Oracle Utilities Mobile Workforce Management

Installation Guide

Release 2.1.0 Service Pack 6

E26614-08

May 2014

ORACLE

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E26614-08

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Preface

This guide describes how to install Oracle Utilities Mobile Workforce Management.

This preface contains these topics:

Audience

Oracle Utilities Mobile Workforce Management Installation Guide is intended for system administrators installing Oracle Utilities Mobile Workforce Management.

To complete this installation you should have:

- Experience installing and configuring application servers and other software
- Administrative privileges on the host where you are installing the software

Related Documents

For more information, see these Oracle documents:

- *Oracle Utilities Mobile Workforce Management Quick Install Guide*
- *Oracle Utilities Mobile Workforce Management Database Administrator's Guide*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1

Overview

This chapter provides an overview of the installation of Oracle Utilities Mobile Workforce Management.

> **Note:** This service pack is intended to be installed on top of an existing Oracle Utilities Mobile Workforce Management installation. Please refer to the **chapter** Installing Service Packs for information about installing this service pack.

Installation Overview

Installing Oracle Utilities Mobile Workforce Management involves the following steps:

1. Review the different tiers of the application architecture as described in Chapter 2**:** Application Architecture Overview.
2. Understand the hardware requirements for installing the application and the supported platforms for the application and database servers as described in Chapter 3**:** Supported Platforms and Hardware Requirements.

   Note: The installation and administration of the database server tier is described in detail in the document Oracle Utilities Mobile Workforce Management *Database Administrator's Guide*.
3. Plan your installation as described in Chapter 4**:** Planning the Installation.
4. Install the database as described in the document Oracle Utilities Mobile Workforce Management *Database Administrator's Guide*.
5. Install all required third-party software as described in Chapter 6**:** Installing Application Server Prerequisite Software. The required software is listed for each supported combination of operating system and application server.
6. Install the framework for the application as described in Chapter 7**:** Installing the Application Server Component of Oracle Utilities Application Framework.
7. Install Oracle Real-Time Scheduler as described in Chapter 8**:** Installing the Application Server Component of Oracle Real-Time Scheduler.
8. Install Oracle Utilities Mobile Workforce Management as described in Chapter 9**:** Installing the Application Server Component of Oracle Utilities Mobile Workforce Management.
9. Install the Mobile Client for Oracle Utilities Mobile Workforce Management on mobile devices as described in Chapter 10**:** Installing the Mobile Client.
10. If you wish to upgrade to Oracle Utilities Mobile Workforce Management version 2.1.0.6, follow the instructions as described in Chapter 11: Installing Service Packs.

11. Follow the installation guidelines described in Chapter 12**:** Additional Tasks.

Chapter 2

Application Architecture Overview

This section provides an overview of the Oracle Utilities Mobile Workforce Management application architecture.

Application Architecture

The Oracle Utilities Mobile Workforce Management application is deployed on multiple tiers.

Please see the *Oracle Utilities Mobile Workforce Management Server Administration Guide* for a more detailed description of the application architecture and individual tiers.

Tier 1: Desktop/Client, or Presentation Tier

This tier is implemented in a browser-based client. Users use a desktop client web browser to log in to and use the Oracle Utilities Mobile Workforce Management application. Note also that a desktop machine running Microsoft Windows and the Oracle client is required to perform some of the Oracle Utilities Mobile Workforce Management installation steps.

Tier 2: Mobile Client Tier

This tier is implemented on mobile computers such as laptops and handhelds. Users can install the mobile client software to use the mobile functionality of Oracle Utilities Mobile Workforce Management.

The current release of Oracle Utilities Mobile Workforce Management supports:

- a mobile client for laptops running Windows 7
- mobile devices running Windows Mobile 6.5 Professional, Windows Embedded Handheld 6.5 or Android Mobile 2.3/4.1

Tier 3: Web Application / Business Application Server, or Business Logic Tier

This tier is implemented in a web application or business application server. The business application component can be installed as part of the web application server, or as a separate component. Except where explicitly noted, most of the Oracle Utilities Mobile Workforce Management installation documentation assumes that the web application and business application servers reside together.

Tier 4: Database, or Persistence Tier

This tier is implemented in a database server. The database server stores data maintained by the Oracle Utilities Mobile Workforce Management application. More specifically, the database tier

contains the data server files and database executables that physically store the tables, indexes, and other database objects for your system.

Chapter 3

Supported Platforms and Hardware Requirements

This section gives an overview of the tiers on which the product is implemented, and shows each of the operating system/server combinations that the product is certified for. It includes:

- Software and Hardware Considerations
- Requirements by Tier
- Supported Platforms
- Support for Software Patches and Upgrades

Software and Hardware Considerations

There are many factors that can influence software and hardware decisions. For example, your system may have to satisfy specific performance, availability, or scalability requirements, or to support running in a language other than English. These business requirements, together with the chosen system architecture, should be used in initial software and hardware planning.

Some of the questions that you should answer before beginning the installation include:

- On which hardware platform and operating system will Oracle Utilities Mobile Workforce Management be deployed?
- On which web server product will Oracle Utilities Mobile Workforce Management deploy?
- On which database product will Oracle Utilities Mobile Workforce Management deploy?
- Do you plan to deploy multiple Oracle Utilities Mobile Workforce Management instances on the same physical server?
- How do you plan to deploy Oracle Utilities Mobile Workforce Management?
    - Web/application/database on the same physical server
    - Web/application on one server and database on separate server
    - Each component on its own server

      Note: If you deploy the mobility application and web application on different servers, the log file path should be shared on the network.
- How do you plan to install and update the Oracle Utilities Mobile Workforce Management mobile client on the mobile computers or devices?
    - Use a device management software like Oracle Mobile Server for installation and updates.

- How do you plan to secure Oracle Utilities Mobile Workforce Management when communicating with devices over unsecured networks like the internet?

For detailed descriptions of various deployment architecture choices that may aid in planning, please see the document *Oracle Utilities Application Framework Architecture Guidelines,* available on My Oracle Support (Article ID 807068.1).

The final hardware and software decisions must comply with the specific requirements of Oracle Utilities Mobile Workforce Management, as described in the rest of this chapter.

Requirements by Tier

The application is deployed on multiple Tiers:

- Tier 1, Desktop
- Tier 2, Mobile Client
- Tier 3, Web/Business Application Server
- Tier 4, Database Server

Tier 1, Desktop: Software and Hardware Requirements

Configuration	Processor	Memory (RAM)	Monitor Display
Minimum	Pentium IV - 2.0 GHz	1024 MB	1024X768** 16-bit Color
Recommended*	Pentium IV - 3.0+ GHz, Or any Core 2 Duo Or any Athlon X2	2048 MB	1280X1024* 32-bit Color

* The Recommended configuration will support better performance of the client.

** To reduce the amount of scrolling required for pages that are longer than 768 or 1024 pixels, consider placing a monitor into vertical position (with narrow side on the bottom).

Web Browser Requirements

The following operating system / web browser software is supported:

- Windows 7 (32-bit or 64-bit) with Internet Explorer 8.x
- Java plug-in 1.6.0_65

Tier 2, Mobile Client: Software and Hardware Requirements

The following hardware configuration is supported:

Configuration	Processor	Memory (RAM)
Minimum	Pentium IV - 2.0 GHz	1024 MB

The following Operating Systems are supported by the mobile client:

- Windows 7 (64-bit)
- Windows Mobile 6.5 Professional
- Windows Embedded Handheld 6.5

- Android 2.3, 4.1

  Note: This release of Oracle Utilities Mobile Workforce Management has been tested on a Motorola MC75 device running Windows Mobile 6.5 Professional, a Panasonic Toughbook 30 running Windows 7 (32-bit), and an HTC Desire device running Android client Mobile 2.3, 4.1.

Tier 3, Web/Business Application Server: Software and Hardware Requirements

Please consult the **Supported Platforms** on page 3-4 to determine which web application servers can be used with the operating system that will be hosting this tier.

The recommendations that follow are based on a standard installation with both the application and business servers on the same machine and the system running with the default values. The minimum resource requirements exclude third-party software installation requirements. Refer to the third-party vendors for specific requirements. The following sizing excludes the Oracle database server installation.

Memory Requirements

For each application server environment a minimum of 4 GB of real memory is required, plus 6 GB of swap space.

Disk Space Requirements

The approximate disk space requirements in a standard installation are as follows:

Location	Size	Usage
$SPLEBASE	5 GB minimum	This location is where the application and Framework get installed. Startup, shutdown and other online log files are stored here. The size and space that is used should be monitored because various debugging options can significantly affect the size of log files.
$SPLAPP	2 GB minimum	This location is used for storing batch log files and output from batch jobs. The size of this space should be influenced by which batches are run and how often, and the amount of debugging information that is collected.
Location of the application web work files on the web servers	1.5 GB minimum	This location is used by the various web server vendors to expand the application. It should be considered when installing these products. Refer to the individual web server documentation to determine the location of the temporary files.
Installation temporary area	4 GB	The application gets installed from this location. You need enough space to uncompress the files and install the application.

Location	Size	Usage
Oracle data area	4 GB minimum	This location is where the Oracle database data files are stored. The size of this space should be based on the requirements of the production environment. For an initial or demo database install 4 GB should be sufficient.

Tier 4, Database Server: Software and Hardware Requirements

See the section **Supported Platforms** on page 3-4 for supported database servers.

Supported Platforms

The installation has been tested and certified to operate on many operating system, application server, and database server combinations. For the software requirements for each of these combinations, see Chapter 6**:** Installing Application Server Prerequisite Software for more information.

Operating Systems and Application Servers

The following table details the operating system and application server combinations on which this version of Oracle Utilities Mobile Workforce Management is supported.

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database
Windows 7* (IE 8.x)	AIX 7.1 TL0 (64-bit)	POWER 64-bit	WebLogic 10.3.6	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3
	Oracle Linux 5.6/5.8/ 6.2 (64-bit) (based on Red Hat Enterprise Linux **(64-bit)	x86_64	WebLogic 10.3.6	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3
	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.6	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.6	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3

* Oracle support for Windows XP ended December 2013. Microsoft support for Windows XP ended April 2014.

** Oracle Utilities Mobile Workforce Management is supported on the versions of Oracle Linux specified. Because Oracle Linux is 100% userspace-compatible with Red Hat Enterprise Linux, Oracle Utilities Mobile Workforce Management also is supported on Red Hat Enterprise Linux for this release.

Platform Changes

Oracle Utilities Mobile Workforce Management 2.1.0 no longer requires the Oracle Spatial database option to operate properly. While this release supports Oracle Spatial, additional

installation steps have been added which allow the application to run against a database without this option, including Oracle Standard Edition.

Oracle Database Servers

This version of Oracle Utilities Mobile Workforce Management is supported with Oracle Database Server 11.2.0.1+ on all of the operating systems listed above.

The Oracle 11.2.0.1+ client is required for this version of the database server.

The following Oracle Database Server Editions are supported:

- Oracle Database Server Standard Edition
- Oracle Database Server Enterprise Edition

Application Dependencies for Oracle Business Intelligence for Utilities

When using Oracle Utilities Mobile Workforce Management version 2.1.0.6 with Oracle Business Intelligence for Utilities, you must upgrade to Oracle Utilities Advanced Spatial and Operational Analytics version 2.4.0 Service Pack 4. This release is not compatible with previous releases of Oracle Utilities Advanced Spatial and Operational Analytics. For more information, see the release notes and installation documentation for Oracle Utilities Advanced Spatial and Operational Analytics, version 2.4.0 Service Pack 4.

Please note that in release 2.5, the product name for Oracle Utilities Advanced Spatial and Operational Analytics was updated to "Oracle Utilities Analytics".

Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will periodically issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle products have already been tested against.

If it is necessary to apply an upgrade, please do so in a test environment that is running on the same platform as your production environment prior to updating the production environment itself.

The exception from this rule is Hibernate software version 3.3.2 ga. This version should not be upgraded.

Always contact Oracle Utilities Support prior to applying vendor updates that do not guarantee backward compatibility.

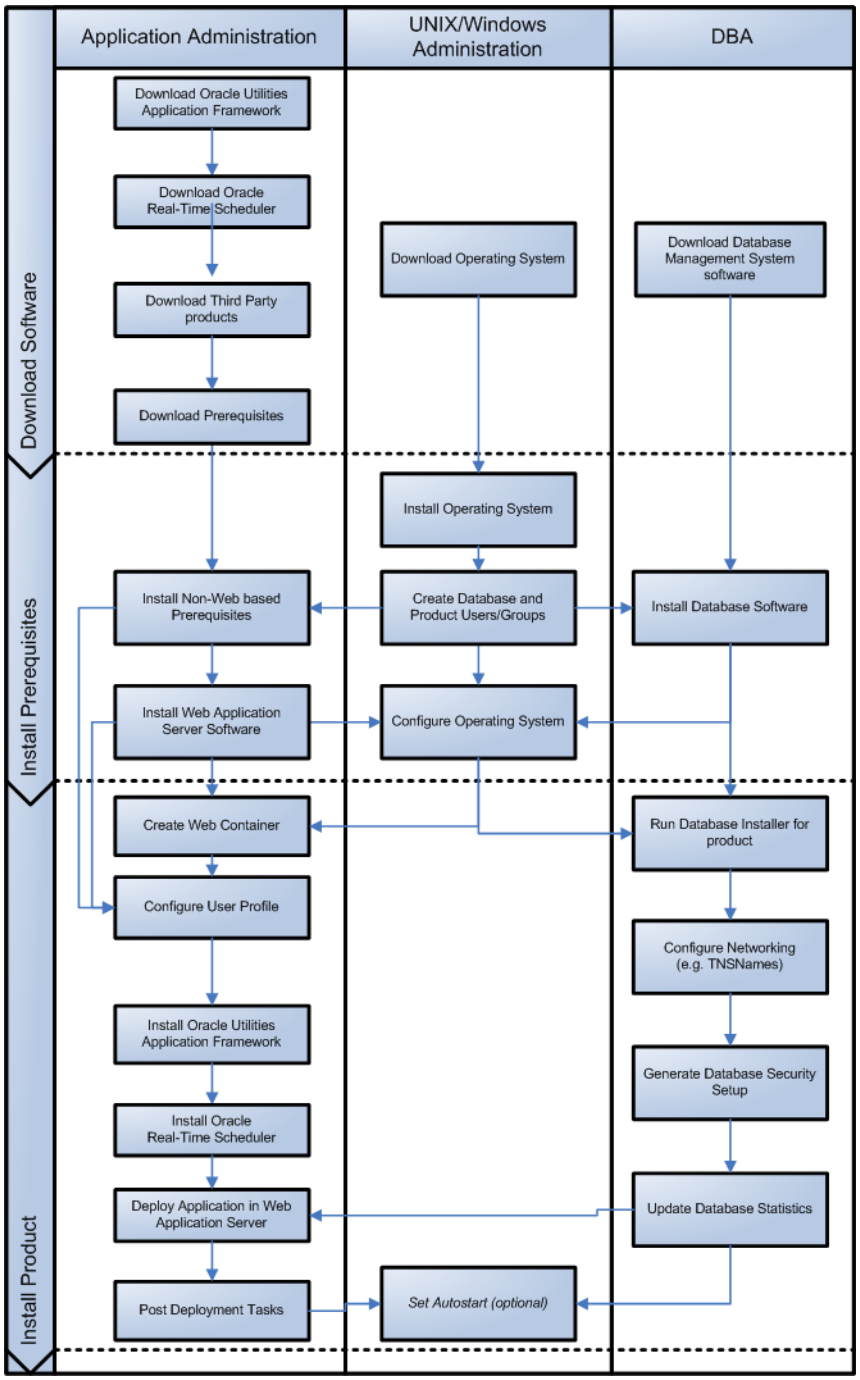
Chapter 4

Planning the Installation

This chapter provides information for planning an Oracle Utilities Mobile Workforce Management installation, including:

Installation and Configuration Overview

The following diagram provides an overview of the steps that need to be taken to install and configure Oracle Utilities Mobile Workforce Management:



Before You Install

Refer to My Oracle Support for up-to-date additional information about installing Oracle Utilities Mobile Workforce Management.

