functionality.

**Note:** All other Oracle applications necessary for a full installation of Field Service (for example, Oracle Install Base, Oracle Shipping, and so on) are required for Oracle Mobile Field Service - Wireless. See the *Oracle Field Service Implementation Guide* for details.

- Oracle Knowledge Management

This application is required if you plan to access your organization's Knowledge Base. If you want to use the Oracle Mobile Field Service - Wireless category search functionality, you must configure categories according to the *Oracle Knowledge Management User Guide*.

- Oracle Advanced Supply Chain Planning

Oracle Mobile Field Service - Wireless interfaces with Spares Management and, through Spares, uses the Available-to-Promise (ATP) functionality in the Advanced Supply Chain Planning application for its parts ordering and parts search functionality.

- Oracle Advanced Scheduler

This application is mandatory for the task scheduling feature to work properly.

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

## Setting Up Mobile Field Service – Wireless Administrator Dashboard

The Mobile Field Service – Wireless Administrator Dashboard is the entry point for administrators and managers to perform multiple functions on behalf of their reporting field technicians.

Using the dashboard, an administrator can:

- View all tasks assigned to the group or territory.
- View a task assigned to a field service engineer who belongs to a group.
- Reassign existing tasks to one of the group or territory members using the Advanced Scheduler.
- Create, update, and post debrief on behalf of the technicians.
- Create and order parts on behalf of the technicians.
- Return excess and defective parts on behalf of the technicians.
- Receive parts on behalf of the technicians.

The Field Service Wireless Administrator (CSFW\_WIRELESS\_ADMIN) responsibility must be added to a user to access the Administrator Dashboard. The user with the administrator responsibility must be assigned resource groups using the Resource Manager Setup page. For more information on assigning resource groups, see *Field Service Implementation Guide*.

To access the dashboard, an administrator must select the Field Service – Wireless Administrator option. In the Resource page, you must choose either a territory or group resource and provide the required information. The task list displays all tasks that are assigned to the group or assigned to the field service engineer belonging to the group.

## Setting Up the User with Wireless Responsibility

Use this procedure to assign the wireless responsibility to the applications user. The profile options for the Oracle Mobile Field Service - Wireless user are set up once per user.

### Prerequisites

- The user must be created in the database before you can assign the Oracle Mobile Field Service - Wireless responsibility.

#### Steps:

1. Log in to the Oracle Enterprise applications with the System Administrator responsibility.
2. Navigate to Users window (Security > User > Define).
3. Query for a valid User Name, which is already in the database.
4. On the Direct Responsibilities tab, enter the *Field Service Wireless* responsibility.
5. Save your work.

## Setting Up the Profile Options for the Mobile Field Service Wireless User

Use this procedure to assign profile options to the Mobile Field Service wireless applications user.

### Prerequisites

- The user must be created in the database, and must have the Field Service Wireless responsibility.

### Steps:

1. Log in to the Oracle Enterprise applications with the Functional Administrator responsibility.
2. Navigate to the Oracle Applications Administration: Core Services - Profiles page (Core Services > Profiles).
3. Enter the profile **Name**, in the search area. For wild card searches, use '%'. Provide the access level details and click Go.
4. Enter values for the profile options shown in this section. You can set these options in any sequence.

### Options

---

Option	Description
JTFW_PROFILE_DEFAULT_WIRELESS_RESPONSIBILITY	<p>Set at the User level. The default wireless responsibility is the wireless responsibility with which the user is logged in.</p> <p>By default, this profile is set to 22730, the wireless responsibility.</p> <p>This profile is used in the case where a user has more than one Field Service Wireless custom responsibilities created using CSFW_WIRELESS_TOP menu.</p>
CSFW: Use Icons for buttons	<p>Image icons or buttons appear, based on the value of this profile option. If this profile is set to Yes, icons are present in the application. If this profile is set to No, buttons are present in the application.</p> <p>This profile can be set at User level but is not mandatory. The profile option level precedence rule will take place here.</p>
CSF: Default Task Report Template	<p>The profile defines the default layout that is used to generate the task report. You can customize the default template from the XML Publisher Administrator responsibility.</p> <p>All templates defined will be present in the LOV and can be updated at the Site, Application, Responsibility and User levels.</p> <p>The default value for the profile option is Field Service Task Summary Report.</p>

---

Option	Description
CSF: Display Generic Note Type	<p>This profile option is used to display all note types that are not linked to a source object. If the profile is set to <i>Yes</i>, then the Note Type LOV displays notes that are mapped to the source object "Task Manager" and Application "Field Service" or just mapped to the source object "Task Manager".</p> <p>If this profile is not set or set to <i>No</i>, then the LOV displays all notes including all unmapped notes. The default value is <i>Yes</i>.</p>
CSF: Enable Destination Inventory Organization for Parts Transfer	<p>This profile option is used to display the valid destination inventory organizations during transfer of parts. If the profile is set to <i>Yes</i>, all valid organizations are displayed. If the profile is set to <i>No</i>, the destination organization will be the same as the source organization assigned to the technicians.</p>
CSF: Default Task Status for Personal Tasks	<p>This profile option is used to display the default status for personal tasks. The default value is <i>Personal</i>.</p>
CSF: Validate Part Replacement in Debrief	<p>This profile is used to validate if the installed item and the recovered item are the same. If the profile is set to <i>Yes</i>, the recovered item and the installed item are validated and the debrief line is saved, if they are found to be the same, else the system displays an error without posting the debrief line. If the profile is set to <i>No</i>, then validation is disabled and the line is posted to debrief.</p>
CSP: Initial Status of Internal Order	<p>This profile is used to determine the initial status of the parts order when the order is created in the Scheduler process.</p>
CSP: Initial Status of Internal Order for Scheduler	<p>This profile is used to determine the initial status of the parts order when the order is created in the Scheduler process.</p>
CSP: Parts Requirement Default Ship To Address	<p>This profile option is used to set the default value of the Ship to Address Type.</p> <p>LOV values include Customer Address, Do not default, Task Address, and Technician Address.</p>

## Setting Up Default Organization and Subinventory

You must set up the default organization and subinventory for the resources that will be using the Oracle Mobile Field Service - Wireless application.

For complete information on creating resources, see Setting Up Field Service Technicians and Dispatchers in the *Oracle Field Service Implementation Guide*.

## Setting Profile Options for Task Summary Display, Date Format

The profile options for the Task Summary Display screen and Date Format are set up at the system level but they can be overridden at the user level.

Use this procedure to optionally set up the profile options for the task summary display screen, date format.

### Prerequisites

- The user must be created in the database, and must have the Oracle Mobile Field Service - Wireless responsibility.

### Steps:

1. Log in to the Oracle Enterprise applications with System Administrator responsibility.
2. Navigate to System Profile Values window (Profile > System).  
The Find System Profile Values window appears.
3. In the Profile field, enter: CSFW% and click Find.  
The System Profile Values window appears displaying all the profile options that match the criteria entered.
4. Enter values for the profile options shown in this section. You can set these options in any sequence.

## Options

---

Option	Description
CSF: Default Distance Unit	<p>This is the distance unit for measurement purposes in Oracle Mobile Field Service - Wireless. Available values are:</p> <ul style="list-style-type: none"><li data-bbox="760 499 850 525">• Mile</li><li data-bbox="760 569 911 594">• Kilometer</li></ul>
CSFW: TASK DISPLAY1	<p>This profile is used together with CSFW: TASK DISPLAY2 and CSFW: TASK DISPLAY3 to display any three values on the Task Summary screen. The options selected here determine what the field service technicians will view when they start the Oracle Mobile Field Service - Wireless application. The values to select from are:</p> <ul style="list-style-type: none"><li data-bbox="760 877 979 903">• TASK NUMBER</li><li data-bbox="760 947 1081 972">• SCHEDULE START TIME</li><li data-bbox="760 1016 1057 1041">• CUSTOMER ADDRESS</li><li data-bbox="760 1085 894 1110">• STATUS</li><li data-bbox="760 1155 932 1180">• TASK TYPE</li></ul>
CSFW: TASK DISPLAY2	<p>This profile is used together with CSFW: TASK DISPLAY1 and CSFW: TASK DISPLAY3 to display any three values on the Task Summary screen. The options selected here determine what the field service technicians will view when they start the Oracle Mobile Field Service - Wireless application. The values to select from are:</p> <ul style="list-style-type: none"><li data-bbox="760 1453 979 1478">• TASK NUMBER</li><li data-bbox="760 1522 1081 1547">• SCHEDULE START TIME</li><li data-bbox="760 1591 1057 1617">• CUSTOMER ADDRESS</li><li data-bbox="760 1661 894 1686">• STATUS</li><li data-bbox="760 1730 932 1755">• TASK TYPE</li></ul>

---

Option	Description
CSFW: TASK DISPLAY3	<p>This profile is used together with CSFW: TASK DISPLAY1 and CSFW: TASK DISPLAY2 to display any three values on the Task Summary screen. The options selected here determine what the field service technicians will view when they start the Oracle Mobile Field Service - Wireless application. The values to select from are:</p> <ul style="list-style-type: none"> <li>• TASK NUMBER</li> <li>• SCHEDULE START TIME</li> <li>• CUSTOMER ADDRESS</li> <li>• STATUS</li> <li>• TASK TYPE</li> </ul>
CSFW: Home Page	<p>This profile option applies to the PDA application. For the WML application the home page always remains as the Main Menu. However, for the PDA application, the user does have an option to pick from Main Menu, Today's Task, or Open Tasks as the default Home page.</p>
CSFW: Task Max	<p>This is a numeric value that determines the maximum number of tasks to display on a screen.</p>
CSFW: Planned Task Window	<p>Follow-Up task functionality requires the entry of a Planned Start Date and Planned End Date. The Planned Start Date defaults to the system date and time. This profile determines the Planned End Date. When the profile is not set, the Planned End Date does not default. The profile can be set in number of days. For example, if current date and time are 11-27-2004 (MM-DD-YYYY) and 10:00, and the profile is set to 2.25, the Planned End Date and Time will default to 11-29-2004, 16:00.</p>
CSFW: Service History Days	<p>This profile determines how far back the Service History of an item belonging to a service request should be shown.</p>
ICX: Date format mask	<p>Stores the date format.</p>

## Setting Up the Spares Management Order Parts Profile Option

If you plan to use the Spares Management order parts functionality you must set the following profile option: CSP: Order Type.

Use this procedure to set up the profile option:

### Steps:

1. Log in to the Oracle Enterprise applications with the System Administrator responsibility.
2. Navigate to the System Profile Values window (Profile > System).  
The Find System Profile Values window appears.
3. In the Profile field, enter: CSP% and click Find.  
The System Profile Values window appears displaying all the profile options that match the criteria entered.
4. Enter values for the profile option shown in this section.

### Option

Option	Description
CSP: Order Type	This profile option is used to provide a default value for order type when creating internal orders. Select from any valid order type in the list of values.