For frequently asked questions and troubleshooting information during installation of the application and database components of Oracle Utilities Mobile Workforce Management, refer to articles 1475032.1 and 1475013.1 on My Oracle Support.

Before You Upgrade

The MCP version control enhancement requires that a certain upgrade process be followed to ensure that no data is lost and no incompatible version issues arise.

The upgrade process includes the following steps:

1. All mobile devices should end their shifts and log off.
2. Upgrade the server and all MDTs.
3. Regenerate all deployments.

For more information about this enhancement and upgrade considerations, refer to Chapter 11, "Deploying the Application to Mobile Devices," in the *Oracle Utilities Mobile Workforce Management Configuration Guide*.

Installation Checklist

The following checklist will help guide you through the installation process of the application tier. The details for each step are presented in subsequent chapters.

Note: Please make sure that you follow the order listed below.

1. Create Group/User ID.
2. Install prerequisite software (see **Prerequisite Third-Party Software Overview** on page 4-4 for more information).
   - Oracle Client 11.2.0.1+ (for connecting to Oracle database)
   - Java 6
   - Hibernate 3.3.2
   - JDeveloper 11g (11.1.1.6.0)

     Note: You can choose to install either JDeveloper or Oracle Application Developer Framework (ADF). Do **NOT** install JDeveloper if you plan to install and use Oracle ADF.
   - MapViewer 11.1.1.5.1
   - Map data
   - Oracle BPEL Process Manager 11g (optional)
3. Install application server.
   - Oracle WebLogic 11gR1 (10.3.6)
   - wllfullclient.jar
4. Install Oracle Application Development Framework (ADF) 11g (11.1.1.6.0). Ensure the version of Oracle ADF is compatible with the version of Weblogic installed.

   Note: You can choose to install either JDeveloper or Oracle Application Developer Framework (ADF). Do **NOT** install Oracle ADF if JDeveloper is already installed.
5. Verify that all software is installed.
6. Set up environment variables.
7. Install Oracle Utilities Application Framework.
8. Install Oracle Real-Time Scheduler.
9. Install MapViewer 11.1.1.5.1.
10. Install Oracle Utilities Mobile Workforce Management.

11. Deploy the Oracle Utilities Mobile Workforce Management application.
12. Perform Post installation tasks.

Prerequisite Third-Party Software Overview

For complete details about installing and configuring the prerequisite third-party software for your specific platform, see Chapter 6: Installing Application Server Prerequisite Software.

Application Framework Installation and Configuration Worksheets

Installation Menu Functionality Overview

The main configuration menu is structured so that related variables and/or options are grouped together and are associated by a menu item number. To access a particular group of variables and options, enter the menu item number associated with that group. Each option within that group is displayed in turn on the screen, along with a prompt so that you can type the desired value for the option, if it is not the same as the default or current value.

When performing the initial installation you need to go through all menu options. The menu options may have a default value, a list of valid values and a validation check.

On each option prompt you can keep the current value by simply leaving the input line empty. In order to erase a variable value you need to enter one dot (“.”). The leading spaces will be trimmed out on each values entered.

Note: When working with the menu you will see the following:

- **Valid Values: [ALFANUM].** This indicates you will need to enter an alphanumeric value in the prompt.
- **Valid Values: [NUM].** This indicates you will need to enter an numeric value in the prompt.

When all options are set, type <P> at the main menu prompt option. This will save the option values selected throughout the configuration.

During this processing the global variables are validated and the configuration file <SPLEBASE>/etc/ENVIRON.INI is created or updated. This file contains all the variables inputted and calculated. These are needed by the next part of the installation process.

To exit the configuration utility without saving any of the values entered, type <X> and 'Enter'

Installation Menu Functionality Details

The Environment Installation Utility requires that Oracle Client Home is set in the path for the user performing the installation.

Prior to running the installation utility you will need to review the supported platforms document to ensure you have all of the Third Party software installed.

In this menu if the variables are set prior to execution, that value will be defaulted by the installation utility when performing the installation.

When the installation has been completed successfully, the values will be written to an ENVIRON.INI file. When splenviron.sh / cmd is executed, it will read from the ENVIRON.INI file to set the environment variables.

In the worksheets there are three different types of values given:

- Default Values are the values that will be defaulted when running the installation utility.

- Security Values denote values that should be changed when in production.
- Example Values are values that can be used for a default installation.

> **Note:** The production environment should not be run with default values. See the <*Product Name*> *Server Administration Guide* for additional information about configuring these values.

When you enter passwords you will not see the password characters on the screen because they are entered in silent mode. Passwords are encrypted when the values are entered.

Install the Oracle Client software specified in the section **Supported Platforms** prior to running any of the installation utilities.

The following prompt will appear when executing the installation utility:

```
Enter Oracle Client Home Directory (<ENTER> quit):
```

> **Note:** If the environmental variable ORACLE_CLIENT_HOME is set, the install script will validate the variable. If it passes the validation you will not be prompted for it. This is needed in order to run Perl installation utilities.

Encryption Methods

When the application server choice is WebLogic, the Oracle Utilities Application Framework installation uses the Oracle WebLogic API to encrypt the User ID and password that perform admin functions for the WebLogic application servers. Please refer to the Oracle WebLogic documentation for further information about the encryption.

The Oracle Utilities Application Framework installation also uses industry standard cryptography to encrypt passwords that are prompted within the installation.

In each case these password are entered in the command line but the inputted values are not reflected on the screen when performing the installation.

Third Party Software Configuration

```
 ************************************
* Environment Installation Options *
************************************
1. Third Party Software Configuration
       Oracle Client Home Directory:
       Web Java Home Directory:
       Child JVM Home Directory:
       COBOL Home Directory:
       Hibernate JAR Directory:
       ONS JAR Directory:
       Database Home Directory:
       Web Application Server Home Directory:
       ADF Home Directory:
       OIM OAM Enabled Environment:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME***	The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client. Example Location: /oracle/client/product/11.2.0.1	
Web Java Home Directory	JAVA_HOME***	Java home that will be used by the web application server. Example Location: /ouaf/java/jdk1.6.0_20	
Child JVM Home Directory	CHILD_JVM_JAVA_HOME	Java home that will be used by the child java process that handles COBOL related requests. Example Location: /ouaf/java/jdk1.6.0_20 Note: This value is optional because the product contains no COBOL components. Press Enter to skip this value.	
COBOL Home Directory	COBDIR	COBOL installation location directory. Example Location: /opt/SPLcobAS51WP6 Note: This value is optional. Press Enter to skip this value.	
Hibernate JAR Directory	HIBERNATE_JAR_DIR***	Location on the disk where the hibernate3.jar is installed. Example Location: Unix: /ouaf/Hibernate Install Dir Windows: C:\ouaf\Hibernate Install Dir\	
*ONS JAR Directory	ONS_JAR_DIR	Location on the disk where the ons-11.2.0.2.jar file is installed. **Required for Oracle RAC installation. See the Server Administration Guide for more information.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Database Home Directory	DATABASE_HOME***	Location on the disk where database client is installed for your particular installation. Example Location for Oracle Database: /oracle/client/product/11.2.0.1 Note: This value will be the same as the previously entered for Oracle.	
Web Application Server Home Directory	WEB_SERVER_ HOME***	Location on the disk where the application server is installed. Example Location: WebLogic: /ouaf/middleware/ wlserver_10.3 To validate the home directory, check if the following jar files exist in the appropriate path: $WEB_SERVER_HOME/server/lib/ weblogic.jar %WEB_SERVER_HOME%\server\lib\ weblogic.jar	
* ADF Home Directory	ADF_HOME***	Location on the disk where JDeveloper or ADF is installed. Example Location: /ouaf/jdev11_1_1_4 or /adf_location	
OIM OAM Enabled Environment	OPEN_SPML_ENABL ED_ENV	Denotes if an environment will be integrating with Oracle Identity Manager for user propagation. Valid values: true false Defaulted value: false	

* Denotes optional Menu Options that may be required for the product installation and variables.

** In order to activate the RAC FCF, the application needs the external ons.jar file, version 11.2.0.2. This ons.jar is located under the Oracle Database Software 11.2.0.2, at the following path:

```
$ORACLE_HOME/opmn/lib/ons.jar
```

The ons.jar should be copied to the Application Server. During the OUAF installation the relevant option should be populated with the folder location of the ons.jar.

*** Denotes mandatory field options that are required for the product installation.

Environment Installation Options

```
50. Environment Installation Options
       Environment Mount Point:
       Log Files Mount Point:
       Environment Name:
       Database Type:
       Web Application Server Type:
       Install Application Viewer Module:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Mount Point	<SPLDIR> ***	The mount point into which the application is installed. For example: /ouaf for UNIX and C:\ouaf for Windows. This mount point MUST exist and the <Product Acronym> administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (<Product Acronym>) environments; the default is cissys). The installation sets permissions on all subdirectories installed under this directory. See <SPLENVIRON> below for more information on how this mount point is used.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Log File Mount Point	<SPLDIROUT>***	A mount point that will contain any application output or application logs. Example value is /ouaf/sploutput for UNIX installation or C:\ouaf\sploutput for Windows. This mount point MUST exist and the <Product Acronym> administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (<Product Acronym>) environments; the default is cissys). For each environment initialized, the application logs will be written to the directory <SPLDIROUT>/<SPLENVIRON> Note: Later in the installation the splenviron.sh (splenviron.cmd) script will set the $SPLOUTPUT (%SPLOUTPUT%) environment variable to point to:<SPLDIROUT>/<SPLENVIRON>	
Environment Name	<SPLENVIRON>***	A descriptive name to be used as both a directory name under the mount point <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV. On installation a directory <SPLDIR>/<SPLENVIRON> is created, under which the Oracle Utilities Application Framework and <Product Name> software resides. When multiple environments are set up on the machine you will typically have directories such as: /ouaf/DEV01/.... /ouaf/CONV/.... Each of these contains a complete version of the Oracle Utilities Application Framework and <Product Name>. Note: Later in the installation process, the splenviron.sh (splenviron.cmd) script will set $SPLEBASE (%SPLEBASE%) environment variable to point to <SPLDIR>/<SPLENVIRON>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Database Type	<CMPDB>***	Type of a database to connect an environment to. Valid values: oracle: Oracle Defaulted value: oracle Note: Not all database types are supported on all platforms; refer to the Supported Platforms section for details.	oracle
Web Application Server Type	<SPLWAS>***	A web application server for the environment to be used. The following value must be selected: Valid values: WLS: WebLogic WAS: WebSphere WASND: WebSphere ND Note: Not all web application servers are supported on all platforms; refer to Supported Platforms section for details.	
Installation Application Viewer Module	<WEB_ISAPPVIEWER>***	Denotes if the Application Viewer Web Module will be installed in the environment. When this value is set to false the application viewer will not be accessible in the environment. Valid values: true: Application Viewer module will be installed. false: Application Viewer module will not be installed. Defaulted value: true Note: When the value of false is selected, the Application Viewer will only be installed at a later date by a complete reinstall of the application.	

Environment Description

```
1. Environment Description
       Environment Description:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Description	DESC***	This is a free form text field to describe the purpose of the environment.	

WebLogic Business Application Server Configuration

The WebLogic parameters below and in the worksheet are for a WebLogic installation.

```
2. Business Application Server Configuration
      Business Server Host:                                <machine_name>
      WebLogic Server Name:                                  myserver
      Business Server Application Name:                      SPLService
      MPL Admin Port Number:
      MPL Automatic startup:                                 false
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Business Server Host	BSN_WLHOST***	The host name on which business application server resides. Default value: <current server name>	
WebLogic Server Name	BSN_WLS_SVRNAME ***	The name of the WebLogic server where the business application resides. Default value: myserver Note: If there is not a previously created WebLogic server, take the default value of "myserver".	
Business Server Application Name	BSN_APP***	The name of the business application server. Default value: SPLService	
MPL Admin Port number	MPLADMINPORT	The port number for the Multi Purpose Listener (MPL) Admin Server. Example value: 6502	
MPL Automatic Startup	MPLSTART	Automatically starts the MPL Listener whenever environment starts. Default value: false	

WebLogic Web Application Server Configuration

The WebLogic parameters below and in the worksheet are for a WebLogic installation.

```
3. Web Application Server Configuration
      Web Server Host:                                    <machine_name>
      Web Server Port Number:
      Web Context Root:
      WebLogic JNDI User ID:
      WebLogic JNDI Password:
      WebLogic Admin System User ID:
      WebLogic Admin System Password:
      WebLogic Server Name:                                 myserver
      Web Server Application Name:                          SPLWeb
      Application Admin User ID:
      Application Admin Password:
      Expanded Directories:                                 true
      Application Viewer Module:                            true
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Server Host	WEB_WLHOST***	The host name on which the web application server resides. Default value: <current server name>	
Web Server Port Number	WEB_WLPORT***	A unique port number within the system that will be assigned to the HTTP port. This is the port number that is used as a part of the client URL request to connect to the host. Example value: 6500	
Web Context Root	WEB_CONTEXT_ROOT***	A context root name that allows customers to run multiple instances of web application on the same server. Default value: ouaf Once the application is up, you can access it using http://<host>:<port>/ouaf	
WebLogic JNDI User ID	WEB_WLSYSUSER***	The user ID the application uses to connect to the EJB component through JNDI. This is the EJB container user ID. Note: The required value for an initial installation is "system". This is a security value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic JNDI Password	WEB_WLSYSPASS***	The password the application uses to connect to the EJB component through JNDI Note: The required value for an initial installation is "ouafadmin". This value will be saved in encrypted format. This is a security value.	
WebLogic Admin System User ID	WLS_WEB_WLSYSUSER***	The user ID to log in to the Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilizes this user ID Note: The installation utility will prompt you to enter "Y" to encrypt. For an initial installation, enter Y/y and specify the required value "system". This is a security value.	
WebLogic Admin System Password	WLS_WEB_WLSYSPASS***	The password to login to Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilize this password. Note: The installation utility will prompt you to enter "Y" to encrypt. For an initial installation, enter Y/y, and specify the required value "ouafadmin". This is a security value.	
WebLogic Server Name	WEB_WLS_SVRNAME	The name of the WebLogic server where the web application resides. Default value: myserver Note: For an initial installation, use the default value of "myserver". .	
Web Server Application Name	WEB_APP	The name of the web application server. Default value: SPLWeb Note: For an initial installation, use the default value of "SPLWeb".	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Admin User ID	WEB_SPLUSER***	This is the default user ID to login to the application through the browser. Example value: SYSUSER Note: The required value for an initial installation is "SYSUSER". This value is also used in communication within the XAI application. This is a security value.	
Application Admin Userid Password	WEB_SPLPASS***	This is the password of the application admin user. Example value: sysuser00 Note: The required value for an initial installation is "sysuser00". This value will be saved in encrypted format This is a Security Value.	
Expanded Directories	WEB_ISEXPANDED***	When the value is "true" the web application will be deployed in exploded directory format (no WAR files). When the value is "false", the web application will be deployed in ear file format. Valid values: true: Environment expanded (no WAR files) false: Environment with WAR/EAR files Default value: false	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Viewer Module	WEB_ISAPPVIEWER***	When the value is "true" the application viewer will be deployed to the web server. When the value is "false", the application viewer will not be deployed to the web Server. Note: With either value the application viewer module will still be managed by the upgrade process. Note: When this value is set to false from the initial install menu you will not be able to change this value to true to re-enable the application viewer. Valid values: true: The application viewer module will be deployed to the web server false: The application viewer module will not be deployed to the web server Default value: true	

Database Configuration

```
4. Database Configuration
       Web Application Database User ID:
       Web Application Database Password:
       MPL Database User ID:
       MPL Database Password:
       XAI Database User ID:
       XAI Database Password:
       Batch Database User ID:
       Batch Database Password:
       Database Name
       Database Server:
       Database Port:
       ONS Server Configuration:
       Database Override Connection String:
      Oracle Client Character Set NLS_LANG:  AMERICAN_AMERICA.AL32UTF8
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Database User ID	DBUSER***	The database user ID that has been configured on the database for the web application server connection. This is a security value.	
Web Application Database Password	DBPASS***	The database password that has been configured on the database for the web application connection. Note: This value will be saved in encrypted format. This is a security value.	
MPL Database User ID	MPL_DBUSER***	The database user ID that has been configured on the database for the MPL server connection. This is a security value.	
MPL Database Password	MPL_DBPASS***	The database password that has been configured on the database for the MPL server connection. Note: This value will be saved in encrypted format. This is a security value.	
XAI Database User ID	XAI_DBUSER***	The database user ID that has been configured on the database for the XAI server connection. This is a security value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
XAI Database Password	XAI_DBPASS***	The database password that has been configured on the database for the XAI server connection. Note: This value will be saved in encrypted format. This is a security value.	
Batch Database User ID	BATCH_DBUSER***	The database user ID that has been configured on the database for the batch connection. This is a security value.	
Batch Database Password	BATCH_DBPASS***	The database password that has been configured on the database for the batch connection. Note: This value will be saved in encrypted format. This is a security value.	
Database Name	DBNAME***	The name of the database instance that the application will be connecting to.	
Database Server	DBSERVER***	Host name of the server where database resides.	
Database Port	DBPORT***	Database port number on the database server used for connecting to the database	
ONS Server Configuration	ONSCONFIG	ONS Server Configuration is required for Oracle RAC FCF. See the Server Administration Guide for more information. This is an optional value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Database Override Connection String	DB_OVERRIDE_CONNECTION	This connection string can be used to override the database information entered above for RAC installation. Set this string to override the standard database connection string, as entered above. Example: jdbc:oracle:thin:@(DESCRIPTION = (LOAD_BALANCE=on) (ADDRESS = (PROTOCOL = TCP)(HOST = dbhost1) (PORT = dbport1)) (ADDRESS = (PROTOCOL = TCP)(HOST = dbhost2) (PORT = dbport2)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = databasename))) See the Server Administration Guide for more information. This is an optional value.	
Oracle Client Character Set NLS_LANG	NLS_LANG***	The Oracle Database Character Set. Select the Language and Territory that are in use in your country. Default value: AMERICAN_AMERICA.AL32UTF8	

General Configuration Options

Note: See the <*Product Name*> *Batch Server Administration Guide* for additional details on this configuration.

```
5. General Configuration Options
       Batch RMI Port:
       Batch Mode:                                          CLUSTERED
       Coherence Cluster Name:
       Coherence Cluster Address:
       Coherence Cluster Port:
       Coherence Cluster Mode:                              dev
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT***	Unique port used by the Batch RMI. Make sure that this port is free to use.	
Batch Mode	BATCH_MODE***	Valid values: CLUSTERED or DISTRIBUTED DISTRIBUTED - allows numerous threads from numerous jobs to be execute by one or more JVMs. CLUSTERED - provides same facilities as DISTRIBUTED mode and uses the Named Cache and Work Manager facilities in Oracle Coherence. Default value: CLUSTERED Note: CLUSTERED is currently the only supported mode for production environments.	
Coherence Cluster Name	COHERENCE_CLUSTER_NAME***	Unique name for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Address	COHERENCE_CLUSTER_ADDRESS***	Unique multicast address. Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Port	COHERENCE_CLUSTER_PORT ***	Unique port for the batch CLUSTER Make sure that this port is free to use. Note: Value is required when batch mode is CLUSTERED.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Coherence Cluster Mode	COHERENCE_CLUSTER_MODE***	Valid values: dev (Development) prod (Production) Default value: dev During non-production activities not involving a cluster, the mode should be set to dev For production and environments where clustering is required (for cluster testing) the mode should be set to prod	

Advanced Menu Options

The advanced menu options are not available during installation. These options can be accessed after installation using the following commands:

Unix:

```
$SPLEBASE/bin/configureEnv.sh -a
```

Windows

```
%SPLEBASE%\bin\configureEnv.cmd -a
```

Advanced Environment Miscellaneous Configuration

```
50. Advanced Environment Miscellaneous Configuration
       Online JVM Batch Server Enabled:                    false
       Online JVM Batch Number of Threads:                 5
       Online JVM Batch Scheduler Daemon Enabled:          false
       JMX Enablement System User ID:
       JMX Enablement System Password:
       RMI Port number for JMX Business:
       RMI Port number for JMX Web:
       GIS Service Running on the same Web Server:         true
       GIS Service URL:
       GIS WebLogic System User ID:
       GIS WebLogic System Password:
       Online Display Software Home:
```

Menu Option	Name Used in Documentation	Usage	Customer Value Install
WebSphere Deployment Manager Host Name	WASND_DMGR_HOST	WebSphere Deployment Manager Host name, this value is used for WebSphere ND, when connecting to the WebSphere Deployment Manager. Note: This value will only appear for WebSphere ND.	
Online JVM Batch Server Enabled	BATCHENABLED	When starting a web application server JVM, this property can be set to "true" to allow the on-line application server to also act as a batch worker in the grid. Default value: false Note: This functionality should only be used in low volume environments.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
Online JVM Batch Number of Threads	BATCHTHREADS	The maximum number of batch processing threads to be executed within a worker JVM when no explicit Distributed Thread Pool is specified. The "DEFAULT" distributed thread pool is used by the batch-scheduling daemon when it initiates processing on batch jobs (typically added via the online system) where no thread pool is specified). Default value: 5 Note: This will be only used and activated when BATCHENABLED is set to true.	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	In a distributed batch environment, this property can be set to "true" to allow a worker JVM to host the batch scheduling daemon. The daemon accepts online batch submissions requests and automatically submits the work for them. Valid values: true, false Default value: false Note: This will be only used and activated when BATCHENABLED is set to true.	
JMX Enablement System User ID	BSN_JMX_SYSUSER	Example value: user This value is optional.	
JMX Enablement System Password	BSN_JMX_SYSPASS	Example value: admin Note: This value will be saved in encrypted format. This value is optional.	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_PERFORMACE	JMX Port for business application server monitoring. This needs to be set to an available port number on the machine. This value is optional.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMACE	JMX Port for web application server monitoring This needs to be an available port number for the environment running on the machine. This value is optional.	
GIS Service Running on the same Web Server	GIS	Geographical information (GEOCODING) - GIS Service running on the same web application server Valid values: true, false This value is optional.	
GIS Service URL	GIS_URL	This is the URL of the external web server. Note: This value will be only be used when GIS is set to true. This value is optional.	
GIS WebLogic System User ID	GIS_WLSYSUSER	GIS WebLogic System User ID Note: This value will be only be used when GIS is set to true. This value is optional.	
GIS WebLogic System Password	GIS_WLSYSPASS	GIS WebLogic System Password. Note: This value will be only be used when GIS is set to true. This value is optional.	
Online Display Software Home	ONLINE_DISPLAY_HOME	The location of the Online Display Software installation directory. This value is optional.	

Advanced Environment Memory Configuration

```
51. Advanced Environment Memory Configuration
       JVM Child Memory Allocation:                        512
       JVM Child Additional Options:
       Web Application Java Initial Heap Size:             1024
       Web Application Java Max Heap Size:                 1024
       Web Application Java Max Perm Size:                 700
       Web Application Additional Options:
       Ant Min Heap Size:                                  200
       Ant Max Heap Size:                                  800
       Ant Additional Options:
       Thread Pool Worker Java Min Heap Size:              512
       Thread Pool Worker Java Max Heap Size:              1024
       Thread Pool Worker Java Max Perm Size:              768
       Thread Pool Worker Additional Options:
       Additional Runtime Classpath:
       Release Cobol Thread Memory Options:
-Dspl.runtime.cobol.remote.releaseThreadMemoryAfterEachCall=...
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
JVM Child Memory Allocation	JVMMEMORYARG	Heap size for the JVM Child. Default value: 512 This option is not applicable to this product.	
JVM Child Additional Options	JVM_ADDITIONAL_OPT	Additional JVM options that are passed to the Child JVM. Note: For WebLogic installation only. This option is not applicable to this product.	
Web Application Java Initial Heap Size	WEB_MEMORY_OPT_MIN***	Minimum heap size for the application server. Default value: 1024 Note: For WebLogic installation only. Recommended value is 2048.	
Web Application Java Max Heap Size	WEB_MEMORY_OPT_MAX***	Maximum heap size for the application server. Default value: 1024 Note: For WebLogic installation only. Recommended value is 2048.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Java Max Perm Size	WEB_MEMORY_OPT _MAXPERMSIZE***	Maximum Perm Size for the application server. Default value: 700MB (Linux, Solaris) 700MB (Windows) Note: For WebLogic installation only. Recommended value: 1024MB	
Web Application Additional Options	WEB_ADDITIONAL_ OPT***	Additional options that will be passed in to the web application server JVM. Note: For WebLogic installation only. Replace the value of SPLEBASE or %SPLEBASE% with the actual environment value. UNIX: -Xrs -XX:+ShowMessageBoxOnError -XX:+UseGCOverheadLimit -Doracle.security.jps.config=$SPLEBASE/splapp/config/jps-config.xml -Ddomain.home=$SPLEBASE/splapp Windows: -Xrs -XX:+ShowMessageBoxOnError -XX:+UseGCOverheadLimit -Doracle.security.jps.config=%SPLEBASE%/splapp/config/jps-config.xml -Ddomain.home=%SPLEBASE%/splapp AIX: -Xrs -XX:+ShowMessageBoxOnError -XX:+UseGCOverheadLimit -Doracle.security.jps.config=$SPLEBASE/splapp/config/jps-config.xml -Ddomain.home=$SPLEBASE/splapp -Djava.awt.headless=true	
Ant Min Heap Size	ANT_OPT_MIN	Minimum Heap Size passed to ANT JVM. Default value: 200	
Ant Max Heap Size	ANT_OPT_MAX	Maximum Heap Size passed to ANT JVM. Default value: 800	
Ant Additional Options	ANT_ADDITIONAL_ OPT	Additional options that are passed into the ANT JVM.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	Minimum heap size passed to the Thread Pool Worker. Default value: 512 Recommended value is 1024.	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	Maximum heap size passed to the Thread Pool Worker. Default value: 1024 Recommended value is 2048.	
Thread Pool Worker Java Max Perm Size	BATCH_MEMORY_OPT_MAXPERMSIZE	Maximum perm size passed to the Thread Pool Worker Default value: 768	
Thread Pool Worker Additional Options	BATCH_MEMORY_ADDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. This is an optional free form field.	
Additional Runtime Classpath	ADDITIONAL_RUNTIME_CLASSPATH***	Additional Classpath Options passed in when starting the WebLogic JVM Note: For WebLogic installation only. Replace the value of $SPLEBASE or %SPLEBASE% with the actual value. Unix: $SPLEBASE/splapp/standalone/lib/commons-cli-1.1.jar:$SPLEBASE/splapp/standalone/lib/log4j-1.2.15.jar Windows: %SPLEBASE%/splapp/standalone/lib/commons-cli-1.1.jar;%SPLEBASE%/splapp/standalone/lib/log4j-1.2.15.jar	
Release Cobol Thread Memory Options	REL_CBL_THREAD_MEM	Allow for child JVMs to be optionally configured to release thread-bound memory when each thread is returned to its thread pool. This will increase the number of memory allocations and memory free calls performed by the Microfocus runtime. It will also lower the amount of C-heap memory consumed by child JVMs. Valid values: true, false Default value: false	

Advanced Web Application Configuration

```
52. Advanced Web Application Configuration
       WebLogic SSL Port Number:
       WebLogic Console Port Number:
       WebLogic Additional Stop Arguments:
       Strip HTML Comments:                                  false
       Authentication Login Page Type:                       FORM
       Web Form Login Page:                              /loginPage.jsp
       Web Form Login Error Page:                    /formLoginError.jsp
       Web Security Role:                                    cisusers
       Web Principal Name:                                   cisusers
       This is a development environment:                    false
       Preload All Pages on Startup:                         false
       Maximum Age of a Cache Entry for Text:                28800
       Maximum Age of a Cache Entry for Images:              28800
       JSP Recompile Interval (s):                           43200
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic SSL Port Number:	WEB_WLSSPORT	The port number assigned to WebLogic Secure Sockets connection. This is the port number that is used for Secure Sockets connecting to the WebLogic server. The Secure Sockets implementation is disabled in the default configuration. For Production additional actions are required. Do NOT run Production with Demo certificates Refer to the WLS installation guide - Configuring Identity and Trust When this value is populated http will be disabled. Example value: 6501 Note: For WebLogic installation only. This value is optional. If you enable the SSL port, then the https port is enabled and http port is disabled by default.	
WebLogic Console Port Number	WLS_ADMIN_PORT	The port number assigned to WebLogic Console connection. This is the port number that is used for Secure Sockets connecting to the WebLogic Console server. Note: For WebLogic installation only. This value is optional.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic Additional Stop Arguments	ADDITIONAL_STOP_WEBLOGIC***	WebLogic Additional Stop Arguments This value is required when running the WebLogic Console Port Number and the Application using SSL. Example values: -Dweblogic.security.TrustKeyStore=DemoTrust -Dweblogic.security.TrustKeystoreType=CustomTrust Note: For Production additional actions are required. Do NOT run Production with Demo certificates Refer to the WLS installation guide - Configuring Identity and Trust Note: For WebLogic installation only. This is an optional value. If you enable the WebLogic console port number using the Advanced Web Application Configuration menu, then you should specify the WebLogic additional stop argument.	
StripHTMLComments: false	STRIP_HTML_COMMENTS	Stripping HTML (and JavaScript) comments will increase the security of the system. Default value: false Valid values: true, false	
Authentication Login Page Type	WEB_WLAUTHMETHOD	Specifies which authentication mode should be used. To switch off OUAF Login Page enter: BASIC Valid values: FORM, BASIC Default value: FORM	
Web Form Login Page	WEB_FORM_LOGIN_PAGE	Specify the jsp file used to login into the application. Default value: /loginPage.jsp	
Web Form Login Error Page	WEB_FORM_LOGIN_ERROR_PAGE	Specify the jsp file used when there is an error when logging into the application. Default value: /formLoginError.jsp	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Security Role	WEB_PRINCIPAL_NAME	Specify the name of the security role. Default value: cisusers	
Web Principal Name	WEB_PRINCIPAL_NAME	Specify the name of a principal that is defined in the security realm. Default value: cisusers	
This is a development environment	WEB_ISDEVELOPMENT	If the value is "true", the web application may be used for application development, which will trigger certain generation processes. If the value is "false" the environment will be used as a runtime environment. When you choose "true" (development environment) the startup preload pages will be disabled, and the application security will be less strict. This value also controls the amount of logging information written to the application log files. Valid values: true, false Default value: false	
Preload All Pages on Startup	WEB_PRELOADALL	This controls if the pages should be pre-loaded during the startup of the application or not. Valid values: true, false Default value: false	
Maximum Age of a Cache Entry for Text	WEB_MAXAGE	Default value: 28800	
Maximum Age of a Cache Entry for Images	WEB_MAXAGEI	Default value: 28800	
JSP Recompile Interval (s)	WEB_wlpageCheckSeconds	Default value: 43200	

Advanced Web Application Configuration

OIM Configuration Settings

```
53. OIM Configuration Settings
     SPML SOAP Trace Setting:                              false
     SPML IDM Schema Name:                                 F1-IDMUser
     SPML OIM Name Space:      http://xmlns.oracle.com/OIM/provisioning
     SPML OIM Enclosing Element:                           sOAPElement
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
SPML SOAP Trace Setting	OIM_SPML_SOAP_DEBUG_SETTING	Name of Oracle Identity Manager library for debug Default value: false Valid values: true, false	
SPML IDM Schema Name	OIM_SPML_UBER_SCHEMA_NAME	Name of Oracle Identity Manager library for schema Defautlt value: F1-IDMUser	
SPML OIM Name Space	OIM_SPML_NAME_SPACE	Default Namespace for Oracle Identity Manager integration Default value: http://xmlns.oracle.com/OIM/provisioning	
SPML OIM Enclosing Element	OIM_SPML_SOAP_ELEMENT	Default top level SOAP Element name for Oracle Identity Manager integration Default value: sOAPElement	

Oracle Real-Time Scheduler Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing Oracle Real-Time Scheduler and Oracle Utilities Mobile Workforce Management, as described in Chapter 8: Installing the Application Server Component of Oracle Real-Time Scheduler and Chapter 9: Installing the Application Server Component of Oracle Utilities Mobile Workforce Management. No Customer Install Value fields should be left blank.