5. Save your work.

## Setting Up Task Scheduling and Assignment Profile Options

Technicians can self-schedule and self-assign new tasks and new follow-up tasks, created from their wireless PDA devices. You can also select a plan option from the Windows to Promise options for scheduling the new tasks and new follow-up tasks, created from wireless PDA devices. You can choose to work right away on an additional new task created on the same service request, or on a new task on a new service request. You can choose the *Self Schedule* or *Windows to Promise* options to schedule the new task for a later time, due to constraints, such as calendar availability or if you don't have the required skills or parts to perform the job right away.

Navigate to the Profiles page to set the necessary profile options (Functional administrator > Core Services > Profiles). The table below lists the necessary profile options to set for this functionality. Below the table, these same profile options are detailed.

**Important:** Oracle Field Service and Oracle Advanced Scheduler must be implemented for this functionality.

**Key Profile Options for Task Scheduling and Assignment**

Profile Option	User	System Admin:	System Admin:	System Admin:	System Admin:	Required?	Default
		USER	RESP	APP	SITE		
CSF: Default Working Task Status	View Update	View Update	View Update	View Update	View Update	Y	Working
CSFW: Task Max	View Update	View Update	View Update	View Update	View Update	Y	-
CSF: Default Planned task status for planned task	View Update	View Update	View Update	View Update	View Update	Y	Planned
CSFW: Technicians Schedule Options	View Update	View Update	View Update	View Update	View Update	Y	Window to Promise
CSF: Default commit task status	View Update	View Update	View Update	View Update	View Update	Y	Assigned

## Profile Options Description

Option	Description
CSF: Default commit task status	Technicians can self-schedule and self-assign new tasks and new follow-up tasks from their wireless PDA devices. When the task is scheduled, the task assignment status depends on the value of this profile. The default value for this profile is <i>Assigned</i> .
CSF: Default Planned task status for planned task	Technicians can schedule new tasks and new follow-up tasks, using the window options available when utilizing the Windows to Promise mode, from their wireless PDA devices. When the task is scheduled, the task assignment status depends on the value of this profile. The default value for this profile is <i>In Planning</i> .
CSF: Default Working Task Status	If you choose to work right away on the additional task created on the same service request or on a new task on a new service request, the task assignment status depends on the value of this profile. The default value for this profile is <i>Working</i> .  <b>Note:</b> Advanced Scheduler is not required for this option.
CSFW: Task Max	Technicians can self schedule and self assign tasks and follow-up tasks, using the <i>Self Schedule</i> option or schedule the tasks and follow-up tasks using <i>Windows to Promise</i> options, from their wireless PDA devices. You can select a slot from the plan options that are displayed. The Plan options appear, based on the value of this profile. The plan options appear in an ascending order, from lowest to highest cost.

Option	Description
CSFW: Technicians Schedulable Options	<p>Technicians can self schedule and self assign tasks and follow-up tasks, work on the tasks and follow-up tasks right away, or schedule the task and follow-up task using the <i>Windows to Promise</i> option, from their wireless PDA devices. Your access level in the wireless device depends on the value of this profile.</p> <ul style="list-style-type: none"> <li>• <i>No scheduling Permission:</i> When the profile is set with this value, the technician does not have any scheduling and assignment options.</li> <li>• <i>Work on it:</i> When the profile is set with this value, the technician can assign the task to themselves and work on it. No scheduling is required.</li> <li>• <i>Self Schedule:</i> When the profile is set with this value, the technician has the following options: <ol style="list-style-type: none"> <li>1. Self assign the task and work on it.</li> <li>2. Schedule the task by selecting a suitable plan option from the list of various plan options, and assign the task to them self.</li> </ol> <p><b>Note:</b> Advanced Scheduler must be implemented for this selection.</p> </li> <li>• <i>Intelligent:</i> This allows technicians to perform other options including WTP and schedule a task for other resources. It is similar to the Intelligent mode for the Dispatch Center Scheduler. <p><b>Note:</b> Advanced Scheduler must be implemented for this selection.</p> </li> <li>• <i>Window to Promise:</i> This is the default</li> </ul>

Option	Description
	<p>value. When the profile is set with this value, a technician has the following options:</p> <ol style="list-style-type: none"> <li>1. Self assign the task and work on it.</li> <li>2. Schedule the task by selecting a suitable plan option from the list of various plan options, and assign the task to them self.</li> <li>3. Use the Windows To Promise mode to schedule and assign the task to the best possible resource.</li> </ol> <p><b>Note:</b> Advanced Scheduler must be implemented for this selection.</p>

## Related Topics

Self-Assign or Self-Schedule Tasks, *Oracle Mobile Field Service User Guide*

## Setting Up the Email Server Profile Option

The Email server is set up only once for the system.

Use this procedure to set up the profile option for the Email server.

### Steps:

1. Log in to the Oracle Enterprise applications with the System Administrator responsibility.
2. Navigate to System Profile Values window (Profile > System).  
The Find System Profile Values window appears.
3. In the Profile field, enter: JTFW% and click Find.  
The System Profile Values window appears displaying all the profile options that match the criteria entered.
4. Enter values for the profile option shown in this section.

### *Option*

<b>Option</b>	<b>Description</b>
JTFW: SMTP SERVER	Set this profile option to your SMTP server.

5. Save your work.

## Setting Up Signature Control

To use the Oracle Mobile Field Service - Wireless signature control functionality, you must use one of the following two wireless devices along with the appropriate system requirements:

<b>Device</b>	<b>System Requirements</b>	<b>Plug-in Required</b>
Built-In Signature Capable devices	Symbol Spectrum 24R WebClient for Palm Computing Platform	No
Pocket PC-based devices	Pocket PC, Pocket PC2000, Pocket PC 2002, Pocket PC 2003 and 4.0 .Net based devices	Yes

On devices with built-in signature capabilities (Symbol Spectrum24R WebClient for Palm Computing Platform), the Mobile Field Service - Wireless application automatically generates the appropriate markup language.

In the case of PocketPC devices running WinCE .0 or later (Pocket PC, Pocket PC2000, Pocket PC 2002, Pocket PC 2003 and 4.0 .Net based devices), a signature capture plug-in is available for download.

If you are using signature capture with either of the devices supported by Oracle, you must set the CSFW: Enable Signature Control profile option to "yes."

## Using Functional Security for Personalization

You can personalize Oracle Mobile Field Service - Wireless using functional security. The application implements two levels of functional security:

- Main menu functions restriction - First level

- Major subfunctions restriction within a function - Second level

## Restricting Main Menu Functions

You can remove any function from the wireless main menu by adding it to the Menu exclusion list in the Responsibility Form. In addition, functional security prevents even manual access to a function if it is added in the Menu exclusion list in the Responsibility Form or if the Grant flag is cleared in the Menu Detail UI. If an attempt is made to access a function from the menu that is added in the Menu exclusion or whose Grant flag is cleared in the Menu definition, then the error message "Insufficient privileges to access this function." is displayed. The following table lists the available functions in Oracle Mobile Field Service - Wireless.

### *Functions for Wireless*

<b>Function</b>	<b>Function Name</b>
CSFW_DAY	Today's Task
CSFW_TASKENTRY	Task Search - WAP
CSFW_REQENTRY	Service Request Search - WAP
CSFW_DATEENTRY	Date Search - WAP
CSFW_ALLPARTS	Parts Search - WAP
CSFW_CACHE	Offline Schedule
CSFW_ADV_TASK_SEARCH	Advance Task Search
CSFW_CREATE_SR	Create Service Request
CSFW_KM	Knowledge Base
CSFW_PARTS_SRCH	Parts Search
CSFW_PARTS_RETURN	Parts Return
CSFWTRANHIST	Transaction History
CSFW_MOBILE_QUERY	Mobile Queries

Function	Function Name
CSFWPREFERENCES	Preferences
CSFWCHANGEPASS	Change Password
CSFW_DIRECTIONS	Get Directions
CSFW_ABOUT	About Field Service

### To restrict a function from appearing in the Wireless main menu:

1. Navigate to System Administrator > Security > Responsibility.
2. Search for Field Service Wireless responsibility.
3. In the Menu Exclusions tab, add the functions to be excluded.

or

1. Navigate to Functional Administrator > Core Services > Menus.
2. Search for the Wireless menu Field Service Wireless.
3. Clear the Grant checkbox for the function to be excluded from the menu.

### Restricting Subfunctions Within a Function

The second layer of functional security uses permissions and subfunctions. With these permissions and subfunctions, you can restrict display of a subfunction or the action in a function. That is, you can personalize the Mobile Field Service - Wireless UIs.

The following second-level functions (permissions) are available in the Task Detail UI:

1. CSFW\_TINF\_TASK\_DFF\_V - Task DFF View
2. CSFW\_TINF\_TASK\_DFF\_U - Task DFF Update
3. CSFW\_TINF\_SR\_ATCHT\_V - SR Attachment View/Download
4. CSFW\_TINF\_SR\_ATCHT\_U - SR Attachment Upload
5. CSFW\_TINF\_TASK\_NOTE\_V - Task Note View
6. CSFW\_TINF\_TASK\_NOTE\_C - Task Note Create

7. CSFW\_TINF\_SR\_NOTE\_V - Service Request Note View
8. CSFW\_TINF\_SR\_NOTE\_C - Service Request Note Create
9. CSFW\_TINF\_SR\_DFF\_V - Service Request DFF View
10. CSFW\_TINF\_SR\_DFF\_U - Service Request DFF Update

The following second-level functions (permissions) are available in the Debrief UI:

1. CSFW\_DBF\_PROB\_U - Problem Code Update
2. CSFW\_DBF\_HDR\_DFF\_V - Debrief Header DFF View
3. CSFW\_DBF\_HDR\_DFF\_U - Debrief Header DFF Update
4. CSFW\_DBF\_MAT\_V - Material Debrief View
5. CSFW\_DBF\_MAT\_U - Material Debrief Update
6. CSFW\_DBF\_EXP\_V - Expense Debrief View
7. CSFW\_DBF\_EXP\_U - Expense Debrief Update
8. CSFW\_DBF\_LAB\_V - Labor Debrief View
9. CSFW\_DBF\_LAB\_U - Labor Debrief Update
10. CSFW\_DBF\_SIG\_U - Signature Capture
11. CSFW\_DBF\_RES\_U - Resolution Code Update
12. 12. CSFW\_DBF\_NOTE\_V - Debrief Notes View
13. CSFW\_DBF\_NOTE\_U - Debrief Notes Update

To set access or restrict a particular functionality in the Task Details UI or the Debrief UI, you use the listed permissions in the Wireless main menu Field Service Wireless through the permission set Field Service Wireless - Default Permission Set. To restrict access to any functionality of these UIs, such as Signature Capture or Service Request Note View, you remove the specific permission from the permission set. Alternatively, you can create a new permission set with the set of permissions required by a particular user or user-group, or similar entity, and create a grant for such entity.

**To restrict a subfunction with a function:**

1. Navigate to Functional Administrator > Security > Permission Sets.
2. Search for set Field Service Wireless - Default Permission Set.

3. Remove the subfunction to be excluded or hidden from the default permission set.

or

1. Navigate to Functional Administrator > Core Services > Menus.

2. Search for the Field Service Wireless menu.

3. Navigate to the submenu/permission set added to the menu.

4. Click the submenu link.

The permissions/sub-functions attached to the submenu appears.

5. Clear "Grant" from the permissions to be excluded.

or

1. Navigate to Functional Administrator > Security > Permission Sets.

2. Create a permission set based on the specific requirement.

3. Remove the default permission set from the Wireless main menu.

4. Attach the new permission set.

5. For the user level, create a grant for the new permission set and assign the grant to the user or user group.

## Personalizing Oracle Mobile Field Service – Wireless (Online)

Personalization enables you to tailor the user interface (UI) look-and-feel, layout or visibility of page content to suite a business need or a user preference.

You can personalize the following pages in Oracle Mobile Field Service – Wireless if the *Personalize Self-service Defn* profile option is set to *Yes*:

- Task Details
- Debrief
- Parts Search

You can change the Rendered and Read Only properties for elements in the Personalization Structure. Personalization is supported at the site and responsibility levels. For more information on personalization, see *Oracle Application Framework Personalization Guide*.

**Note:** Set the profile option, Oracle Applications Look and Feel to

profile value: Alta Look and Feel, which renders Alta screen. If you set the profile option to Skyros, then it renders a Skyros screen.

## Verifying the Implementation

To verify a successful implementation of the Oracle Mobile Field Service - Wireless application you should perform several tasks. Tasks covered in this section include:

- Verify User Login.
- Verify Task Detail Information.
- Verify Directions.

### Verify User Login

After you have implemented the Oracle Mobile Field Service - Wireless application, you can verify the user login as follows:

1. Type in the URL for the Portal to Go Server (Oracle AS Wireless Server) and click on the Field Service URL Adapter Service.
2. Type in the applications login and password and verify that you can view the menu.

### Verify Task Detail Information Card

To verify the task detail information, perform these steps:

1. Create a service request using the Oracle Field Service core application and assign a task to a Field Service wireless user for today.
2. Log in to the Oracle Mobile Field Service - Wireless application and verify whether the task is properly assigned to the wireless user.
3. Click on Today's Task and verify the display of the summary screen is in accordance with the profile setting for CSFW: TASK DISPLAY1, CSFW: TASK DISPLAY2, and CSFW: TASK DISPLAY3.
4. Click Customer Information and verify that you can send an e-mail, assuming that an SMTP server is available.

### Verify Directions

If Directions are implemented, you can verify that the function works correctly as

follows:

1. Log in to the Oracle Mobile Field Service - Wireless application and click Direction.
2. Click Other and type in a starting and ending address that you know are correct.
3. Verify the Directions text.



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## Administration and Troubleshooting

This chapter covers the following topics:

- Mobile Field Service Wireless and Voice Debug Page
- Oracle AS Wireless Server Log
- HTTP Header Log
- Issues and Solutions

### Mobile Field Service Wireless and Voice Debug Page

Administrators can verify Mobile Field Service - Wireless user setup and other system level settings by using the Mobile Field Service Wireless and Voice Debug page.

#### What is the Debug Page?

The Debug page is:

- A simple HTML page.
- A quick tool for System Administrators to provide required information while logging a TAR.
- Various debugging information displayed in a well formatted manner.

#### What Information Does the Debug Page Contain?

The Debug page contains the following:

- User and profile information.
  - Basic user information.

Basic user information such as, user name, resource ID, wireless responsibility

ID and name, and default subinventory.

- Profile values for the user.

Profile values used in the Mobile Field Service - Wireless and Voice applications for the logged in user.

- Task and service request information.
  - Service request data related to the task.  
Useful information for the service request related to a given task number.
  - Task details.  
Brief details of the given task number.
  - Contact, Task Assignment, and Task Status details.  
Related information for the task number.
- Environmental information.
  - Middle tier and database information.  
Technical information about the middle tier and database such as, JRE, OJSP compiler, JDBC driver, and database versions.
  - Java classpath entries.  
All the classpath entries.
  - JDBC connections pool and invalid database objects.
    - JDBC connection pool status in terms of total available connections, used and free connections.
    - List of any CSF invalid database objects.
- File versions.
  - JSP and Java file versions.  
File versions of Field Service Wireless JSP and Java files.

## How to Access the Debug Page?

To access the Debug page use this procedure:

1. Enter the following URL in any web browser: `http://{host}:{port}/OA_HTML/csfwDebugValues.jsp`

2. Login in with user for which you want to view the user and profile information.
3. Provide task number for which you want to view the task and service request information.
4. Provide the profile name apart from profiles displayed under "User & Profile Information", to view the profile values for the logged in user.

## Oracle AS Wireless Server Log

In the case where the user receives "Service Error", the administrator can check for the error details in the Oracle AS Wireless Server log file.

The log file is located at: \$WIRELESS\_OH/wireless/logs/log.xml

**Important:** Make sure you truncate this log file periodically to avoid any performance issues.

## HTTP Header Log

The Oracle AS Wireless server acts as a virtual browser between the Oracle E-Business Suite and the end user device. To log the entire HTTP traffic between Oracle AS Wireless and the back-end application you have to modify the \$WIRELESS\_OH/opmn/conf/opmn.xml file and add the following in the start section for OC4J\_Wireless:

```
-DHTTPClient.log.mask=-1
-DHTTPClient.log.file=$ORACLE_HOME/wireless/logs/http.log
```

For example, after the change, that section will look something like this:

```
<category id="start-parameters">
<data id="java-options" value="-server
-Djava.security.
policy=$ORACLE_HOME/j2ee/OC4J_Wireless/config/java2.policy
-Djava.awt.headless=true -Xmx256m -Djava.awt.headless=true
-Doracle.wireless.oraclehome=$ORACLE_HOME
-Doracle.wireless.home=$ORACLE_HOME -DHTTPClient.log.mask=-1
-DHTTPClient.log.file=$ORACLE_HOME/wireless/logs/http.log"/>
<data id="oc4j-options" value="-properties
-userThreads"/>
</category>
```

**Important:** Do not modify the opmn.xml directly. You need to use the EM web GUI.

After the change you have to restart the OC4J\_Wireless process. If you have configured it correctly you should see a new file \$WIRELESS\_OH/wireless/logs/http.log immediately after OC4J\_Wireless comes up.

**Note:** You should remove/comment these lines from opmn.xml file and restart OCJ4\_Wireless process after you complete the debugging process.

## Issues and Solutions

This table lists some of the issues that may occur when implementing Oracle Mobile Field Service - Wireless and the recommended solution:

Issue	Solution
Not getting Signature Capture control for Microsoft Windows Mobile 6.0.	In the device, make sure that you have installed the Signature Capture plugin for the right CPU type.  Also make sure that you have added a valid User-Agent name for the Device Metadata.

# A

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## Item Handling for the Mobile Field Service Store and Forward Applications

This appendix covers the following topics:

- Limiting System Item Download
- Setting Up System Items for Install Base Transactions
- Setting Up Install Base Profile Options
- Removing and Installing Parts in Oracle Mobile Field Service Store and Forward
- Ordering and Transferring Parts

### Limiting System Item Download

The following system items are replicated to the mobile device:

- Items used in a service request assigned to or created by the mobile user
- Item instance items used in a service request assigned to or created by the mobile user
- Items used in debrief lines
- Items used in item orders
- Items present in subinventories assigned to the mobile user
- Most frequently returned Items controlled by the two new profiles:
  - CSM: Maximum Number of Items
  - CSM: Return Activity Duration

**Note:** You can set the category profiles for the Oracle Mobile Field Service applications only at the responsibility level.

## Setting Up System Items for Install Base Transactions

### Steps

Complete the following steps to set up system items for install base transactions:

1. Log in to the Forms application using the responsibility Inventory.
2. Create a miscellaneous transaction, putting the item in a Subinventory.
3. Navigate to `Setup > Organizations > Subinventories`.
4. Create at least one subinventory in the Service Master Organization.  
The subinventory should be a Quantity Tracked, AssetSubinventory.
5. Set the Locator Control value to None.
6. Create a subinventory in the inventory organization, which will be used as the good subinventory.
7. In the same organization as the subinventory of the mobile resource, create system items that are one of the following:
  - Transactable (Inventory tab page)
  - Trackable (Inventory tab page)
  - Serviceable (Service tab page)
  - Of type Material (Service tab page)
8. Put the trackable item you defined above in your good Subinventory (using Miscellaneous Transactions). Also put a non-trackable item there. The trackable item should be created as an install base product instance in the back end.
9. Under the responsibility Field Service Manager, navigate to `Spares Management > Setup > Resource Addresses and Subinventories`.
10. Create a new record for your mobile resource by entering its name. Assign a Primary Address and the two Subinventories you created to it.
11. The condition of the Subinventory in the Master Organization should be set to `Defective` and the condition of your Transaction Organization Subinventory

should be set to Usable.

## Setting Up Install Base Profile Options

Set up profiles as indicated in the following table:

Profile Name	Value	Comments
CSE: Miscellaneous Issue to Project Transaction Type	Issue to	none
CSE: Miscellaneous Receipt From Project Transaction Type	Receipt from	none
CSE: PA Expenditure Type	Material	none
CSE: Bypass Event Queue	Y	This profile is used to bypass some queues, so when miscellaneous transactions are created they will be directly inserted into Install Base.

Adjusting transaction types so they can be used for install base updates can be done under the responsibility Install Base Admin and navigating to **Setups > Transaction Types and Sub Types**. Transaction types can be used for removing install base products by setting the **Change Owner To** field in the **Source Info** section of the form to **Internal**. By setting this field to **External**, the transaction type can be used for installing new install base products.

## Removing and Installing Parts in Oracle Mobile Field Service Store and Forward

Whether an install base update is done when removing a part in Oracle Mobile Field Service Store and Forward depends on the selected transaction type when doing a material transaction.

If the **Change Owner To** value of the selected transaction type is set to **Internal**, then the install base product to be removed can be indicated in Oracle Mobile Field Service Store and Forward.

If the **Change Owner To** value is set to **External**, than a trackable product can be indicated from a usable subinventory. An install base product will be created upon debriefing the material transaction in Field Service Debrief with the **Update Installed**

Base check box selected.

## Ordering and Transferring Parts

To create an item order in an Oracle Mobile Field Service Store and Forward application, at least one usable (good) subinventory has to be defined and assigned to the field service technician. Two usable subinventories have to be defined and assigned to the field service technician to perform transfers.

Subinventories are set up using the Field Service Administrator responsibility and the Resource Addresses and Subinventories window. See the *Oracle Field Service Implementation Guide* for more details.

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## National Language Support for the Oracle Mobile Field Service Store and Forward Applications

This appendix covers the following topics:

- Overview

### Overview

This appendix describes how to use National Language Support (NLS) to change the default language of the Oracle Mobile Field Service Store and Forward applications, English, to the desired language of the user.

The profile option ICX: Language determines the language in which field service technicians receive data, messages, and labels for Oracle Mobile Field Service Store and Forward -Multiplatform application.

As a prerequisite, install the NLS language for the Oracle E-Business Suite and then apply all patches in the NLS language when applicable.

From the enterprise application, complete the following steps to change the default language of Oracle Mobile Field Service Store and Forward applications:

1. Change the profile ICX: Language to the desired language.
  1. Login with System Administrator responsibility.
  2. Navigate to Profile > System.
  3. Select the User check box and then enter the username.
  4. Enter the profile option name, ICX: Language, and then click **Find**.
  5. Change the language of the user level.