> **Note:** Some web application server information will not be available until the software installation steps have been completed as described in Chapter 6: Installing Application Server Prerequisite Software.

JMS Configuration

```
8. JMS Configuration
   Context Factory:        weblogic.jndi.WLInitialContextFactory
       WebLogic Server URL:
       Weblogic System User ID:
       Weblogic System Password:
       Time Out:                 120000
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Context Factory	CONTEXTFACTORY***	JNDI Name attribute field when the Connection Factory object is created. When the Connection Factory object is loaded, JNDI provides a path to the object. Default: weblogic.jndi.WLInitialContextFactory	
WebLogic Server URL	URL***	Specify weblogic server URL in below format: t3://<host>:<web server port no> NOTE: This is the port number that is used as a part of the client URL request to connect to the host. If you enable the WebLogic console port number using the Advanced Web Application Configuration menu, then specify WebLogic server URL in the following format: t3s://<host>:<weblogic console port number> Otherwise: t3://<host>:<web server port no>	
Weblogic System User ID	WLS_USERID***	User ID to login to Admin WebLogic console. Default user ID: system	
Weblogic System Password	WLS_PASSWORD***	On the configuration step of Oracle Utilities Mobile Workforce Management install process you have to provide the same password given during Oracle Utilities Application Framework installation. This should only be done if you have changed the password on an existing system following the Oracle WebLogic instructions.	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Time Out	TIMEOUT***	JMS Configuration Timeout, in milliseconds. Default:120000	

ORS Environment Description

```
9. ORS Environment Description
      ORS Scheduler Map Files Location:
       Schedule Manager Port Number:
       Minimum Requests:                                    1
       Maximum Time (seconds) Booking Requests:             5
       Unique identifier for
       the instance of the JVM:
      Registry cleanse timing in seconds:                 900
      Scheduler connection timeout in milliseconds     300000
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
ORS Scheduler Map Files Location	MAPDIR***	Location for Map files from where scheduler will read the maps. For example: **Unix:** /ouaf/mapdir **Windows:** C:\ouaf\mapdir	
Schedule Manager Port Number	IPCSTARTPORT***	Specify the starting port number on which the application will communicate with the scheduler processes. The application will look for any available port above this number. Default: 9100	
Minimum Requests	MINREQUESTS***	Minimum request that scheduler can handle. Default: 1	
Maximum Time (seconds) Booking Requests	MAXPROCESSINGTIM***	Maximum request that scheduler can handle. Default: 5	
Unique identifier for the instance of the JVM	NODEID***	Unique id for JVM instance. For Example: Node1 Note: This has to be same as the Node ID configured in the Scheduler table in the Oracle Utilities Mobile Workforce Management application. This should be left empty if scheduler is going to be run from the standalone batch program.	
Registry cleanse timing in seconds	CLEANSE_INTERVAL***	This is the registry cleanse interval. Default: 900	
Scheduler connection timeout in milliseconds	SCHED_CONN_TIMEOUT***	Scheduler connection timeout in milliseconds. Default: 300000	

Geocode Data Source Configuration

```
10. Geocode Data Source Configuration
      JDBC URL for the
      Geocode database:
      Database User Name:
      Database Password:
      JNDI name for the
      Geocode datasource:
```

Menu Option	Name used in this Documentation	Usage	Customer Install Value
JDBC URL for Geocode Database	DBURL_GEOCODE***	Geocode database information details. For example: jdbc:oracle:thin:@localhost:1521:GEODB	
Database User Name	DBUSER_GEOCODE***	Geocode database user ID.	
Database Password	DBPASS_GEOCODE***	Geocode database password.	
JNDI name for the Geocode datasource	JNDI_GEOCODE***	JNDI name for accessing the database. For example: GEOSAMPLE	

Mapviewer Configuration

```
11. Mapviewer Configuration
      Deploy mapviewer locally on this instance:              true
      Location of mapviewer ear file:
```

Menu Option	Name used in this Documentation	Usage	Customer Install Value
Deploy mapviewer locally on this instance	MAPVIEWER_ISLOCAL***	Set this value to true for deploying mapviewer on the same WebLogic instance. Default: true	
Location of mapviewer ear file	MAPVIEWER_EAR***	This needs to point to the location of the exploded mapviewer ear directory in case mapviewer is deployed locally on the same Weblogic instance. For example: /ouaf/mapviewer/mapviewer.ear	

Security Configuration

```
                    12. Security Configuration
                          Deploy only mobility web application:                  false
```

Menu Option	Name used in this Documentation	Usage	Customer Install Value
Deploy only mobility web application	MOBILITY_APP_ONLY***	Set this value to true to deploy only the mobility web application. This option can be used to expose just the mobility web application to the internet while the rest of the application runs inside a secured environment. Default: false	

Chapter 5

Installing the Database

Please review Chapter 1 of this guide and then follow the steps for installing the database as described in the *Oracle Utilities Mobile Workforce Management Database Administrator's Guide*.

Chapter 6

Installing Application Server Prerequisite Software

This chapter describes the software that needs to be installed for each of the supported operating system and application server combinations. The sections for this chapter are:

- AIX 7.1 Application Server
- Oracle Linux or Red Hat Linux Application Server
- Solaris 10 Application Server
- Windows 2008 Application Server

AIX 7.1 Application Server

This section describes the software requirements for operating the application using the AIX application server.

Supported Application Servers

Operating System	Chipsets	Application Server
AIX 7.1 (64-bit) TL0	POWER 64-bit	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

Web/Application Server Tier

AIX 7.1 TL0 Operating System Running on Power5 and Power6 Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

Description	Default Value	Customer Defined Value
Oracle Utilities Mobile Workforce Management Administrator User ID	cissys	
Oracle Utilities Mobile Workforce Management User Group	cisusr	

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the installed files.

1. Create a group called cisusr (user group).
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.
3. Set the stack size limit to 50 MB or more in the user profile startup script for cissys user:

   ```
   ulimit -s 51200
   ```

4. Set the desired hard/soft limit of the file handler for cissys user to 4096 or higher.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files
cisoper	-------	Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

IBM Java Software Development Kit version 6.0 SR8 64-bit

Installation of Java is a prerequisite for using Oracle WebLogic as a web application server.

At the time of release, AIX Java packages could be obtained from:

http://www.ibm.com/developerworks/java/jdk/aix/service.html

The web server requires the 64-bit Java platform in order to function. The main prerequisite for the web server is the version of java mentioned above.

For the Administrator userid (cissys), ensure that the environment variable JAVA_HOME is set up, and that "java" can be found in cissys' PATH variable.

Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Mobile Workforce Management.

Download the file hibernate-3.3.2.ga.zip (the zip file associated with the 3.3.2 GA release) from the following link:

http://sourceforge.net/projects/hibernate/files/hibernate3/3.3.2.GA/

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-distribution-3.3.2.GA-dist.zip. (e.g., /opt/hibernate).

Extract the file hibernate3.jar into the newly created directory (e.g., /opt/hibernate) from the hibernate-distribution-3.3.2.GA-dist.zip file.

Oracle WebLogic 11gR1 (10.3.6) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.6).

  Note: For an easy and quick installation of Oracle Weblogic please use silent mode. For more information, refer to http://docs.oracle.com/cd/E13196_01/platform/docs81/install/silent.html#1044118

Oracle JDeveloper 11g (11.1.1.6.0) Studio Edition

JDeveloper 11g (11.1.1.6.0) Studio Edition is supported on any platform that runs JDK 6. It requires Oracle Weblogic Server 10.3.6+. It must be installed prior to installing the Oracle Utilities Application Framework.

Oracle JDeveloper can be downloaded from following link:

http://www.oracle.com/technology/software/products/jdev/index.html

Note: For an easy and quick installation of Oracle JDeveloper, please use silent mode. For more information, refer to http://docs.oracle.com/cd/E16764_01/install.1111/e13666/ojdig.htm#CHDCDFEA

Oracle Application Developer Framework (ADF) 11g (11.1.1.6.0)

Oracle ADF 11g (11.1.1.6.0) requires Oracle Weblogic Server 10.3.6+ and it must be installed prior to installing ADF.

Oracle ADF can be downloaded from the following link:

http://www.oracle.com/technetwork/developer-tools/adf/downloads/index.html

Note: Make sure to only use the version of Oracle ADF certified with Weblogic server.

Oracle MapViewer 11g (11.1.1.5.1)

Oracle Fusion Middleware MapViewer 11g Release 1 (11.1.1.5.1) is a tool that renders maps showing different kinds of spatial data. It can be downloaded from the following link:

http://www.oracle.com/technetwork/middleware/products/mapviewer/downloads/index-100641.html

Download mapviewer.ear from this link.

Oracle BPEL Process Manager 11gR1

Oracle BPEL Process Manager is optional software and is required only for SMS dispatching functionality. Oracle BPEL Process Manager 11gR1 is a component of Oracle SOA Suite 11gR1.

The Oracle BPEL Process Manager version is determined by your SMS gateway application. You can download SOA Suite 11gR1 from the SOA Suite download page at the following link:

http://www.oracle.com/technology/products/soa/soasuite/collateral/downloads.html#11g

GCC 4.2.4

GCC 4.2.4 libraries need to be installed for the scheduler functionality to work properly. The following GCC runtime libraries are required to be installed:

- libgcc : GCC compiler dynamic runtime library
- libstdc++ : G++ compiler dynamic runtime library

After installing the GCC runtime libraries, copy the following libraries to <INSTALL_DIR>/runtime directory:

- libstdc++.a
- libgcc_s.a

Alternately, you can add these libraries to LD_LIBRARY_PATH environment variable.

wlfullclient.jar

Please refer to Building the wlfullclient.jar File Using ANT in chapter Additional Tasks for more information.

Oracle Linux or Red Hat Linux Application Server

This section describes the software requirements for operating the application using the Oracle Linux or Red Hat Linux application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Oracle Linux 5.6, 5.8, or 6.2 (64-bit) Red Hat Enterprise Linux 5.6 (64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

Web/Application Server Tier

Oracle Linux or Red Hat Enterprise Linux Operating System Running on x86_64 64-bit Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

Description	Default Value	Customer Defined Value
Oracle Utilities Mobile Workforce Management Administrator User ID	cissys	
Oracle Utilities Mobile Workforce Management User Group	cisusr	

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the files installed.

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.
3. Set the stack size limit to 50 MB or more in the user profile startup script for cissys user:

   ```
   ulimit -s 51200
   ```

4. Set the desired hard/soft limit of the file handler for cissys user to 4096 or higher.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files
cisoper	-------	Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

Oracle Java Development Kit Version 6.0 Update 20, 64-bit

At time of release, Oracle Java packages could be obtained from:

http://www.oracle.com/technetwork/java/archive-139210.html

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Mobile Workforce Management.

Download the file hibernate-3.3.2.ga.zip (the zip file associated with the 3.3.2 GA release) from the following link:

http://sourceforge.net/projects/hibernate/files/hibernate3/3.3.2.GA/

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-distribution-3.3.2.GA-dist.zip. (e.g., /opt/hibernate).

Extract the file hibernate3.jar into the newly created directory (e.g., /opt/hibernate) from the hibernate-distribution-3.3.2.GA-dist.zip file.

Oracle WebLogic 11gR1 (10.3.6) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.6).

  Note: For an easy and quick installation of Oracle Weblogic please use silent mode. For more information, refer to http://docs.oracle.com/cd/E13196_01/platform/docs81/install/silent.html#1044118

Oracle JDeveloper 11g (11.1.1.6.0) Studio Edition

JDeveloper 11g (11.1.1.6.0) Studio Edition is supported on any platform that runs JDK 6. It requires Oracle Weblogic Server 10.3.6+. It must be installed prior to installing the Oracle Utilities Application Framework.

Oracle JDeveloper can be downloaded from following link:

http://www.oracle.com/technology/software/products/jdev/index.html

Note: For an easy and quick installation of Oracle JDeveloper, please use silent mode. For more information, refer to http://docs.oracle.com/cd/E16764_01/install.1111/e13666/ojdig.htm#CHDCDFEA

Oracle Application Developer Framework (ADF) 11g (11.1.1.6.0)

Oracle ADF 11g (11.1.1.6.0) requires Oracle Weblogic Server 10.3.6+ and it must be installed prior to installing ADF.

Oracle ADF can be downloaded from the following link:

http://www.oracle.com/technetwork/developer-tools/adf/downloads/index.html

Note: Make sure to only use the version of Oracle ADF certified with Weblogic server.

Oracle MapViewer 11g (11.1.1.5.1)

Oracle Fusion Middleware MapViewer 11g Release 1 (11.1.1.5.1) is a tool that renders maps showing different kinds of spatial data. It can be downloaded from the following link:

http://www.oracle.com/technetwork/middleware/products/mapviewer/downloads/index-100641.html

Download mapviewer.ear from this link.

Oracle BPEL Process Manager 11gR1

Oracle BPEL Process Manager is optional software and is required only for SMS dispatching functionality. Oracle BPEL Process Manager 11gR1 is a component of Oracle SOA Suite 11gR1. The Oracle BPEL Process Manager version is determined by your SMS gateway application. You can download SOA Suite 11gR1 from the SOA Suite download page at the following link:

http://www.oracle.com/technology/products/soa/soasuite/collateral/downloads.html#11g

wlfullclient.jar

Please refer to Building the wlfullclient.jar File Using ANT in chapter Additional Tasks for more information.