2. Run the Manage Mobile Users concurrent program (if it is not scheduled).
  1. Login with Mobile Administrator responsibility.
  2. Navigate to Concurrent > Requests.
  3. Click **OK** to submit a single concurrent request.
  4. Select the Manage Mobile Users concurrent program from the list of values.
  5. Click **OK**.

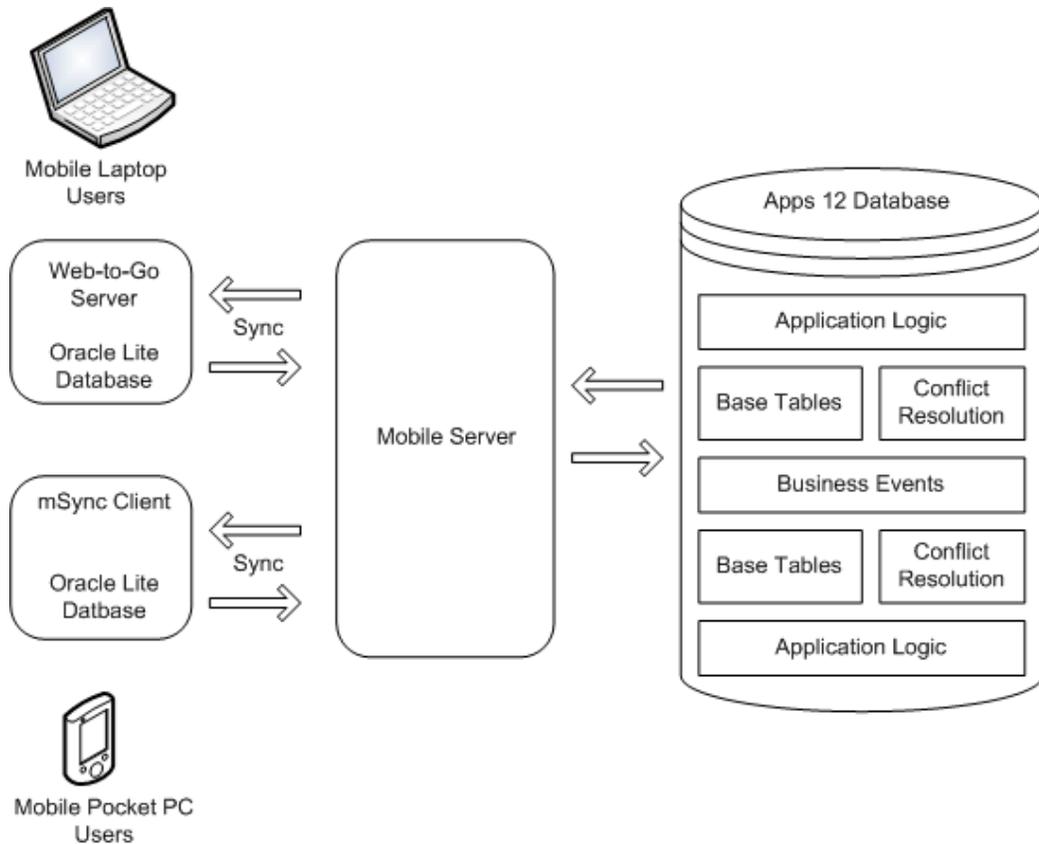
The Manage Mobile Users concurrent program detects the language change and then removes all records in the old language and inserts them in the new language. This in turn, causes a full synchronization. After this synchronization, the user sees the application and data in the new language.

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## **Mobile Synchronization Scalability and Performance for the Oracle Mobile Field Service Store and Forward Applications**

### **Performance Tuning of Mobile Application Framework**

To achieve the test results described in this appendix, tune the Mobile Application Foundation as described in this section. Here, performance tuning issues specific to Oracle Mobile Field Service Store and Forward are addressed. The following figure illustrates the Oracle Mobile Field Service Store and Forward architecture.



The first or initial synchronization, from the mobile computer device installs the entire Oracle Mobile Field Service Store and Forward application as well as the data targeted for that mobile user. Subsequent synchronizations (also called incremental or fast synchronizations) only download application upgrades and incremental data. This incremental dataset consists of data updated on the mobile computer device since last synchronization and data ready on the server since the last synchronization. It can be expected that in a live or production instance, application upgrades are minimal and therefore incremental synchronizations mainly transfer new data. Synchronizations that do not involve either application upgrades or data transfer are called null synchronizations. Null synchronizations are useful for performance benchmarking since they provide the lowest possible synchronization time.

First-time synchronizations should be done on either a LAN or network with a high bandwidth so that the synchronization completes in a timely manner. First-time synchronizations over low-bandwidth (GPRS) networks can terminate due to low network time-out settings. In this case, the latency for preparing a first-time synchronization dataset could require minutes as opposed to seconds for subsequent synchronizations. If the first-time synchronization fails, the process must restart from the beginning.

You are not expected to tune the Oracle Mobile Field Service Store and Forward application on the mobile computer device, except to ensure that the minimum system

requirements are met.

Administrators should use the following to assess system performance:

- Synchronization time.

Synchronization reports are provided to track synchronization times. Reports can be generated with various search criteria. See "Viewing User Synchronization Statistics", page 5-6.

- Concurrent program run times.

Each mobile concurrent program should be monitored for excessive run times.

## Database Tuning

Mobile Field Service Store and Forward captures online business activities such as service request creation and task assignments and then downloads this data to the mobile users. Mobile Field Service Store and Forward uses concurrent programs to find and prepare this data. Data that is prepared for synchronization is stored in the out queue. The out queue comprises two tables: ASG\_SYSTEM\_DIRTY\_QUEUE and ASG\_DELETE\_QUEUE.

### Tuning Out Queue

Better synchronization times can be achieved by tuning the out-queue. The out-queue performance is constantly being improved by tuning the queries executed on the out-queue tables. Since the tables are insert/delete intensive, one of the important storage parameters is PCTUSED. For best performance, set this parameter to a high value like 70%. The size of the out-queue is related to amount of business activity relevant to mobile. Data prepared in the out-queue is automatically removed after the mobile device receives it.

There are several indexes defined in the ASG\_SYSTEM\_DIRTY\_QUEUE table that eliminate the need for full table scans and optimize access. However, it is recommended that these indexes be managed carefully. Due to the insert/delete intensive nature of data management languages (DMLs) on this table, index-stagnation could become an issue. This will result in longer synchronization times even though the size of ASG\_SYSTEM\_DIRTY\_QUEUE table remains about the same. In this case, index-rebuilds have proven to be helpful.

It is possible to purge the out-queue for dormant users by scheduling the JTM Master Concurrent Program with category type "purge." This will purge records for dormant users. *Dormant users* are those who have not synchronized for the past N days, where N is the value of profile option, ASG: Dormancy Period. The JTM Master Concurrent Program will also remove any duplicate records in the out-queue. For best performance, schedule this program once every week.

### Tuning Concurrent Programs

For mobile operations, mobile concurrent programs place a big demand on the

database, even more so than synchronization. The JTM Master Concurrent Program is a good example of this. For this program, you must run three category types: Transaction, Lookup and Inventory. You should regularly monitor the times taken for each category type. You can use the following table to do this.

<b>Category Type</b>	<b>Scheduled Interval</b>	<b>Average Run Time</b>
Transaction	5 min	
Lookup	1 hour	
Inventory	1 day	

The actual scheduled interval for these programs depend on your business requirements. However, the average run time should be compared with the scheduled interval to make sure that it is a very small fraction of the scheduled interval (less than 5% for Lookup and Inventory, and 20% for Transaction). If the concurrent programs take a longer time, then increase the scheduled interval so that the system is not overloaded.

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## Customization Support for the Oracle Mobile Field Service Store and Forward Applications

### Overview

This appendix describes the customization support for the Oracle Mobile Field Service Store and Forward applications. This appendix is intended for system integrators and implementation consultants who want to develop custom extensions for these applications.

The Oracle Mobile Field Service Store and Forward applications provide rich functionality built into the standard product. In addition, you can customize the application to suit your business process.

The following are the means by which you can customize the Oracle Mobile Field Service Store and Forward applications:

- Flexfield support for additional data fields.
- Label modification.
- Attachment support.
- New custom screen creation in the Oracle Mobile Field Service Store and Forward applications to enable new features or extend additional features.

Depending on your business needs, you may need to use one or more of the above means of customization.

What is not supported is modification to existing screens (adding/removing/hiding fields) or changing the navigation between the standard screens.

## Flexfield Support

Descriptive flexfields can be used to display and capture additional information. Users can also use context-sensitive flexfields when the information stored by the application depends on other values users enter in other parts of the screen. Table-validated flexfields are not supported by the Oracle Mobile Field Service Store and Forward applications.

The following table describes the types of flexfields you can find in the Oracle Mobile Field Service Store and Forward applications:

---

Flexfield	Multiplatform
Service request	read/write
Task	read/write
Debrief header	read/write
Debrief line	read/write
Customer	read

---

## Steps for Setting Up Flexfields

Complete the following steps to set up the descriptive flexfields in Oracle Applications that are specific to an Oracle Mobile Field Service Store and Forward application:

1. Log in to Oracle Applications as a system administrator and select the System Administrator responsibility.
2. Navigate to `Application > Flexfield > Descriptive > Segments`
3. Click the Application field and search for Oracle Service.
4. Click the Title field and search for the component for which the flexfield(s) should be created.
5. The Freeze Flexfield Definition check box indicates whether or not flexfields can be defined or updated. Make sure it is deselected so new flexfields can be defined.
6. Click **Segments** to display the Segments Summary form.
7. Click **New** to create a new flexfield definition or click **Open** to open an existing

flexfield definition.

8. Enter the segment name in the Name field.
9. Click the button next to the Column field and select an attribute column from the Column list of values.
10. Enter a description in the Description field and a number in the Number field.
11. Click the search button in the Value Sets field and select a value set (this is the data type of the flexfield) from the list of values. The Description field will be automatically populated.

You can also select a default type from the Default Type list of values to indicate a default value in the Default Value field. Select or deselect the Required check box to specify whether a value is required or not.

12. Specify the flexfield size information in the Sizes section of the form.
13. Optionally, specify prompt information in the Prompts section of the form.  
For example, prompts could be used when displaying a window that requests data input for the flexfield.
14. Optionally, click **ValueSet** to open the form where you can define new value sets or update existing value sets.
15. Click **Save** to save the new flexfield definition and close the Segments form.
16. Review the Segments Summary form shown and then close it.
17. If no more updates are needed, select the Freeze Flexfield Definition check box.
18. Click **Compile**.

## Viewing the Flexfields

The flexfields are downloaded and displayed in the Oracle Mobile Field Service Store and Forward application after synchronization.

## Label Modification

The Oracle Mobile Field Service Store and Forward Multiplatform application supports label changes. Newly defined labels are visible to the end user.

For Oracle Mobile Field Service Store and Forward Multiplatform, all labels are stored in the FND\_NEW\_MESSAGES table. Use the application developer responsibility to change labels.