Solaris 10 Application Server

This section describes the software requirements for operating the application using the Sun Solaris 10 application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Solaris 10 Update 8 (64-bit)	SPARC	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

Web/Application Server Tier

Solaris 10 Operating System Running on SPARC-based 64-bit Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

Description	Default Value	Customer Defined Value
Oracle Utilities Mobile Workforce Management Administrator User ID	cissys	
Oracle Utilities Mobile Workforce Management User Group	cisusr	

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the files installed.

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.
3. Set the stack size limit to 50 MB or more in the user profile startup script for cissys user:

   ```
   ulimit -s 51200
   ```

4. Set the desired hard/soft limit of the file handler for cissys user to 4096 or higher.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files
cisoper	-------	Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

Oracle Java Development Kit Version 6.0 Update 20, 64-bit

This software is only required for Oracle WebLogic installations.

At the time of release, the Oracle Java packages used in the test cycle were downlo aded from:

http://www.oracle.com/technetwork/java/archive-139210.html

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Mobile Workforce Management.

Download the file hibernate-3.3.2.ga.zip (the zip file associated with the 3.3.2 GA release) from the following link:

http://sourceforge.net/projects/hibernate/files/hibernate3/3.3.2.GA/

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-distribution-3.3.2.GA-dist.zip. (e.g., /opt/hibernate).

Extract the file hibernate3.jar into the newly created directory (e.g., /opt/hibernate) from the hibernate-distribution-3.3.2.GA-dist.zip file.

Oracle WebLogic 11gR1 (10.3.6) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.6).

  Note: For an easy and quick installation of Oracle Weblogic please use silent mode. For more information, refer to http://docs.oracle.com/cd/E13196_01/platform/docs81/install/silent.html#1044118

Oracle JDeveloper 11g (11.1.1.6.0) Studio Edition

JDeveloper 11g (11.1.1.6.0) Studio Edition is supported on any platform that runs JDK 6. It requires Oracle Weblogic Server 10.3.6+. It must be installed prior to installing the Oracle Utilities Application Framework.

Oracle JDeveloper can be downloaded from following link:

http://www.oracle.com/technology/software/products/jdev/index.html

Note: For an easy and quick installation of Oracle JDeveloper, please use silent mode. For more information, refer to http://docs.oracle.com/cd/E16764_01/install.1111/e13666/ojdig.htm#CHDCDFEA

Oracle Application Developer Framework (ADF) 11g (11.1.1.6.0)

Oracle ADF 11g (11.1.1.6.0) requires Oracle Weblogic Server 10.3.6+ and it must be installed prior to installing ADF.

Oracle ADF can be downloaded from the following link:

http://www.oracle.com/technetwork/developer-tools/adf/downloads/index.html

Note: Make sure to only use the version of Oracle ADF certified with Weblogic server.

Oracle MapViewer 11g (11.1.1.5.1)

Oracle Fusion Middleware MapViewer 11g Release 1 (11.1.1.5.1) is a tool that renders maps showing different kinds of spatial data. It can be downloaded from the following link:

http://www.oracle.com/technetwork/middleware/products/mapviewer/downloads/index-100641.html

Download mapviewer.ear from this link.

Oracle BPEL Process Manager 11gR1

Oracle BPEL Process Manager is optional software and is required only for SMS dispatching functionality. Oracle BPEL Process Manager 11gR1 is a component of Oracle SOA Suite 11gR1.

The Oracle BPEL Process Manager version is determined by your SMS gateway application. You can download SOA Suite 11gR1 from the SOA Suite download page at the following link:

http://www.oracle.com/technology/products/soa/soasuite/collateral/downloads.html#11g

wlfullclient.jar

Please refer to Building the wlfullclient.jar File Using ANT in chapter Additional Tasks for more information.

Windows 2008 Application Server

This section describes the software requirements for operating the application using the Windows application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Windows Server 2008 R2 (64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

Web/Application Server Tier

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

Oracle Java Development Kit version 6.0 Update 20, 64-bit

This software is required for the Oracle WebLogic Installation.

At time of release, Oracle Java packages could be obtained from:

http://www.oracle.com/technetwork/java/archive-139210.html

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Hibernate 3.3.2

Hibernate must be installed prior to the installation of Oracle Utilities Mobile Workforce Management.

Please download the file hibernate-3.3.2.ga.zip from the following link:

http://prdownloads.sourceforge.net/hibernate/

or from the following link:

http://sourceforge.net/project/showfiles.php?group_id=40712&package_id=127784

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-3.3.2.ga.zip. (e.g. c:\opt\hibernate3.3.2).

Extract the file hibernate3.jar from hibernate-3.3.2.ga.zip.

Oracle WebLogic 11gR1 (10.3.6) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.

- Download and install WebLogic Server 11gR1 (10.3.6).

  Note: For an easy and quick installation of Oracle Weblogic please use silent mode. For more information, refer to http://docs.oracle.com/cd/E13196_01/platform/docs81/install/silent.html#1044118

Oracle JDeveloper 11g (11.1.1.6.0) Studio Edition

JDeveloper 11g (11.1.1.6.0) Studio Edition is supported on any platform that runs JDK 6. It requires Oracle Weblogic Server 10.3.6+. It must be installed prior to installing the Oracle Utilities Application Framework.

Oracle JDeveloper can be downloaded from following link:

http://www.oracle.com/technology/software/products/jdev/index.html

Note: For an easy and quick installation of Oracle JDeveloper, please use silent mode. For more information, refer to http://docs.oracle.com/cd/E16764_01/install.1111/e13666/ojdig.htm#CHDCDFEA

Oracle Application Developer Framework (ADF) 11g (11.1.1.6.0)

Oracle ADF 11g (11.1.1.6.0) requires Oracle Weblogic Server 10.3.6+ and it must be installed prior to installing ADF.

Oracle ADF can be downloaded from the following link:

http://www.oracle.com/technetwork/developer-tools/adf/downloads/index.html

Note: Make sure to only use the version of Oracle ADF certified with Weblogic server.

Oracle MapViewer 11g (11.1.1.5.1)

Oracle Fusion Middleware MapViewer 11g Release 1 (11.1.1.5.1) is a tool that renders maps showing different kinds of spatial data. It can be downloaded from the following link:

http://www.oracle.com/technetwork/middleware/products/mapviewer/downloads/index-100641.html

Download mapviewer.ear from this link.

Oracle BPEL Process Manager 11gR1

Oracle BPEL Process Manager is optional software and is required only for SMS dispatching functionality. Oracle BPEL Process Manager 11gR1 is a component of Oracle SOA Suite 11gR1. The Oracle BPEL Process Manager version is determined by your SMS gateway application. You can download SOA Suite 11gR1 from the SOA Suite download page at the following link:

http://www.oracle.com/technology/products/soa/soasuite/collateral/downloads.html#11g

wlfullclient.jar

Please refer to Building the wlfullclient.jar File Using ANT in chapter Additional Tasks for more information.

Chapter 7

Installing the Application Server Component of Oracle Utilities Application Framework

Installing the Oracle Utilities Application Framework is the prerequisite and foundation for installing a framework-based application such as Oracle Utilities Mobile Workforce Management. This section describes the process for installing the Oracle Utilities Application Framework, including:

- Installation Overview
- Preinstallation Tasks
- Installing Oracle Utilities Application Framework
- Upgrade Installation

Installation Overview

This process replaces any previously delivered and installed version of the Oracle Utilities Application Framework Server. Before you proceed:

1. Make sure that you have installed all the required third-party software as described in **Chapter 6: Installing Application Server Prerequisite Software**.
2. Complete the database installation (refer to the Oracle Utilities Mobile Workforce Management *Database Administrator's Guide*).
3. If you plan to upgrade a previously installed application server make a backup before you start a new installation.

The application server installation process of Oracle Utilities Mobile Workforce Management consists of the following:

1. Installing Oracle Utilities Application Framework
2. Installing Oracle Real-Time Scheduler
3. Installing Oracle Utilities Mobile Workforce Management

As a first step of the application server installation, download and install the framework application server. The installation process creates and configures the application server environment.

Once the Oracle Utilities Application Framework installation is successfully completed and the framework application environment is created, Oracle Real-Time Scheduler and Oracle Utilities Mobile Workforce Management can be installed on top of the framework environment.

You can download the installation packages from the Oracle Software Delivery Cloud.

This section describes how to install a working Oracle Utilities Application Framework Server, which can then be further configured manually to allow for production performance levels.

Application server installation packages delivered for this version are multi-platform and are ready to install on any supported platform (as described in the section **Supported Platforms**). You must complete the database installation before installing the application server.

Preinstallation Tasks

Hardware and Software Version Prerequisites

The section **Supported Platforms** contains all of the available platforms that are required with this release of the product.

Database Installation

Verify that the database has been installed and is operational. See Oracle Utilities Mobile Workforce Management *Database Administrator's Guide* for more information.

Installation Prerequisites

Chapter 6: Installing Application Server Prerequisite Software describes all preparations that need to be done on the server prior to installing the application server. Please read carefully the server setup requirements and make sure that all prerequisite software is installed and that all required environment variables are set. Correct server setup and proper environment variable settings are an essential prerequisite for successful environment installation.

System Architecture Overview

Oracle Utilities Application Framework V4.1.0 is a decoupled system architecture involving a business service application tier and a web application tier. Typically both will run on the same server, but the design does allow each tier to be installed on separate servers.

The design implements a stateless session bean (EJB technology, under Java EE 6), to provide remote access to service invocations. The root web app, Mobility web app, and XAI web apps can be configured to access service processing locally (as in previous versions), or to make a remote EJB call to perform the service request. In the latter case, the served containers, effectively, run as very thin servlet wrappers around the remote call.

For all supported application servers except for WebLogic expanded configuration (SDK environment), the deployment is in the form of two Enterprise Archive (ear) Files: SPLService.ear and SPLWeb.ear. Web Archive (war) files are created during the installation process but are not deployed.

Copying and Decompressing Install Media

The Oracle Utilities Application Framework installation file is delivered in jar format for both UNIX and Windows platforms.

If you are planning to install multiple Oracle Utilities Framework environments operated by different Oracle Utilities Administrator user ids, you must complete each of the following installation steps for each Administrator userid.

1. Log in to the application server host as the Oracle Utilities Framework administrator user ID (default cissys).
2. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.

3. Copy the file FW-V4.1.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

```
cd <TEMPDIR>

jar -xvf FW-V4.1.0-MultiPlatform.jar
```

Note: You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages:

http://www.oracle.com/technetwork/java/archive-139210.html

A sub-directory named "FW.V4.1.0" is created. It contains the installation software for the Oracle Utilities framework application server.

Set Permissions for the cistab File in UNIX

Every Oracle Utilities Application Framework environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID (cissys), this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.1.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Framework administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Framework administrator user ID, you do not need to run the generated script with the root user ID. Instead the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you are planning to upgrade an existing environment it is your responsibility to take a backup prior to the installation process. The installation utility does not create a backup of existing environment.

Installing Oracle Utilities Application Framework

This section outlines the steps for installing the Application Framework.

Brief Description of the Installation Process

1. Log on as the Oracle Utilities Framework administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).

2. Configure your application server and any third-party software required for your platform, as outlined in **Chapter 6: Installing Application Server Prerequisite Software**.

3. Change directory to the <*TEMPDIR*>/FW.V4.1.0 directory.
4. Set the ORACLE_CLIENT_HOME and path variables as Oracle client Perl is required to run the installer.

   UNIX:

   ```
   export ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>

   export PERL_HOME=${ORACLE_CLIENT_HOME}/perl

   export PATH=${PERL_HOME}/bin:$PATH

   export PERL5LIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF

   Installer Decompressed location/bin/perlib>

   export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF

   Installer Decompressed location/bin/perlib>

   export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:$LD_LIBRARY_PATH
   ```

   Windows:

   ```
   set ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>

   set PERL_HOME=%ORACLE_CLIENT_HOME%\perl

   set PATH=%PERL_HOME%\bin;%PATH%
   ```

5. Start the application installation utility by executing the appropriate script:

   UNIX: ksh ./install.sh

   Windows: install.cmd

6. Follow the messages and instructions that are produced by the application installation utility. Use the completed worksheets in the section **Application Framework Installation and Configuration Worksheets** to assist you.
7. Installation of Oracle Utilities Framework Application Server is complete if no errors occurred during installation.

Detailed Description of the Installation Process

1. Log on to the host server as Oracle Utilities Application Framework administrator.

   Logon as cissys (on UNIX) or as a user with Administrator privileges (on Windows).

2. Configure application server and third-party software.

   Complete all steps outlined in **Chapter 6: Installing Application Server Prerequisite Software**. You will need to obtain specific information for the install.

3. Change directory to the <*TEMPDIR*>/FW.V4.1.0 directory and start the application installation utility by executing the appropriate script:

   UNIX: ksh ./install.sh

   Windows: install.cmd

4. On the Environment Installation Options menu, select item 1: Third Party Software Configuration.

   Use the completed Third Party Software Configuration worksheet in **Application Framework Installation and Configuration Worksheets** to complete this step. Below are the mandatory lists of configurable items along with descriptions for a few items. Where you see <Mandatory>, enter values suitable to your environment. You can assign default values to the rest of the menu items.

```
1.Third Party Software Configuration
Oracle Client Home Directory: <Mandatory>
Web Java Home Directory: <Mandatory>
Child JVM Home Directory:
COBOL Home Directory:
Hibernate JAR Directory: <Mandatory>
ONS JAR Directory:
Database Home Directory:<Mandatory>
Web Application Server Home Directory: <Mandatory>
ADF Home Directory: <Mandatory>
OIM OAM Enabled Environment:
```

5. Select menu item 50: Environment Installation Options.

   Use the completed Environment Installation Options Worksheet to complete this step. See **Application Framework Installation and Configuration Worksheets**.

   Note: You must create the directory for output (the Log Mount Point). The installation process fails if this directory does not exist.

```
50. Environment Installation Options
Environment Mount Point: <Mandatory> - Install Location
Log Files Mount Point:<Mandatory> - ThreadPoolWorker Logs
Location
Environment Name:<Mandatory>
Database Type: Oracle
Web Application Server Type: WLS
Install Application Viewer Module: true


    Each item in the above list should be configured for a
successful install.
    Choose option (1, 50, <P> Process, <X> Exit):
```

6. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu. See Application Framework Installation and Configuration Worksheets. During this step, the specification of a new environment is checked for validity against /etc/cistab and the permissions on mount points and directories. Below are the mandatory lists of configurable items along with descriptions for a few items.

```
**********************************************************

* Environment Configuration *

**********************************************************

    1. Environment Description
    Environment Description: <Mandatory>
    2. Business Application Server Configuration
    Business Server Host: <Mandatory> - Hostname on which
application being installed
    WebLogic Server Name: myserver
    Business Server Application Name: SPLService
```

```
        MPL Admin Port Number: <Mandatory> - Multipurpose Listener
        Port
        MPL Automatic startup: false

        3. Web Application Server Configuration
        Web Server Host: <Mandatory>
        Web Server Port Number: <Mandatory>
        Web Context Root: ouaf
        WebLogic JNDI User ID: <Mandatory>
        WebLogic JNDI Password: <Mandatory>
        WebLogic Admin System User ID: <Mandatory>
        WebLogic Admin System Password: <Mandatory>
        WebLogic Server Name: myserver
        Web Server Application Name: SPLWeb
        Application Admin User ID: <Mandatory>
        Application Admin Password: <Mandatory>
        Expanded Directories: false
        Application Viewer Module: true

        4. Database Configuration
        Application Server Database User ID: <Mandatory>
        Application Server Database Password: <Mandatory>
        MPL Database User ID: <Mandatory>
        MPL Database Password: <Mandatory>
        XAI Database User ID: <Mandatory>
        XAI Database Password: <Mandatory>
        Batch Database User ID: <Mandatory>
        Batch Database Password: <Mandatory>
        Database Name: <Mandatory>
        Database Server: <Mandatory>
        Database Port: <Mandatory>
        ONS Server Configuration:
        Database Override Connection String:
        Oracle Client Character Set NLS_LANG:
        5. General Configuration Options
        Batch RMI Port: <Mandatory> - RMI port for batch
        Batch Mode: <Mandatory> - CLUSTERED or DISTRIBUTED
        Coherence Cluster Name: <Mandatory> - Unique name for batch
        Coherence Cluster Address: <Mandatory> - Unique multicast
address
        Coherence Cluster Port: <Mandatory> - Unique port for batch
cluster
        Coherence Cluster Mode: <Mandatory> - prod
        Each item in the above list should be configured for a
successful install.
        Choose option (1,2,3,4,5, <P> Process, <X> Exit):
```

7. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file $ SPLEBASE/etc/ ENVIRON.INI. The application installation utility copies the installation media to a new environment.