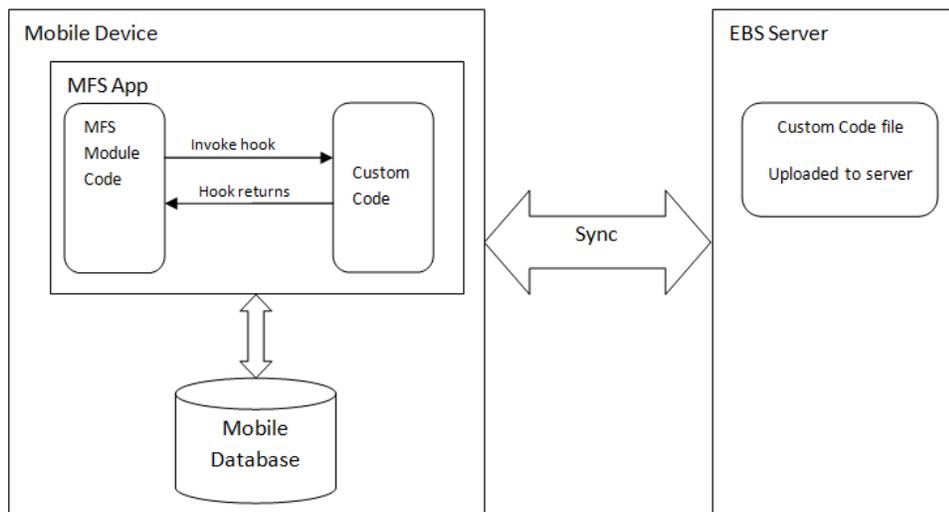
## Steps

Complete the following steps to customize the labels and messages seeded in FND\_NEW\_MESSAGES:

1. Log on to the enterprise system.
2. Select the Application Developer responsibility
3. Select `Application > Messages Function`.
4. Search for messages starting with the CSM5 prefix.
5. Message text can then be replaced for corresponding message.

## User Interface Customization

The Oracle Mobile Field Service Store and Forward Multiplatform application supports user interface customization and validation. There are pre-defined hooks/methods. Users can define and implement these hooks in the custom files and upload to the EBS server. The custom code will be downloaded to the device/client and will be loaded within a container inside the MFS app. At runtime, the MFS file will detect the hooks/methods and if present they will be invoked. MFS app will wait for hook to complete the execution and return the control back to MFS. Custom code returns parameters to MFS app after completion.



The screens that can be customized are described below.

## Task Details Screen

The hooks/methods in the task details screen are as follows:

### 1. onTaskDetailsLoadHook(successCb)

This 'On-load' method is called when the task details screen is loaded. This method allows to set show/hide and/or read-only to the fields of the task details screen. There will be one parameter to this method.

- successCb – This is the method that needs to be called by custom code with JSON object.

Custom code should prepare a JSON object of fields and the attributes readOnly, display. Once JSON object is prepared success callback method should be called with the JSON object as parameter. All the IDs of the fields on the screens are mentioned in the Constants section of this chapter.

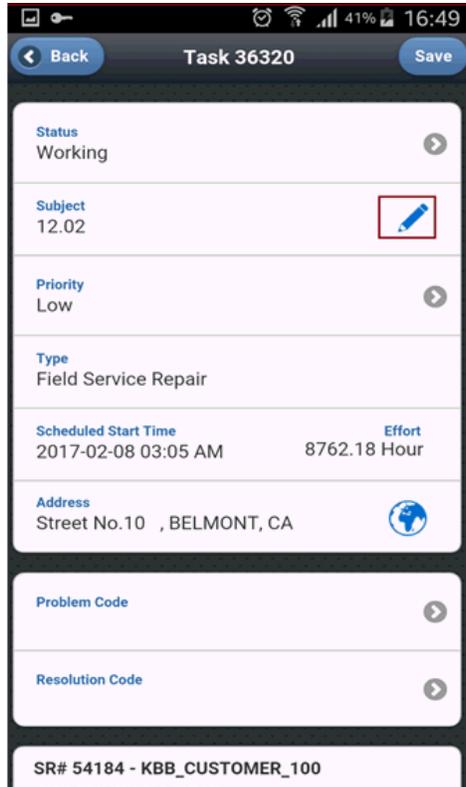
#### **Example**

Below is the example of the JSON object to be passed to the success callback method.

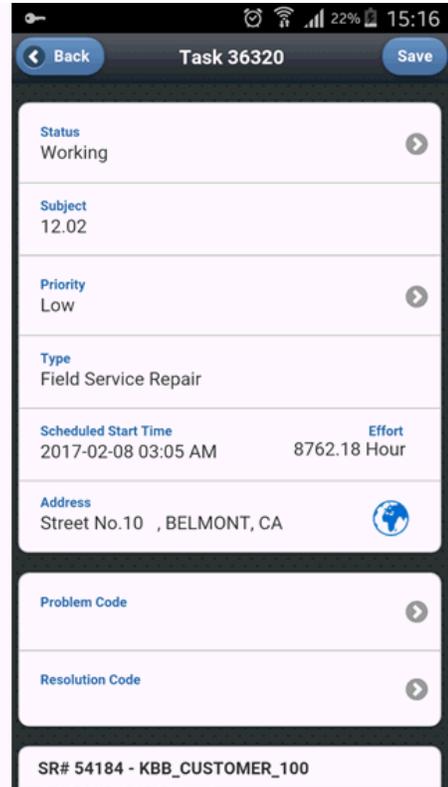
```
var taskObj = {TASK_DETAILS:[{ID:TASK_DETAILS_SUBJECT,readOnly:true,display:'show'}}]; executeCustomFeatureJS(successCb,["S@"+JSON.stringify(taskObj)]);
```

Example of onTaskDetailsLoadHook, - This sets the field Subject to display as readonly field.

```
function onTaskDetailsLoadHook(successCb)
{
//This will make task subject as read-only
var taskObj = {TASK_DETAILS:[{ID:TASK_DETAILS_SUBJECT,readOnly:
true,display:'show'}}];
//Call the success callback with the prepared JSON object.
executeCustomFeatureJS(successCb,["S@"+JSON.stringify(taskObj)]);
}
```



Before Customization

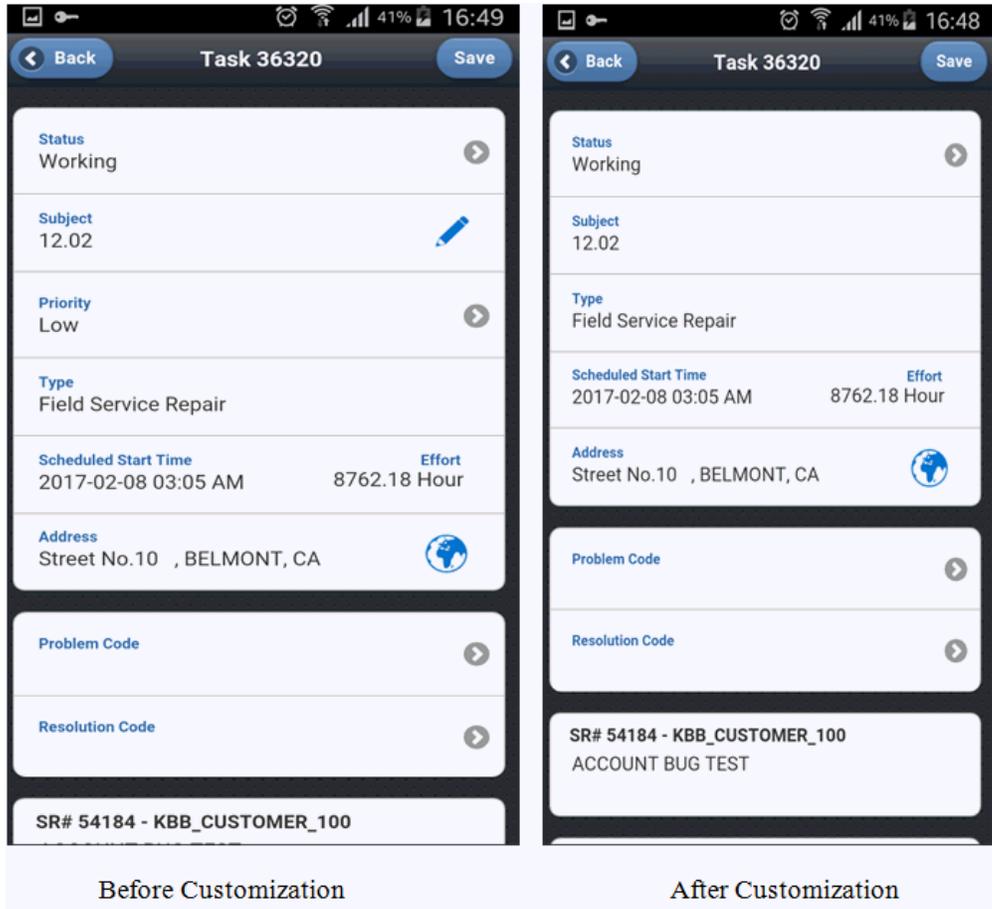


After Customization

### Example

To hide task priority and make subject as read-only from the details.

```
var taskObj = {TASK_DETAILS:[{ID:TASK_DETAILS_SUBJECT,readOnly:true,
display:'show'}, {ID:TASK_DETAILS_PRIORITY,readOnly:false,
display:'hide'}]};
executeCustomFeatureJS(successCb,["S@"+JSON.stringify(taskObj)]);
```



2. onTaskDetailsPreSaveHook (taskObj,successCb)

This 'pre-save' method/hook is called when the user clicks on the Save button in the task details screen. There will be two parameters to this method.

- JSON object – This will have all the fields with their values on the UI

- successCb – This is the method which should be called from custom code with the parameters as true/false and error message.

Custom code can read all the values from JSON object and do validations. On completion call the successCb method with true / false. If true is passed the save operation will continue. If false is passed save will not proceed.

In case of failure:

successCb (false, "Duplicate problem code.")

In case of success:

successCb (true)

Data can be accessed as mentioned below:

```
taskObj. TASK_DETAILS_STATUS
taskObj. TASK_DETAILS_SUBJECT
```

### Example

Example of onTaskDetailsPreSaveHook, - This example validates and does not allow the system to close a task if install and return count are not matching.

```
function onTaskDetailsPreSaveHook(taskObj,successCb)
{
    //on a particular task status , if we want to add some validation
we can make use of this method.
    if (taskObj. TASK_DETAILS_STATUS == "CLOSED") {
        //Check the install and return parts count, if they do not match
then we call pass the error
message.
        if(installCount <> returnCount)
            successCb (false, "Installed parts is not matching
the returned parts.");
        else
            successCb (true);
    }
    else{
        successCb (true);
    }
}
```

## Debrief Material Return Screen

Following are examples of customizing the Debrief Material Return screen.

### 1. onReturnPartsLoadHook(successCb)

This 'pre-save' method/hook is called when the debrief material return screen is loaded. This method allows users to set show/hide and/or read-only properties to the fields of the debrief material return screen. There will be one parameter to this method.

- successCb – This is the method that needs to be called by custom code with JSON object.

Custom code should prepare a JSON object of fields and the attributes readOnly, display. Once JSON object is prepared success callback method should be called with the JSON object as parameter.

### Example

Example of onReturnPartsLoadHook, This hides the field return disposition.

```
function onReturnPartsLoadHook(successCb)
{
    //if we want to hide the return disposition..
    var retObj = {RETURN :[{ID: RETURN_DISPOSITION,readOnly:false,
display:'hide'}]};    successCb(retObj);
}
```

### 2. onReturnPartsPreSaveHook(returnObj,successCb)

This 'pre-save' method/hook is called on click of save button in debrief material

return screen. There will be two parameters to this method.

- JSON object – This will have all the fields with their values on the UI.

- successCb – This is the method which should be called from custom code with the parameters as true/false and error message.

Custom code can read all the values from JSON object and perform validations. On completion, call the successCb method with true/false. If true is passed the save operation will continue. If false is passed save will not proceed.

In case of failure:

```
successCb (false, "Duplicate bill.")
```

In case of success

```
successCb (true)
```

Data can be accessed as mentioned below:

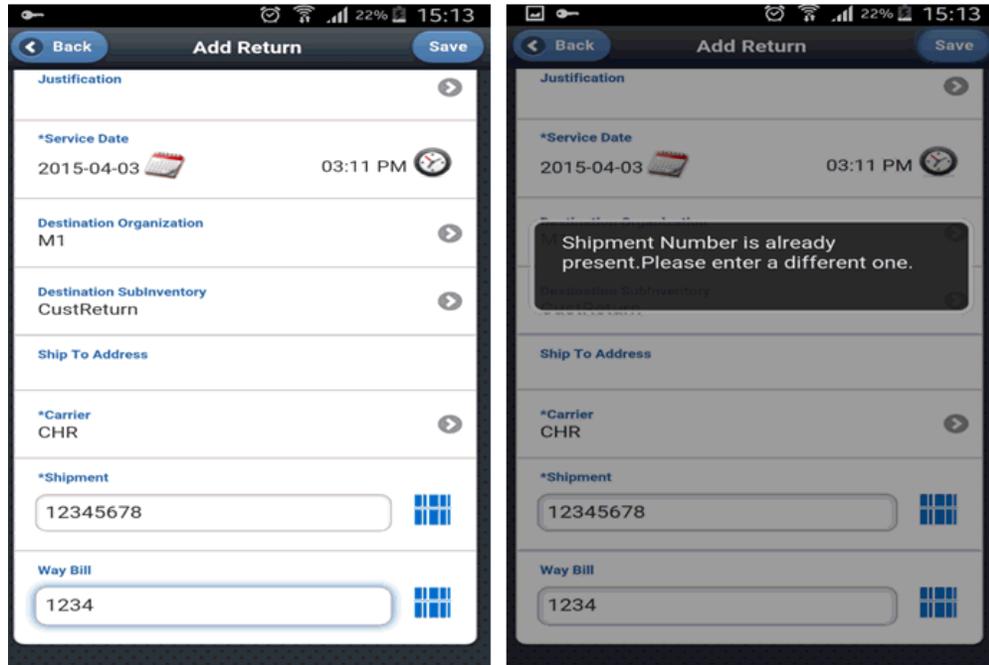
```
returnObj.RETURN_SHIPMENT
```

```
returnObj.RETURN_DEBRIEF_LINE_ID
```

### **Example**

Example of onReturnPartsPreSaveHook, This doesn't allow to enter duplicate shipment number.

```
function onReturnPartsPreSaveHook(returnObj, successCb)
{
    //To check if the shipment no is duplicate..
    //Search for shipment no "returnObj.RETURN_SHIPMENT" in the list of
    shipment numbers in the client.
    if(found(returnObj.RETURN_SHIPMENT ))
    executeCustomFeatureJS(successCb,["E@Shipment Number is already
    present.Please enter a different one."]);
    }else executeCustomFeatureJS(successCb,["S@" ]);
```



Before Customization

After Customization

## Labor Details Screen

Below are hooks/methods in labour details screens.

### 1. onLaborDetailsLoadHook (successCb)

This 'On-load' method is called when the labor details screen is loaded, This method allows to set show/hide and/or read-only properties for the fields of the labor details screen. There will be one parameter to this method.

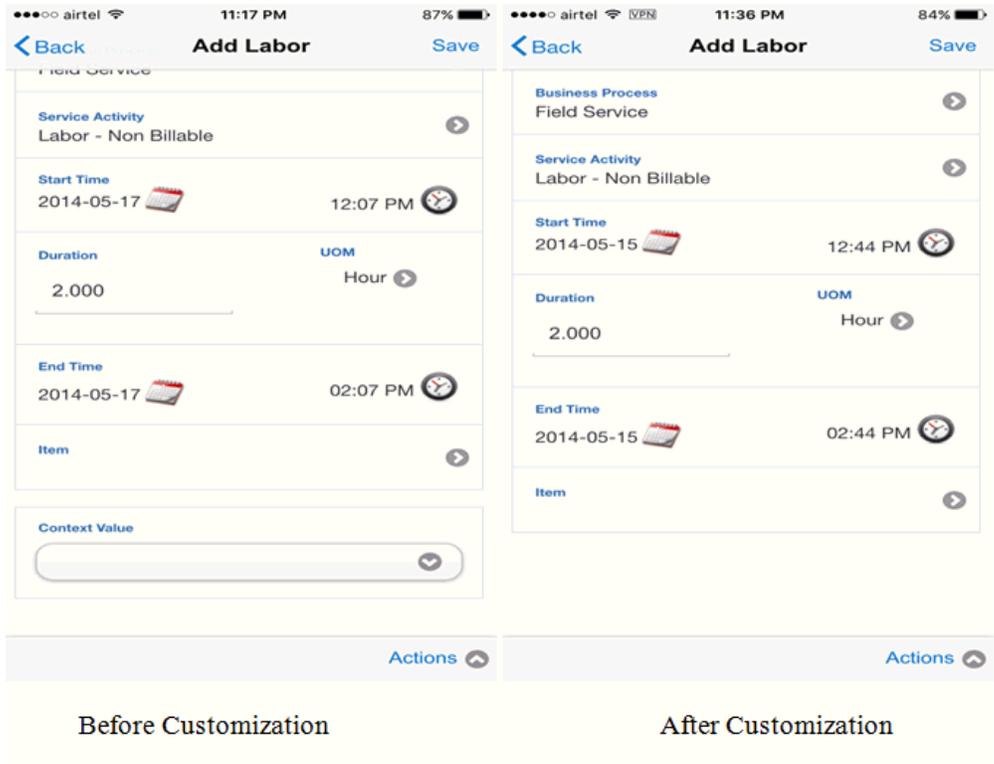
- successCb – This is the method that needs to be called by custom code with JSON object.

Custom code should prepare a JSON object of fields and the attributes readOnly, display. Once JSON object is prepared success callback method should be called with the JSON object as parameter.

Below is the example of the JSON object to be passed to success callback method.

```
var laborObj = {LABOR_DETAILS:[{ID:LABOR_FLEX_FIELD,readOnly:false,
display:'hide'}}];executeCustomFeatureJS(successCb,["S@"+JSON.
stringify(laborObj)]);
```

Example of onLaborDetailsLoadHook, - This hides Labor Flex Field from the details.



2. onLaborDetailsPreSaveHook (laborObj,successCb)

This 'pre-save' method/hook is called on click of save button in labor details screen. There will be two parameters to this method.

- JSON object – This will have all the fields with their values on the UI

- successCb – This is the method which should be called from custom code with the parameters as true/false and error message.

Custom code can read all the values from JSON object and do validations. On completion, call the successCb method with true / false. If true is passed the save operation will continue. If false is passed save will not proceed.

Example: In case of failure:

successCb (false, "Duplicate problem code.")

In case of success:

successCb (true)

## SR Details Screen

Below are the hooks/methods in SR Details screen.

1. onSRDetailsLoadHook (successCb)

This 'On-load' method is called when the SR details screen is loaded. This method allows to set show/hide and/or read-only properties to the fields of the SR Details screen. There will be one parameter to this method.

- successCb – This is the method that needs to be called by custom code with JSON object.

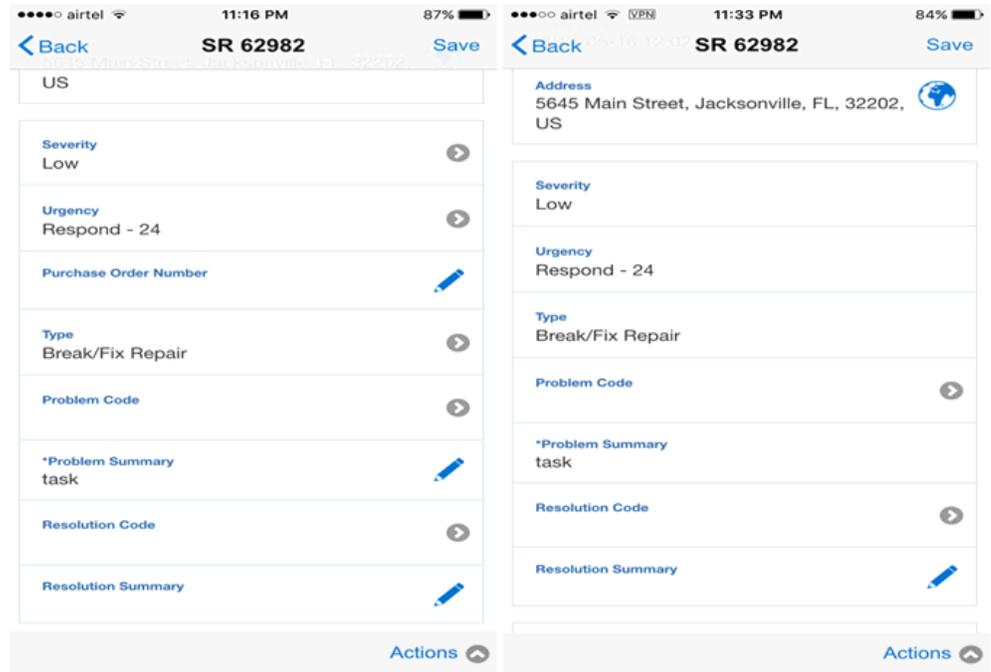
Custom code should prepare a JSON object of fields and the attributes readOnly, display. Once JSON object is prepared success callback method should be called with the JSON object as parameter.

### **Example**

Below is the example of the JSON object to be passed to success callback method.

```
var srObj = {SR_DETAILS:[{ID:SR_DETAILS_SEVERITY,readOnly:true,
display:'show'},{ID:SR_DETAILS_URGENCY,readOnly:true,
display:'show'},{ID:SR_DETAILS_PURCHASEORDER_NUMBER,readOnly:false,
display:'hide'},{ID:SR_DETAILS_TYPE,readOnly:true,display:'show'},
{ID:SR_DETAILS_PROBLEM_SUMMARY,readOnly:true,display:'show'}}];
executeCustomFeatureJS(successCb,["S@"+JSON.stringify(srObj)]);
```

Example of onSRDetailsLoadHook, - This hides SR details purchase order number and set SR Details severity, SR Details Urgency, SR details type, SR Details Problem Summary to read only.