    - The installation utility copies the new version software from the temporary installation media directory to the new environment.
    - If any manual or electronic interruption occurs during this step, you can rerun the install utility from the beginning and follow the interactive instructions. The application installation utility is able to recover from such a failure.
    - The application installation utility generates environment configuration parameters:
    - The application installation utility automatically executes the script initialSetup.sh (on UNIX) or initialSetup.cmd (on Windows), located in $SPLEBASE/bin (%SPLEBASE%\bin on Windows) directory. This script populates different application

template configuration files with the new environment variables values and completes the rest of the installation steps.

8. Once the install has finished, the installation log location appears on the screen. If the log does not list any error messages, the installation of the application component of Oracle Utilities Application Framework is complete.

9. Set up environment variables.

   Once the ENVIRON.INI file is created and contains the correct environment parameters, the application installation utility starts a sub shell to the current process by executing the splenviron.sh (on UNIX) or splenviron.cmd (on Windows) script, located in $SPLEBASE/bin (or %SPLEBSE%\etc for Windows) directory. This script sets up all the necessary environment variables and shell settings for the application server to function correctly.

   From this point, a number of environment variables have been set up. Some key ones are:

   - $PATH - an adjustment to $PATH is made so that all of the environment scripts and objects will be in the path.
   - $SPLEBASE (%SPLEBASE%) - stands for <SPLDIR>/<SPLENVIRON> directory
   - $SPLOUTPUT (%SPLOUTPUT%) - stands for <SPLDIROUT>/<SPLENVIRON> directory

     Note: Make sure that this directory exists. Otherwise the installation script will fail.

   - $SPLENVIRON (%SPLENVIRON%) - environment name

   For future operations or any postinstallation steps, you need to first execute the following command to connect your session to the new environment:

   UNIX: $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON

   Windows:%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%

   You need to execute this script each time you want to be connected to the specific environment before performing manual operations such as shutdown, startup or performing an additional application product installation.

   When you have finished the install process, your current online session will be connected to the new environment.

   See the chapter **Planning the Installation** for settings and configuration.

Upgrade Installation

If you are upgrading from an earlier version of Oracle Utilities Application Framework the installation steps will be the same as for an initial installation. The upgrade installation process will upgrade the Oracle Utilities Application Framework version from V4.0.2 to V4.1.0.

There have been some changes in the application server prerequisite software required for this release compared to the previous versions. Before upgrading an existing installation please ensure that all the application server prerequisite software is installed. Please refer to **Application Framework Installation and Configuration Worksheets**.

If you are upgrading or installing into an existing environment that had customer modifications, the install utility will back up all your customer modifications in a temporary installation area and copy them back into the environment at the end of the upgrade process.

The configuration files of the existing environment are backed up in the directory $SPLEBASE/etc on UNIX and %SPLEBASE%\etc on Windows during installation by the install scripts to preserve any customer changes.

Chapter 8

Installing the Application Server Component of Oracle Real-Time Scheduler

This section describes the procedure for installing Oracle Utilities Mobile Workforce Management on top of the previously created Oracle Utilities Application Framework environment. This section includes:

- Preinstallation Tasks
- Installing the Application
- Security Considerations
- Installing User Documentation
- Operating the Application
- Postinstallation Tasks

To proceed with the Oracle Utilities Mobile Workforce Management installation you need to be connected to the target framework application environment. See the detailed installation instructions in the following section.

You *must* initialize the Framework environment along with the required Patch Set prior to proceeding with Oracle Utilities Mobile Workforce Management Application product installation. For detailed instructions see **Preparing for the Installation** on page 8-2.

Preinstallation Tasks

This section describes the steps that should be taken before installing Oracle Utilities Mobile Workforce Management.

Installing Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Mobile Workforce Management 2.1.0. The patches are available as a convenience rollup, ORS-V2.1.0.-FW-PREREQ-Multiplatform.zip, which is included in the downloaded Media Pack. Please refer to the instructions contained inside the rollup directory for steps to install the patches. For a list of the patches that are included in this rollup, see Appendix B: Application Framework Prerequisite Patches.

Copying Map files

Copy the Map file to the map file directory <MAPDIR>. For more information, see the *Map Editor Installation Guide* and *Map Editor User's Guide.*

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Mobile Workforce Management is delivered in a separate installation package for each supported Operating System. Please refer to the **Supported Platforms** on page 3-4 for version and installation details regarding the database and operating system versions. Also see Chapter 7**:** Installing the Application Server Component of Oracle Utilities Application Framework for prerequisite third-party software installation instructions.

Download the installation package for your operating system and proceed as follows:

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Mobile Workforce Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file ORS-V2.1.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

```
cd <TEMPDIR>
jar -xvf ORS-V2.1.0-MultiPlatform.jar
```

For Windows installations, include the location of the JDK in your path before you execute the jar command.

For both Unix and Windows platforms, a sub-directory named ORS.V2.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Preparing for the Installation

1. Log on as Oracle Utilities Mobile Workforce Management Administrator (default cissys).
2. Initialize the Framework environment that you want to install the product into.

   UNIX:
   ```
   $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
   ```

   Windows:
   ```
   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
   ```

3. Stop the environment if running.

   UNIX:
   ```
   $SPLEBASE/bin/spl.sh stop
   ```

   Windows:
   ```
   %SPLEBASE%\bin\spl.cmd stop
   ```

Installing the Application

1. Change to the <TEMPDIR>/ORS.V2.1.0 Directory.
2. Execute the script:

   UNIX:
   ```
   ksh ./install.sh
   ```

Windows:
`install.cmd`

Note: On UNIX, ensure that you have the proper execute permission on install.sh

3. The application specific menu will appear.
4. Select the following menu items and enter mandatory fields. See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31.

```
8. JMS Configuration
       Context Factory:  <Mandatory>
       WebLogic Server URL:     <Mandatory>
       Weblogic System User ID:    <Mandatory>)
       Weblogic System Password:  <Mandatory>
       Time Out:     <Mandatory>

9. ORS Environment Description
       ORS Scheduler Map Files Location:   <Mandatory>
       Schedule Manager Port Number:  <Mandatory>
       Minimum Requests:    <Mandatory>
       Maximum Time (seconds) Booking Requests:   <Mandatory>
       Unique identifier for the instance of the JVM:
                                                  <Mandatory>
       Registry cleanse timing in seconds:    <Mandatory>
       Scheduler connection timeout in milliseconds:
                                                  <Mandatory>
       Scheduler maintenance cycle time in seconds: <Mandatory>

10. Geocode Data Source Configuration
       JDBC URL for the Geocode database:      <Mandatory>
       Database User Name:  <Mandatory>
       Database Password:     <Mandatory>
       JNDI name for the Geocode datasource: <Mandatory>

11. Mapviewer Configuration
       Deploy mapviewer locally on this instance:  <Mandatory>
       Location of mapviewer ear file:   <Mandatory>

12. Security Configuration
       Deploy only mobility web application:   <Mandatory>
```

5. When you are done with the parameter setup, proceed with the option P. Write Configure file.
6. Once the install has finished successfully, initialize the environment and modify the Advanced Menu Option Values. For more information, refer to Appendix Common Maintenance Activities.
7. Select the menu item 51 for Advanced Memory Configuration.

   Use the completed Advanced Memory Configuration Worksheet to complete this step. Specify the values for the Web Application Java Initial Heap Size, Web Application Java Max Heap Size, Web Application Java Max Perm Size and Web Application Additional Options. See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31.

   51. Advanced Environment Memory Configuration

```
      JVM Child Memory Allocation:
      JVM Child Additional Options:
       Web Application Java Initial Heap Size:       <Mandatory>
       Web Application Java Max Heap Size:           <Mandatory>
       Web Application Java Max Perm Size:           <Mandatory>
       Web Application Additional Options:           <Mandatory>
```

```
Ant Min Heap Size:
Ant Max Heap Size:
Ant Additional Options:
Thread Pool Worker Java Min Heap Size:
Thread Pool Worker Java Max Heap Size:
Thread Pool Worker Java Max Perm Size:
Thread Pool Worker Additional Options:
Additional Runtime Classpath:                <Mandatory>
```

8. Select the menu item 52 for Advanced Web Application Configuration.

   Use the completed Advanced Web Application Configuration Worksheet to complete this step. See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31.

```
52. Advanced Web Application Configuration
      WebLogic SSL Port Number:
      WebLogic Console Port Number:
      WebLogic Additional Stop Arguments:          <Mandatory>
      Strip HTML Comments:
      Authentication Login Page Type:
      Web Form Login Page:
      Web Form Login Error Page:
      Application Viewer Form Login Page:
      Application Viewer Form Login Error Page:
      Help Form Login Page:
      Help Form Login Error Page:
      Web Security Role:
      Web Principal Name:
      Application Viewer Security Role:
      Application Viewer Principal Name:
      This is a development environment:
      Preload All Pages on Startup:
      Maximum Age of a Cache Entry for Text:
      Maximum Age of a Cache Entry for Images:
      JSP Recompile Interval (s):
```

9. When you are done with the parameter setup, proceed with the option P. Write Configure file.
10. To apply the above changes to the environment, run initial setup script.

    UNIX:

```
$ cd $SPLEBASE/bin

$ ksh ./initialSetup.sh
```

    Windows:

```
C:\> cd %SPLEBASE%\bin

C:\> initialSetup.cmd
```

11. Once the installation has finished successfully, you will need to execute postinstallation steps as described in **Postinstallation Tasks** on page 8-6. Also, set security for your application according to the steps described in **Security Considerations** on page 8-4.

Security Considerations

It is critical to secure Oracle Utilities Mobile Workforce Management when communicating with mobile devices using unsecured networks like the internet. At a minimum, we recommend exposing only necessary resources for device communication to these networks and only permit communication using HTTPS. Also, it is recommended to insure that the WebLogic console and other web applications intended for intranet-only use are not exposed to the internet.

Whenever possible, HTTP access to the application should be disabled and only HTTPS access should be allowed. It is also advisable to allow access to the WebLogic admin console application through a separate HTTPS admin port that is different from the application port.

For a more secured configuration, only the mobility web application would be deployed on the public or exposed network while the rest of the application would be deployed behind an internal firewall.

Please refer to the Advanced Web Application Configuration options under **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for a list of the security options available when deploying the Oracle Utilities Mobile Workforce Management application in a public or exposed network such as a DMZ.

It is also recommended to deploy MapViewer on the same WebLogic server instance so that the user security credentials can be shared. Please refer to the MapViewer Configuration options in the section **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for the options available for deploying MapViewer on the same WebLogic server instance. Also refer to **Configuring MapViewer** on page 12-1 for the configuration changes required in the MapViewer installation.

Refer to **Oracle Location Services (eLocation)** on page 12-3 for the configuration changes required in the application for eLocation.

Installing User Documentation

This section provides instructions for installing the Oracle Utilities Mobile Workforce Management user documentation that is supplied with the system. The user documentation is provided in PDF format for printing.

The documentation is also provided in HTML format located inside the Oracle Utilities Mobile Workforce Management application server installation package. It is automatically installed and can be launched from the user interface. The files are under the applications directory packaged in the file named help.war. User documentation is provided in English (ENG). The documentation material is divided into the following subdirectories underneath the language directory:

- M1: Oracle Utilities Mobile Workforce Management User Guide

- F1: Oracle Utilities Application Framework Administration and Business Process Guides

Installing Stand-Alone Online Help

You can also use the Oracle Utilities Mobile Workforce Management online help in stand-alone mode (that is, you do not have to launch it from the application or access it on the application server).

To install the help for stand-alone operation, copy the help.war from the Oracle Utilities Mobile Workforce Management server (environment) or from the Oracle Utilities Mobile Workforce Management installation package to the server or machine on which you want to access the help. If you want to copy the file from any installed Oracle Utilities Mobile Workforce Management environment, you can locate the file in the $SPLEBASE/splapp/applications directory on the server.

Unzip the help.war file to any directory on your machine. To launch the Oracle Utilities Mobile Workforce Management help in stand-alone mode, open the SPLHelp.html file (located inside the language directory that you wish to use).

> **Note:** Do not change the subdirectory names. The documents use relative path names to link to other documents. Changing the subdirectory names will result in broken links.

Customizing Help for Stand-Alone Operation

You can customize the SPLHelp.html file to open to the file and topic that you most frequently use. To do so, edit the SPLHelp.html file and change the DEFAULT_BOOKMARK to the desired location. The default DEFAULT_BOOKMARK is 'helpHome.html'.

Installing Stand-Alone Help Under Web Server

You can also install Oracle Utilities Mobile Workforce Management online help as a stand-alone web application. You can use any web application server, such as WebLogic. Configure the configuration file for your web application server to use web application help.

For example,

- For WebLogic, configure config.xml file for deployed application Name="help"with URI="help.war" and set WebServer DefaultWebApp="help"

Access the documentation from the browser by the following URL :

http://<host name>:<port name>/<WebContext>/<Lang>/SPLHelp.html

where <hostname>:<portname> is the URL of the web server, <Web Context> is the root web context name specified during web application server configuration, <Lang> is the name of the language directory, for example, ENG.

> **Note:** Standalone online help files are not automatically updated when changes are made to the help files on the application server. You will have to re-install the stand-alone online help files.

Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the Server Administration Guide for more information on further configuring and operating the Oracle Utilities Mobile Workforce Management system.

Postinstallation Tasks

1. Run the postinstall script.

   UNIX:
   ```
   $cd $SPLEBASE/runtime

   $ksh ./ORS_postinstall.sh
   ```

   If you get permission errors while running this script, run the following command to set the permissions, then repeat the above step.

   ```
   chmod 755 ORS_postinstall.sh
   ```

   Windows:
   ```
   C:\> cd %SPLEBASE%\runtime

   C:\> ORS_postinstall.cmd
   ```

   > **Note:** Whenever you run initialSetup.sh/cmd script to change any configuration (using the configureEnv.sh script), please execute the above script once the initialSetup.sh/cmd has completed successfully.