Before Customization

After Customization

2. onSRDetailsPreSaveHook (srObj,successCb)

This 'pre-save' method/hook is called when the user clicks the save button in sr details screen. There will be two parameters to this method.

- JSON object – This will have all the fields with their values on the UI.

- successCb – This is the method which should be called from custom code with the parameters as true/false and error message

Custom code can read all the values from JSON object and do validations. On completion call the successCb method with true / false. If true is passed the save operation will continue. If false is passed save will not proceed.

In case of failure:

successCb (false, "Duplicate problem code.")

In case of success

successCb (true)

## Install Screen

Below are the hooks/methods in the Install screen.

1. onInstallPartsLoadHook (successCb)

This 'On-load' method is called when the Install part screen loads.

2. `onInstallPartsPreSaveHook(res, successCb)`

This 'pre-save' method/hook is called when the user clicks on the save button in Install part screen.

3. `onInstallPartsListLoadHook(res,successCb)`

This 'On-load' method is called when the Install part list screen loads.

## Task List Screen

Below are the hooks/methods in the Task List screen.

1. `onTaskListLoadHook(successCb)`

This 'On-load' method is called when the task list screen loads. This method allows to enable the table dependent DFF, Location tracking.

- successCb – This is the method that needs to be called by custom code with JSON object.

Custom code should prepare a JSON object of fields and the attributes enable. Once JSON object is prepared success callback method should be called with the JSON object as parameter.

Below is the example of the JSON object to be passed to success callback method.

```
var initObj = {TASK_LIST : [{ID : ENABLE_TABLE_DEPENDENT_DFF,enable: true}]};  
executeCustomFeatureJS(successCb,["S@"+JSON.stringify(initObj)]);
```

Example of `onTaskDetailsLoadHook`, - This enables table validated DFF.

```
function onTaskListLoadHook(successCb)  
{  
  var initObj = {TASK_LIST : [{ID : ENABLE_TABLE_DEPENDENT_DFF,enable : true}]};  
  //Call the success callback with the prepared JSON object.  
  executeCustomFeatureJS(successCb,["S@"+JSON.stringify(initObj)]);  
}
```

## Custom Action From Task Details `onTaskDetailsCustAction1Hook`

This method is called on from Custom Action link click on Task Details screen. This link can be enabled by passing `TASK_DETAILS_CUST_ACTION1` in the `onTaskDetailsLoadHook`.

## Table Validated DFF

1. `onTableDependentDFFClicked(custObj,successCb)`

This method is called on clicking any of the table dependent DFF fields. There will

be two parameters to this method.

- JSON object – This will have all the fields with their values and screen id on the UI.

- successCb – This is the method that needs to be called by custom code with JSON object.

Custom code should prepare a JSON object of DFF attribute and lov values. Once JSON object is prepared success callback method should be called with the JSON object as parameter.

### Example

Below is the example of the JSON object to be passed to success callback method.

```
var dffObj = {DFF_DETAILS : [{ID : dffID,lovValues : items,
defaultValue : items[0].lovlineid}]};
executeCustomFeatureJS(successCb, ["S@" + JSON.stringify(dffObj)]);
```

### Example

Example of onTableDependentDFFClicked

```
function onTableDependentDFFClicked (custObj,successCb)
{
doDBOperation("createGenericLov", "Select ATTRIBUTE2 as ID,
ATTRIBUTE6 as NAME from CSM_CUSTOM_4 where ATTRIBUTE3 =
'CSF_LABOR_REASON' ", [], function (items) {
var dffObj = {
DFF_DETAILS : [{
ID : dffID,
lovValues : items,
defaultValue : items[0].lovlineid
}
]
};
executeCustomFeatureJS(successCb, ["S@" + JSON.stringify
(dffObj)]);
});
}
```

## 2. getTableDependentFlexFieldDesc(dffID, successCb)

This method is called while loading the table dependent DFF fields into the UI. This method is used to fetch the description of the DFF and display in the UI. There will be two parameters to this method.

- JSON object – This will have screen id and DFF attribute value ID.

- successCb – This is the method that needs to be called by custom code with JSON object.

Custom code should prepare a JSON object of DFF attribute and lovvalue. Once JSON object is prepared success callback method should be called with the JSON object as parameter.

### Example

Below is the example of the JSON object to be passed to success callback method.

```

var dffObj = {DFF_VAL : [{DFF_ID : dffID.DFF_ID,lovValue : items.
item(0)['NAME']}]};
executeCustomFeatureJS(successCb, ["S@" + JSON.stringify(dffObj)]);
Example of getTableDependentFlexFieldDesc
function getTableDependentFlexFieldDesc (custObj,successCb)
{
doDBOperation("createGenericLov", "SELECT ccl.ATTRIBUTE4 as NAME
from CSM_CUSTOM_1 ccl where ccl.ATTRIBUTE3 = 'CYCSI Debrief
Subcategory Reasons' AND ccl.ATTRIBUTE4 =? ",params, function
(items) {
var dffObj = {
DFF_DETAILS : [{
ID : dffID,
lovValue : items.item(0)['NAME']
}
]
};
executeCustomFeatureJS(successCb, ["S@" + JSON.stringify(dffObj)]);
});
}
}

```

## Custom UI in the mobile device

Below are the steps to add a custom UI in mobile application Add following code JS and custom HTML code to the custom file. Always keep the javascript code and html code separated by one line 'var dummy;':

```

< Javascript code >
var dummy;
< HTML code >

```

### Example

//This is the method which should be called from the UI when user wants the control to be transferred back to the MFS application

```

function goBackFeatureCustom(){
goToFeature('CSM');
executeCustomFeatureJS(customReturnCallBackMethod ,["S@"]); //returns
to MFS
}

```

### Example

//variable to hold the return callback method

```
var customReturnCallBackMethod;
```

### Example

//example of the custom action hook, where control is not returned immediately.

Custom UI is invoked from custom code.

```

function onTaskDetailsCustAction1Hook (obj,successCb)
{
goToFeature('Customization');
customReturnCallBackMethod = successCb;
$.mobile.changePage('#laborfeedback'); //launch custom html UI
}
var dummy;

```

### Example

//sample HTML code

```

<div id="laborfeedback" data-role="page">
<ul style="margin-top:0px;margin-right:-5px;margin-left:-8px;">
    <li>
        <div>
            <span >Title*</span>
        </div>
        <div>
            <div><input required="required" type="text" maxlength="80"></div>
        </div>
    </li>
    <li>
        <div>
            <span >Description</span>
        </div>
        <div >
            <textarea id="strDesc" style="max-height:100px;min-
height:40px;width:95%"></textarea>
        </div>
    </li>
    <li>
        <button onclick="goBackFeatureCustom()">Submit & Return to Prev Page</button>
    </li>
</ul>
</div>

```

### Example

Example - Hook onTaskDetailsCustAction1Hook will invoke the UI and when the user clicks on the submit button, the control will come back to MFS.

```

function onTaskDetailsCustAction1Hook (obj,successCb)
{
    goToFeature('Customization'); // navigate to custom UI
    customReturnCallBackMethod = successCb; //store the callback method
    $.mobile.changePage('#laborfeedback'); //navigate to laborFeedback UI.
}

```

### Example

Method goBackFeatureCustom() to be invoked from the Submit button of UI to return

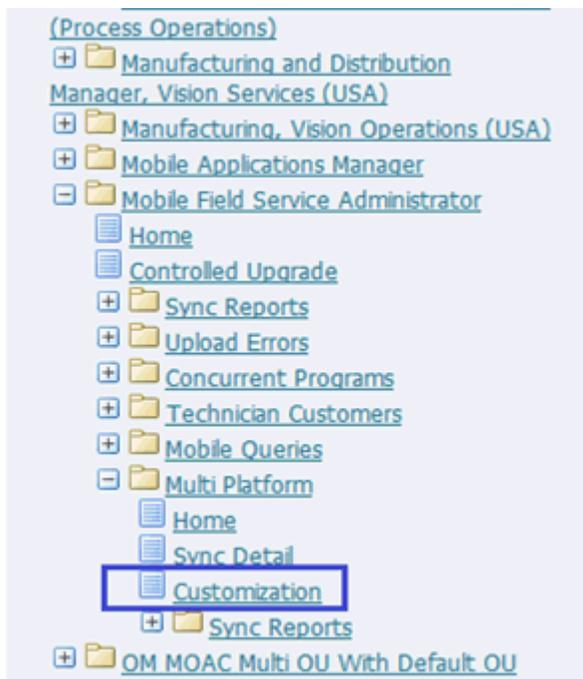
control to MFS.

```
function goBackFeatureCustom()  
{  
  goToFeature('CSM'); //navigate to MFS  
  executeCustomFeatureJS(customReturnCallBackMethod ,["S@"]); //return  
}
```

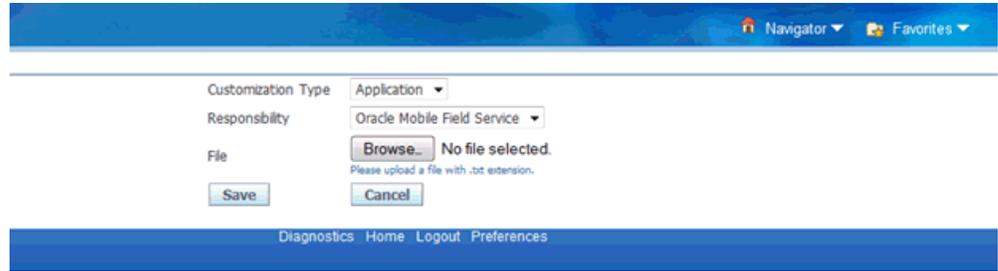
## Server Side Setup of Custom Code File

After implementing the event handler methods, user must upload the file EBS using the Mobile Field Service Administrator responsibility using the steps listed below:

1. Change the extension of the saved customized js file to '.txt'. This is to avoid any involuntary sanitizing of the file as per Note 1357849.1 - Security Configuration Mechanism in the Attachments Feature in Oracle E-Business Suite.
2. Login to EBS as a user who has access to the Mobile Field Service Administrator responsibility.
3. Access the Custom file Upload link.



4. Choose a responsibility that the customization should be available for. Oracle Mobile Field Service is the seeded responsibility. Other custom responsibilities defined for Mobile Field Service application will also be listed and a Site level option is available. When the Site level option is chosen, the customization will be available for those responsibilities without any customization.



5. Upload the customized file (with the .txt extension).
6. Save the changes.
7. Change responsibility to be able to run JTM Master Concurrent Program: Lookup concurrent program.
8. Run JTM Master Concurrent Program: Lookup concurrent program. Synchronize on the mobile device and verify that the customization is applied.

## Constants

Following are the constants used by the Mobile Field Service application to pass/accept data to and from custom code.