2. Start up the environment by running the following command:

   UNIX:
   ```
   spl.sh start
   ```

   Windows:
   ```
   spl.cmd start
   ```

   Follow the messages on the screen along with the logs in $SPLSYSTEMLOGS directory to ensure that the environment was started successfully.

If the startup failed, identify the problem by reviewing the log files. Resolve any issues before attempting to restart the environment.

You should postpone the startup process until you are done with postinstallation steps.

Use the following utility to stop the environment:

UNIX:
```
spl.sh stop
```

Windows:
```
spl.cmd stop
```

Chapter 9

Installing the Application Server Component of Oracle Utilities Mobile Workforce Management

This section describes the procedure for installing Oracle Utilities Mobile Workforce Management on top of the previously created Oracle Real-Time Scheduler environment. This section includes:

- Preinstallation Tasks
- Installing the Application
- Security Considerations
- Installing User Documentation
- Operating the Application
- Upgrade Installation
- Installing Service Packs and Patches

To proceed with the Oracle Utilities Mobile Workforce Management installation you need to be connected to the target Oracle Real-Time Scheduler application environment. See the detailed installation instructions in the following section.

You *must* initialize the Framework environment along with the required patch set prior to proceeding with Oracle Utilities Mobile Workforce Management Application product installation. For detailed instructions see **Preparing for the Installation** on page 9-2.

For frequently asked questions and troubleshooting information during installation of the application and database components of Oracle Utilities Mobile Workforce Management, refer to articles 1475032.1 and 1475013.1 on My Oracle Support.

Preinstallation Tasks

This section describes the steps that should be taken before installing Oracle Utilities Mobile Workforce Management.

Installing Prerequisite Patches

Oracle Real-Time Scheduler patches must be installed prior to installing Oracle Utilities Mobile Workforce Management. Go to My Oracle Support to check for the latest list of patches available for Oracle Real-Time Scheduler.

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Mobile Workforce Management is delivered in a separate installation package for each supported Operating System. Please refer to the **Supported Platforms** on page 3-4 for version and installation details regarding the database and operating system versions. Also see Chapter 7**:** Installing the Application Server Component of Oracle Utilities Application Framework for prerequisite third-party software installation instructions.

Download the installation package for your operating system and proceed as follows:

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Mobile Workforce Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file MWM-V2.1.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

```
cd <TEMPDIR>
jar -xvf MWM-V2.1.0-MultiPlatform.jar
```

For Windows installations, include the location of the JDK in your path before you execute the jar command.

For both Unix and Windows platforms, a sub-directory named MWM.V2.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Preparing for the Installation

1. Log on as Oracle Utilities Mobile Workforce Management Administrator (default cissys).
2. Initialize the Oracle Real-Time Scheduler environment that you want to install the product into.

   UNIX:
   ```
   $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
   ```

   Windows:
   ```
   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
   ```

3. Stop the environment if running.

   UNIX:
   ```
   $SPLEBASE/bin/spl.sh stop
   ```

   Windows:
   ```
   %SPLEBASE%\bin\spl.cmd stop
   ```

Installing the Application

1. Change to the <TEMPDIR>/MWM.V2.1.0 Directory.
2. Execute the script:

   UNIX:
   ```
   ksh ./install.sh
   ```

   Windows:
   ```
   install.cmd
   ```

Note: On UNIX, ensure that you have the proper execute permission on install.sh

See **Security Considerations** on page 9-3 for important information about configuring security.

Security Considerations

It is critical to secure Oracle Utilities Mobile Workforce Management when communicating with mobile devices using unsecured networks like the internet. At a minimum, we recommend exposing only necessary resources for device communication to these networks and only permit communication using HTTPS. Also, it is recommended to insure that the WebLogic console and other web applications intended for intranet-only use are not exposed to the internet.

Whenever possible, HTTP access to the application should be disabled and only HTTPS access should be allowed. It is also advisable to allow access to the WebLogic admin console application through a separate HTTPS admin port that is different from the application port.

For a more secured configuration, only the mobility web application would be deployed on the public or exposed network while the rest of the application would be deployed behind an internal firewall.

Please refer to the Advanced Web Application Configuration options under **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for a list of the security options available when deploying the Oracle Utilities Mobile Workforce Management application in a public or exposed network such as a DMZ.

It is also recommended to deploy MapViewer on the same WebLogic server instance so that the user security credentials can be shared. Please refer to the MapViewer Configuration options in the section **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for the options available for deploying MapViewer on the same WebLogic server instance. Also refer to the section on **Configuring MapViewer** on page 12-1 for the configuration changes required in the MapViewer installation.

Installing User Documentation

This section provides instructions for installing the Oracle Utilities Mobile Workforce Management user documentation that is supplied with the system. Oracle Utilities Mobile Workforce Management user documentation is provided in PDF format for printing.

The documentation is also provided in HTML format located inside the Oracle Utilities Mobile Workforce Management application server installation package. It is automatically installed and can be launched from the user interface. The files are under the applications directory packaged in the file named help.war. User documentation is provided in English (ENG). The documentation material is divided into the following subdirectories underneath the language directory:

- M1: Oracle Utilities Mobile Workforce Management User Guide

- F1: Oracle Utilities Application Framework Administration and Business Process Guides

Installing Stand-Alone Online Help

You can also use the Oracle Utilities Mobile Workforce Management online help in stand-alone mode (that is, you do not have to launch it from the Oracle Utilities Mobile Workforce Management application or access it on the application server).

To install the Oracle Utilities Mobile Workforce Management help for stand-alone operation, copy the help.war from the Oracle Utilities Mobile Workforce Management server (environment) or from the Oracle Utilities Mobile Workforce Management installation package to the server or machine on which you want to access the help. If you want to copy the file from any installed Oracle Utilities Mobile Workforce Management environment, you can locate the file in the $SPLEBASE/splapp/applications directory on the server.

Unzip the help.war file to any directory on your machine. To launch the Oracle Utilities Mobile Workforce Management help in stand-alone mode, open the SPLHelp.html file (located inside the language directory that you wish to use).

> **Note:** Do not change the subdirectory names. The documents use relative path names to link to other documents. Changing the subdirectory names will result in broken links.

Customizing Help for Stand-Alone Operation

You can customize the SPLHelp.html file to open to the file and topic that you most frequently use. To do so, edit the SPLHelp.html file and change the DEFAULT_BOOKMARK to the desired location. The default DEFAULT_BOOKMARK is 'helpHome.html'.

Installing Stand-Alone Help Under Web Server

You can also install Oracle Utilities Mobile Workforce Management online help as a stand-alone web application. You can use any web application server, such as WebLogic. Configure the configuration file for your web application server to use web application help.

For example,

- For WebLogic, configure config.xml file for deployed application Name="help"with URI="help.war" and set WebServer DefaultWebApp="help"

Access the documentation from the browser by the following URL :
http://<host name>:<port name>/<WebContext>/<Lang>/SPLHelp.html, where <hostname>:<portname> is the URL of the web server, <Web Context> is the root web context name specified during web application server configuration, <Lang> is the name of the language directory, for example, ENG.

> **Note:** Stand-alone online help files are not automatically updated when changes are made to the help files on the application server. You will have to re-install the stand-alone online help files.

Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the *Oracle Utilities Mobile Workforce Management Server Administration Guide* for more information on further configuring and operating the Oracle Utilities Mobile Workforce Management system.

Upgrade Installation

At this time Oracle does not support an application upgrade and will only support a database upgrade from v2.0.1.5 to v2.1.0.6. Please refer the *Oracle Utilities Mobile Workforce Management Database Administrator's Guide* for more details about a database upgrade. You will need to do a fresh Oracle Utilities Mobile Workforce Management 2.1.0.6 installation over an Oracle Real-Time Scheduler 2.1.0.6 installation.

Installing Service Packs and Patches

Periodically, Oracle Utilities releases a service pack of single fixes for its products. A service pack is an update to an existing release that includes solutions to known problems and other product enhancements. A service pack is not a replacement for an installation, but a pack consisting of a collection of changes and additions for it. The service pack may include changes to be applied to the application server, the database, or both. The service pack includes all files necessary for installing the collection of changes, including installation instructions.

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information on installing patches, see knowledge base article ID 974985.1 on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support (https://support.oracle.com/).

Chapter 10

Installing the Mobile Client

This section describes how to install the Mobile Client for Oracle Utilities Mobile Workforce Management. It is intended for implementers and system administrators responsible for configuration and initial setup of the mobile application.This section includes:

Installing the Mobile Client on Windows

This section describes how to install the Oracle Utilities Mobile Workforce Management Mobile Client Runtime on Windows Platforms. This section includes:

Installing on Windows 7

1. Extract OracleMWM.msi from Mobile Communication Client v2.1.0.6 for Windows.zip and copy it to a temporary directory. Double click the OracleMWM.msi file to start the installation process.
2. Click **Next** to proceed with the installation of Oracle Utilities Mobile Workforce Management 2.1.0.6 Mobile Client on your machine.
3. Select a folder/hard drive location to install the application to.
4. Click **Next** to proceed with the installation.
5. Click **Close** after the installation is successful.

   The mobile client application is now accessible from shortcuts created on the Desktop or Start Menu.

Installing on Windows Mobile

1. Extract OracleMWM.CAB from Mobile Communication Client v2.1.0.6 for Windows Mobile.zip and copy it to a temporary directory on the mobile device. Tap the OracleMWM.CAB file to start the installation process.
2. If prompted, select **Device** as the location to be installed.

3. Click **Close** after the installation is successful.
4. After completing the MCP installation, delete the CAB file (OracleMWM.CAB) and reboot the mobile device.
   The mobile client application is now accessible from shortcuts created on the **Start > Programs** menu.

Mobile Device Registration

The mobile device needs to be registered with the Oracle Utilities Mobile Workforce Management application server before it can start using the application features. Ensure that the Oracle Utilities Mobile Workforce Management application is installed and running before registering the mobile device.

Please refer to the *Oracle Utilities Mobile Workforce Management Mobile Application User Guide* for the steps to register a device with the server.

Uninstalling the Mobile Client

Follow these procedures to remove the Mobile Client from Windows Mobile.

Uninstalling from Windows 7

1. Ensure that all the data is synchronized on the server.
2. Go to **Start Menu -> Control Panel**.
3. Open **Add or Remove Programs.**
4. Select Oracle Utilities Mobile Workforce Management 2.1.0 from the programs list and click **Remove**.
5. Click **Yes** to confirm the removal of the mobile client.
6. Click **Close** after the mobile client has been removed.

Uninstalling from Windows Mobile

1. Ensure that all the data is synchronized on the server.
2. Go to Start **Menu** -> **Settings** -> **System** tab
3. Open **Remove Programs**.
4. Select Oracle Utilities Mobile Workforce Management 2.1.0 from the programs list and click **Remove**.
5. Click **Yes** to confirm the removal of the mobile client.
6. Click **Close** after the mobile client has been removed.

Installing the Mobile Client on Android

This section describes how to install the Android Mobile Client Platform (Android MCP) for Oracle Utilities Mobile Workforce Management. It is intended for implementers and system administrators responsible for configuration and initial setup of the mobile application. This section includes:

- Overview of the Android MCP
- Installing the Android MCP
- Launching Android MCP
- Launching Android MCP Tools

Overview of the Android MCP

Android MCP provides the same runtime functionality as the Windows Mobile MCP. This functionality includes:

- **RSI:** Communication between the device and the server
- **GPS:** GPS services such as location logging and transferring logs to the server
- **BO Processing:** Business Object Functionality
- **BS Processing:** Business Service Functionality
- **SS Processing:** Service Script Functionality
- **Authentication:** Login processing
- **UI Rendering:** User Interface Processing
- **Logging:** Log File Support

There may be differences in UI layout or JavaScript support due to the different browser component provided by the Android platform. There will also be normal differences in the user interface behavior that are specific to Android applications.

Installing the Android MCP

The Android MCP is delivered as a standard Android APK file. This APK will need to be installed to the Android device in one of the following ways.

- Using SD Card
- Downloading the file from a hosted web server
- Using device management software for Android
- Using Android SDK (Advanced only)

This document will describe the SD Card method only.

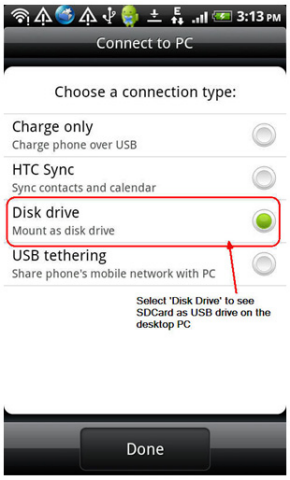
> **Note:** You should uninstall previous versions of the Android MCP before installing a new version.

Installing the MCP Using the SD Card Method

To Install the Android Mcp Using the Sd Card Method

1. Extract OracleMWM.apk from the Mobile Communication Client v2.1.0.6 for Android.zip file and copy it to a temporary directory.

2. Connect the Android device to a desktop or laptop computer as a USB Drive.

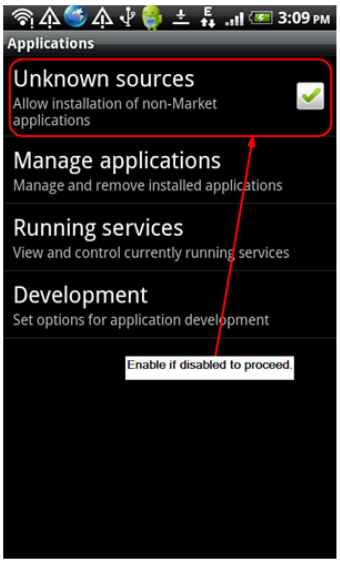


3. Copy the OracleMWM.apk file to the removable disk (select **My Computer** for the drive letter).

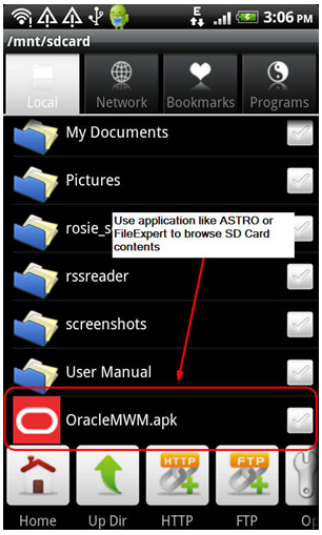
4. Disconnect the device from the desktop or laptop, or choose the **Charge only** connection type.

5. Verify that non-Market applications can be installed.

   Open **Settings, Applications** and select **Unknown sources.**



6. Use a file explorer on the device such as ASTRO or File Expert (which can be downloaded from Android Market) to locate the APK file on the SD card. Launch the file.



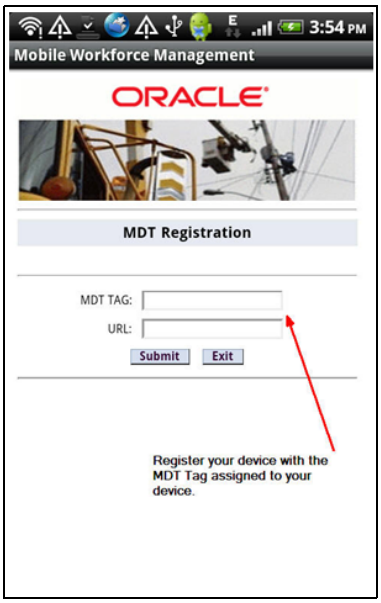
7. Confirm the installation by clicking **Install**.
8. The application will now be installed.
9. After the application is installed, click **Done.**

Launching Android MCP

To Launch the Android MCP on Your Device

1. Under All apps, locate the Oracle MWM icon.
2. Launch the application to register the device and download a deployment.