### Task Details Screen

- TASK\_DETAILS\_STATUS – Task status
- TASK\_DETAILS\_SUBJECT – Task subject
- TASK\_DETAILS\_PRIORITY – Task priority
- TASK\_DETAILS\_TYPE – Task type
- TASK\_DETAILS\_SCHEDULED\_START\_TIME – Scheduled start time
- TASK\_DETAILS\_SCHEDULED\_END\_TIME – Scheduled end time
- TASK\_DETAILS\_PLANNED\_START\_TIME – Task planned start time
- TASK\_DETAILS\_PLANNED\_END\_TIME – Task planned end time
- TASK\_DETAILS\_PBM\_CODE – Problem Code
- TASK\_DETAILS\_RES\_CODE – Resolution Code
- TASK\_DETAILS\_PROBLEM\_SUMMARY - Problem Summary

- TASK\_DETAILS\_TAG - Tag
- TASK\_DETAILS\_PARTS\_SEARCH - Parts Search
- TASK\_DETAILS\_RECIEVE\_PARTS - Receive Parts
- TASK\_DETAILS\_NOTES – Notes
- TASK\_DETAILS\_ATTACHMENTS – Attachments
- TASK\_DETAILS\_TRAVEL – Travel
- TASK\_DETAILS\_LABOR – Labor
- TASK\_DETAILS\_EXPENSE – Expense
- TASK\_DETAILS\_MATERIAL\_INSTALL - Material Install
- TASK\_DETAILS\_MATERIAL\_RETURN - Material Return
- TASK\_DETAILS\_REPORT – Report
- TASK\_DETAILS\_OPA – OPA (custom link)
- TASK\_DETAILS\_KNOWLEDGE –Knowledge (custom link)
- TASK\_DETAILS\_CUST\_ACTION1 –Custom Action  
onTaskDetailsCustAction1Hook()
- TASK\_ID = Task Id
- TASK\_TYPE = Task Type
- TASK\_PRIORITY = Task Priority

### **Debrief Return Screen**

- RETURN\_BUSINESS\_PROCESS\_ID – Return business process id
- RETURN\_SAC\_ID – Return service activity ID
- RETURN\_INV\_ITEM\_ID – Return inventory item id
- RETURN\_SUB\_INVENTORY\_ID– Return sub inventory id
- RETURN\_ORG\_ID –Return organization Id
- RETURN\_UOM\_CODE – Return UOM

- RETURN\_QTY –Return item quantity
- RETURN\_SERIAL\_NO – Return serial no
- RETURN\_RETURN\_DATE – Return date
- RETURN\_REASON\_CODE – Return reason code
- RETURN\_JUST\_CODE – Return justification code
- RETURN\_SERVICE\_DATE – Return service date
- RETURN\_INSTANCE\_ID – Return instance id
- RETURN\_ITEM\_NAME – Return item name
- RETURN\_DISPOSITION – Return disposition
- RETURN\_LOCATOR – Return locator
- RETURN\_LOT – Return LOT
- RETURN\_REVISION –Return revision
- RETURN\_DEST\_ORG – Return destination organization
- RETURN\_DEST\_SUBINV – Return destination Sub inventory
- RETURN\_SHIPPING\_ADDR – Return shipping address
- RETURN\_CARRIER – Return carrier
- RETURN\_SHIP\_METHOD – Return ship to method
- RETURN\_SHIPMENT – Return shipment
- RETURN\_WAYBILL –Return waybill
- RETURN\_DEBRIEF\_LINE\_ID –Return debrief line id

**Debrief Labor Screen**

- LABOR\_BUSINESS\_PROCESS\_ID
- LABOR\_SAC\_ID
- LABOR\_REASON

- LABOR\_INV\_ITEM\_
- LABOR\_FLEX\_FIELD
- LABOR\_START\_TIME
- LABOR\_END\_TIME
- LABOR\_DURATION
- LABOR\_UOM
- DFF\_DEFAULT\_CONTEXT
- INSTALL\_PARTS\_CUSTOM\_BTN
- SYNC\_BEFORE="SYNC\_BEFORE",
- SYNC\_AFTER="SYNC\_AFTER",
- MQ="MQ",
- CURRENT\_TASK\_ASSGISMMENT\_ID
- SHOW\_TABLE\_VALIDATED\_DFF
- LABOR\_FLEX\_FIELD

### **Install Part Screen**

- INSTALL\_BUSINESS\_PROCESS\_ID = "Business Process ID",
- INSTALL\_SAC\_ID = "Service Activity ID",
- INSTALL\_INV\_ITEM\_ID = "Install Inventory Item Id",
- INSTALL\_SUB\_INVENTORY = "Install Source Sub Inventory",
- INSTALL\_SUB\_INVENTORY\_ID = "Install Sub Inventory Id",
- INSTALL\_UOM\_CODE = "Install UOM Code",
- INSTALL\_SERIAL\_NO = "Serial Number ",
- INSTALL\_QTY = "Quantity",
- INSTALL\_RETURN\_DATE = "return date",

- INSTALL\_REASON\_CODE = "Reason code",
- INSTALL\_JUST\_CODE = "Justification Code",
- INSTALL\_SERVICE\_DATE = "service date",
- INSTALL\_INSTANCE\_ID = "Item Instance No",
- INSTALL\_ITEM\_NAME = "ItemName",
- INSTALL\_DISPOSITION = "Disposition code",
- INSTALL\_LOCATOR = "Locator",
- INSTALL\_LOT = "LOTNo",
- INSTALL\_REVISION = "Revision",
- INSTALL\_REC\_INSTANCE = "Recovered Instance Field",
- INSTALL\_REC\_SERIAL = "Recovered Serial Field",
- INSTALL\_PARENT\_INSTANCE = "Parent Instance Field",
- INSTALL\_PARENT\_SERIAL = "Parent Serial Field",
- INSTALL\_DEST\_ORG = "Destination Org",
- INSTALL\_DEST\_SUBINV = " Destination SubInventory",
- INSTALL\_SHIPPING\_ADDR = "Shipping Address",
- INSTALL\_CARRIER = "carrier",
- INSTALL\_SHIP\_METHOD = " shipment method",
- INSTALL\_SHIPMENT = "shipment",
- INSTALL\_WAYBILL = "waybill",
- INSTALL\_DFF\_ATTRIBUTE\_CATEGORY = " ATTRIBUTE\_CATEGORY",
- INSTALL\_DFF\_ATTRIBUTE1 = " ATTRIBUTE1",
- INSTALL\_DFF\_ATTRIBUTE2 = " ATTRIBUTE2",
- INSTALL\_DFF\_ATTRIBUTE3 = " ATTRIBUTE3",

- INSTALL\_DFF\_ATTRIBUTE4 = " ATTRIBUTE4",
- INSTALL\_DFF\_ATTRIBUTE5 = " ATTRIBUTE5",
- INSTALL\_DFF\_ATTRIBUTE6 = " ATTRIBUTE6",
- INSTALL\_DFF\_ATTRIBUTE7 = " ATTRIBUTE7",
- INSTALL\_DFF\_ATTRIBUTE8 = " ATTRIBUTE8",
- INSTALL\_DFF\_ATTRIBUTE9 = " ATTRIBUTE9",
- INSTALL\_DFF\_ATTRIBUTE10 = " ATTRIBUTE10",
- INSTALL\_DFF\_ATTRIBUTE11 = " ATTRIBUTE11",
- INSTALL\_DFF\_ATTRIBUTE12 = " ATTRIBUTE12",
- INSTALL\_ITEM\_NAME = "Item Name"

#### **Install part list screen:**

- INSTALL\_PARTS\_CUSTOM\_BTN=Custom button
- SYNC\_BEFORE=Sync Before
- SYNC\_AFTER=Sync After
- MQ=MQ

#### **SR Details Screen**

- SR\_DETAILS\_SEVERITY –SR Severity
- SR\_DETAILS\_URGENCY –SR Urgency
- SR\_DETAILS\_PURCHASEORDER\_NUMBER –SR Purchase Order Number
- SR\_DETAILS\_TYPE –SR Type
- SR\_DETAILS\_PROBLEM\_SUMMARY –SR Problem Summary

#### **Miscellaneous**

- MODULE = Module
- LABOR = Labor Screen ID

- EXPENSE = Expense Screen ID
- TRAVEL = Travel Screen ID
- INSTALL = Install Screen ID
- RETURN = Return Screen ID
- SR = SR Screen ID
- TASK = Task Screen ID
- DFF\_ATTR= Dff Attribute
- DFF\_DEFAULT\_CONTEXT = Dff Default Context
- CURRENT\_TASK\_ASSGISMMENT\_ID = Current Task Assignment Id
- SHOW\_TABLE\_VALIDATED\_DFF = Show Table Validated Dff
- ATTRIBUTE1 = ATTRIBUTE1
- ATTRIBUTE2 = ATTRIBUTE2
- ATTRIBUTE3 = ATTRIBUTE3
- ATTRIBUTE4 = ATTRIBUTE4
- ATTRIBUTE5 = ATTRIBUTE5
- ATTRIBUTE6 = ATTRIBUTE6
- ATTRIBUTE7 = ATTRIBUTE7
- ATTRIBUTE8 = ATTRIBUTE8
- ATTRIBUTE9 = ATTRIBUTE9
- ATTRIBUTE10 ="ATTRIBUTE10
- ATTRIBUTE11 =ATTRIBUTE11
- ATTRIBUTE12 =ATTRIBUTE12
- LOCATION\_CAPTURE = Location Capture
- ENABLE\_TABLE\_DEPENDENT\_DFF = Enable Table Dependent Dff

- SORT\_BY = Sort By
- INCIDENT\_DATE=Incident Date
- EXPECTED\_RESOLUTION\_DATE=Expected Resolution Date
- INC\_RESPONDED\_BY\_DATE=Inc Responded By Date
- INCIDENT\_RESOLVED\_DATE=Incident Resolved Date
- INCIDENT\_OCCURRED\_DATE=Incident Occurred Date
- PLANNED\_START\_DATE=Planned Start Date
- PLANNED\_END\_DATE=Planned End Date
- SCHEDULED\_START\_DATE=Scheduled Start Date
- SCHEDULED\_END\_DATE=Scheduled End Date

## Generic Attachment Support

Attachments can be used for a variety of purposes, such as maps, driving directions, and product reference images.

### Attachment Support

The Oracle Mobile Field Service Store and Forward applications support the download and display of attachments at a particular entity level.

The following entities have attachment-download. Multiple attachments are allowed on each entity.

- Service Request
- Task

The CSM: Maximum Attachment Size profile controls the maximum amount of attachment data to be downloaded.

The maximum attachment size in mega bytes is specified by the profile value.

If a single file exceeds the profile value, it will not be downloaded. For multiple files, the first n files, which are altogether less than the profile value, will be downloaded.

#### Steps

Complete the following steps to download the attachment:

1. In the enterprise system, create an attachment on a service request or task.

2. Run JTM Concurrent Program: Lookup.
3. Synchronize.

Run the lookup program each time an attachment is added or changed. The new attachment will come down if attached after the last run of the lookup program.

### **Attachment Display for Oracle Mobile Field Service Store and Forward**

There is a button on the service request and task screens that opens a list of attachments.

Click the attachment link to retrieve the data from the attachments table and to save it on the file system with the appropriate file name and extension. Clicking this link will also open the file in the browser.



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