   Note: Ensure that your device has data or WIFI connectivity.



Launching Android MCP Tools

The MCP Tools application provides functionality to import and export the MCP data folder to and from the SD card on the Android device. This can be very useful in debugging issues or for loading test data to the device.

To Launch the Android MCP Tools Application on Your Device

1. Under All apps, locate the Oracle MWM Tools icon.
2. Launch the application to access import and export functionality.
   - **Export Data** exports the application's data folder to SD Card.
   - **Import Data** imports data from SD card's /MWMApp/ folder into the application's data folder.

Uninstalling Android MCP

To Uninstall the Android MCP

1. Open **Settings, Applications, Manage Applications** and click the Oracle MWM application.
2. Click **Uninstall** to remove Android MCP from your device. Do not select **Clear data.**

Chapter 11

Installing Service Packs

This chapter describes the procedure for installing Oracle Utilities Mobile Workforce Management 2.1.0 Service Pack 6 (also referred to as v2.1.0.6).

This chapter includes the following sections:

Package Contents

This section includes information about:

Installation Packages

The following installation packages are part of the product package for this release:

- Oracle Utilities Mobile Workforce Management v2.1.0.6 Oracle Database.zip - Database installation package
- Oracle Utilities Application Framework v4.1.0.2 for ORS 2.1.0.6.zip - Oracle Utilities Application Framework 4.1.0 SP2
- Oracle Utilities Application Framework v4.1.0 Multiplatform.zip - Oracle Utilities Application Framework v4.1.0 Multiplatform package
- ORS-v2.1.0.6-FW-PREREQ-Multiplatform.zip - Oracle Utilities Application Framework 4.1.0.2 Single-fix Convenience rollup
- Oracle Real-Time Scheduler v2.1.0.6 Multiplatform.zip - Oracle Real-Time Scheduler application server installation package
- Oracle Utilities Mobile Workforce Management v2.1.0.6 Multiplatform.zip - Oracle Utilities Mobile Workforce Management application server installation package
- Mobile Communication Client v2.1.0.6 for Android.zip - Android Mobile Runtime installation package
- Mobile Communication Client v2.1.0.6 for Windows.zip - Windows Runtime installation package
- Mobile Communication Client v2.1.0.6 for Windows Mobile.zip - Windows Mobile Runtime installation package

Documentation Packages

The following documentation packages are part of the product package for this release:

- Oracle Utilities Mobile Workforce Management v2.1.0.6 Release Notes.zip - Release notes for this service pack
- ORS-v2.1.0.6_PFDs.zip - Product Fix Documents for this service pack.
- MWM-v2.1.0.6_PFDs.zip - Product Fix Documents for this service pack.

Supported Upgrade Path

Only the following upgrade path is supported by this release of Oracle Utilities Mobile Workforce Management:

- Upgrading from v2.1.0.5 to v2.1.0.6

Upgrading from v2.1.0.5 to v2.1.0.6

Before upgrading Oracle Utilities Mobile Workforce Management from v2.1.0.5 to v2.1.0.6, the following must have been already installed:

1. Oracle Utilities Application Framework v4.1.0
2. Oracle Utilities Application Framework v4.1.0.1
3. Oracle Utilities Application Framework v4.1.0.1.0 Prerequisite Single Fixes
4. Oracle Real-Time Scheduler v2.1.0.5.0
5. Oracle Utilities Mobile Workforce Management Release v2.1.0.5.0

Service Pack Installation Procedure

Installing this service pack release of Oracle Utilities Mobile Workforce Management is a two-step process consisting of:

- Installing the Database
- Installing the Application

Installing the Database

Please refer to the chapter "Installing Service Packs" in the Oracle Utilities Mobile Workforce Management *DBA Guide* for instructions to install the database component for this service pack.

Installing the Application

Install the following components in the order described below:

1. Oracle Utilities Application Framework v4.1.0
2. Oracle Utilities Application Framework v4.1.0.2
3. Oracle Real-Time Scheduler v2.1.0.6 Framework Prerequisite Multiplatform
4. Oracle Real-Time Scheduler v2.1.0.6
5. Oracle Utilities Mobile Workforce Management v2.1.0.6
6. Oracle Utilities Mobile Workforce Management Mobile Client

> **Note:** If you are upgrading from Oracle Utilities Mobile Workforce Management v2.1.0.5, then steps 1) is not required.

The following sections describe the steps to install each of the above components:

Installing Oracle Utilities Application Framework v4.1.0

Note: This procedure is not required if you are upgrading from Oracle Utilities Mobile Workforce Management v2.1.0.5.

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.
2. Copy the file 'Oracle Utilities Application Framework v4.1.0 Multiplatform.zip' in the delivered package to <TEMPDIR>.
   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
3. Upon extracting the zip file, a sub-directory named "FW.v4.1.0" is created. It contains the installation software for the Oracle Utilities Framework application server.

Installing Oracle Utilities Application Framework v4.1.0.2

This section describes how to install the application framework component, including:

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms. Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID. This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Framework application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file FW-V4.1.0.2.0-SP2-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

```
cd <TEMPDIR>

jar -xvf FW-v4.1.0.2.0-SP2-MultiPlatform.jar
```

For Windows installations, include the location of the JDK in your path before you execute the jar command.

For both Unix and Windows platforms, a sub-directory named FW.V4.1.0.2.0-SP2 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

Preparing for the Installation

1. Log on as the administrator (default cissys).
2. Initialize the Oracle Utilities Application Framework environment that you want to install the product into by running the appropriate command:

   UNIX:

   ```
   $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
   ```

   Windows:

   ```
   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
   ```

3. Stop the environment, if running:

   UNIX:

   ```
   $SPLEBASE/bin/spl.sh stop
   ```

   Windows:

   ```
   %SPLEBASE%\bin\spl.cmd stop
   ```

Installing the Service Pack

Follow these steps to install the service pack:

1. Change to the <TEMPDIR>/ FW.V4.1.0.2.0-SP2 directory.
2. Execute the script:

   Note: On UNIX, ensure that you have the proper execute permission on installSP.sh

   UNIX:

   ```
   ksh ./installSP.sh
   ```

   Windows:

   ```
   installSP.cmd
   ```

Installing ORS-v2.1.0.6-FW-PREREQ-Multiplatform

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.
2. Copy the file 'ORS-v2.1.0.6-FW-PREREQ-Multiplatform.zip' in the delivered package to <TEMPDIR>.
   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
3. Refer to the Readme.txt inside 'Application Server Multiplatform' to install Application related FW patch.

Installing Oracle Real-Time Scheduler v2.1.0.6

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Real-Time Scheduler application environment.
2. Unzip 'Oracle Real-Time Scheduler v2.1.0.6 Multiplatform.zip' and copy the file ORS-v2.1.0.6.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.
   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
3. Decompress the file using following command:

```
cd <TEMPDIR>
jar -xvf ORS-v2.1.0.6.0-MultiPlatform.jar
```

Note: For Windows installations, include the location of the JDK in your path before executing the jar command.

For both Unix and Windows platforms, a sub-directory named ORS.v2.1.0.6.0 is created.

4. Initialize the Oracle Real-Time Scheduler environment that you want to install the product into.

   UNIX:

   ```
   <SPLEBASE>/bin/splenviron.sh -e <SPLENVIRON>
   ```

   Windows:

   ```
   <SPLEBASE>\bin\splenviron.cmd -e <SPLENVIRON>
   ```

5. Stop the application server instance if running.
6. Change to the <TEMPDIR>/ORS.v2.1.0.6.0 directory.
7. Execute the following command:

   Note: On UNIX, ensure that you have the proper execute permission on install.sh

   UNIX:

   ```
   ksh ./install.sh
   ```

   Windows:

   ```
   install.cmd
   ```

8. Choose the options for configuration and enter P to proceed with the installation.
9. Execute the following command:

   Note: On UNIX, ensure that you have the proper execute permission on ORS_postinstall.sh

   UNIX:

   ```
   cd <SPLEBASE>/runtime
   ksh ./ORS_postinstall.sh
   ```

   Windows:

   ```
   cd %SPLEBASE%\runtime
   ORS_postinstall.cmd
   ```

10. Execute following command.

    Note: On UNIX, ensure that you have the proper execute permission on configureEnv.sh

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

11. Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Execute following command.

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh

UNIX:

```
initialSetup.sh
```

Windows:

```
initialSetup.cmd
```

Installing Oracle Utilities Mobile Workforce Management Release v2.1.0.6

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Mobile Workforce Management application environment.
2. Unzip 'Oracle Utilities Mobile Workforce Management v2.1.0.6 Multiplatform.zip' and copy the file 'MWM-v2.1.0.6.0-MultiPlatform.jar' in the delivered package to <TEMPDIR>.

   Note: If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
3. Decompress the file using following command:

   ```
   cd <TEMPDIR>
   jar -xvf MWM-v2.1.0.6.0-MultiPlatform.jar
   ```

   Note: For Windows installations, include the location of the JDK in your path before executing the jar command.

   For both Unix and Windows platforms, a sub-directory named MWM.v2.1.0.6.0 is created.
4. Initialize the Oracle Utilities Mobile Workforce Management environment that you want to install the product into:

   UNIX:

   ```
   <SPLEBASE>/bin/splenviron.sh -e <SPLENVIRON>
   ```

   Windows:

   ```
   <SPLEBASE>\bin\splenviron.cmd -e <SPLENVIRON>
   ```
5. Stop the Oracle Utilities Mobile Workforce Management application server instance if running.
6. Change to the <TEMPDIR>/MWM.v2.1.0.6.0 directory.
7. Execute the following command:

   Note: On UNIX, ensure that you have the proper execute permission on install.sh

   UNIX:

   ```
   ksh ./install.sh
   ```

   Windows:

   ```
   install.cmd
   ```
8. Choose option P to proceed with the installation.
9. Execute the following command:

   UNIX:

   ```
   configureEnv.sh
   ```

   Windows:

   ```
   configureEnv.cmd
   ```

Note: On UNIX, ensure that you have the proper execute permission on configureEnv.sh

Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".

10. Execute the following command:

UNIX:

```
initialSetup.sh
```

Windows:

```
initialSetup.cmd
```

Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh

11. Execute the following command:

UNIX:

```
cd <SPLEBASE>/runtime
ksh ./cdfDeploy.sh
```

Windows:

```
cd %SPLEBASE%\runtime
cdfDeploy.cmd
```

12. Start up the application server instance.

UNIX:

```
spl.sh start
```

Windows:

```
spl.cmd start
```

13. Start up the batch scheduler.

UNIX:

```
$ cd $SPLEBASE/bin

$ nohup batchscheduler.sh <Node_ID> > /tmp/batchscheduler.log 2>&1
```

Windows:

```
cd %SPLEBASE%\bin

batchscheduler.cmd <Node_ID>
```

Note: The application domain node ID must be unique value across the environment. This value is used for a scheduler running from Threadpoolworker.

Installing the Mobile Client v2.1.0.6

Note: Oracle Utilities supports a direct upgrade of the mobile client of Oracle Utilities Mobile Workforce Management from v2.1.0.5 to v2.1.0.6.

Please note the MCP Upgrade feature (direct upgrade to mobile client v2.1.0.6) is not supported from previous installed versions of the mobile client (v2.1.0, v2.1.0.1, v2.1.0.2, v2.1.0.3, v2.1.0.4).

This section consists of

- Installing the Mobile Client on Windows

- Installing the Mobile Client on Android
- Registering the Mobile Device

Installing the Mobile Client on Windows

This section consists of:

- Installing the Mobile Client on Windows 7
- Installing the Mobile Client on Windows Mobile

Installing the Mobile Client on Windows 7

You can chose to install the mobile client using either the command-line option or the user interface.

Command-line option:
To install the mobile client on Window 7, execute the following command:

```
msiexec /i "<Location of OracleMWM.msi>"  TARGETDIR="C:\MWMApp\"
/qn
```

(OR)

GUI Option:
To install the mobile client on Windows 7 using the GUI, follow the steps below:

1. Extract OracleMWM.msi from Mobile Communication Client v2.1.0.6 for Windows.zip and copy it to a temporary directory.
2. Double click the OracleMWM.msi file to start the installation process.
3. Click **Next** to proceed with the upgrade of Oracle Utilities Mobile Workforce Management 2.1.0.6 Mobile Client on your machine.
4. Select a folder/hard drive location (specify the same location as that of already installed version) to upgrade the application to.
5. Click **Next** to proceed with the upgrade process.
6. Click **Close** after the upgrade is successful.
   The mobile client application is now accessible from shortcuts created on the Desktop or Start Menu.

Installing the Mobile Client on Windows Mobile

You can chose to install the mobile client using either the silent option or the user interface.

Silent Update option:
To install the mobile client on Windows Mobile using the silent option, execute the **UpdateMCP link** file present inside Mobile Communication Client v2.1.0.6 for Windows Mobile.zip.

In this case, you must place both the OracleMWM.CAB and UpdateMCP link in the root folder of the device.

(OR)

GUI Option:
To install the mobile client on Windows Mobile using the GUI, follow the steps below:

1. Extract OracleMWM.CAB from Mobile Communication Client v2.1.0.6 for Windows Mobile.zip and copy it to a temporary directory on the mobile device.
2. Tap the OracleMWM.CAB file to start the upgrade process.
3. On the first prompt, " The previous version of Oracle MWM will be removed before the new one is installed. Select OK to continue or Cancel to quit", click **OK**.
4. If prompted, select **Device** as the location to be upgraded.

5. Click **Close** after the upgrade is successful.
6. After completing the MCP upgrade, delete the CAB file (OracleMWM.CAB) and reboot the mobile device.
   The mobile client application is now accessible from shortcuts created on the **Start** > **Programs** menu.

Installing the Mobile Client on Android

To install the mobile client on Android device, you must first un-install the installed APK and then install the new APK. You can choose to perform this using the command-line option or through the GUI.

Command-line option:

To perform this using the command-line option, execute the following commands:

```
adb uninstall com.splwg.base.android

adb install <path of apk>
```

(OR)

GUI option:

To perform this using the GUI, follow the procedure below:

Un-installing the Mobile Client

1. Open Settings, Applications, Manage Applications and click the Oracle MWM application.
2. Click **Uninstall** to remove Android MCP from your device. Do not select **Clear data**.

Installing the Mobile Client

1. Extract OracleMWM.apk from the Mobile Communication Client v2.1.0.6 for Android.zip file and copy it to a temporary directory.
2. Connect the device to the desktop or laptop.
3. Copy the OracleMWM.apk file to the removable disk (select My Computer for the drive letter)
4. Verify that non-Market applications can be installed.
5. Open Settings, Applications and select **Unknown sources**.
6. Use a file explorer on the device such as MyFiles to locate the APK file on the SD card.
7. Launch the file.
8. Confirm the installation by clicking **Install**.
   The application will now be installed.
9. After the application is installed, click **Done**.
   You have now successfully installed the mobile client.

Registering the Mobile Device

The mobile device needs to be registered with the Oracle Utilities Mobile Workforce Management application server before it can start using the application features. Ensure that the Oracle Utilities Mobile Workforce Management application is installed and running before registering the mobile device.

Please refer to the Oracle Utilities Mobile Workforce Management *Mobile Application User Guide* for the steps to register a device with the server.

Note: After installing the mobile client for this release, an MCP Backup properties file (titled BackupMDT.properties) gets created. For Android

devices, this file gets created inside "mcpbackup" folder inside the SD card. For Windows devices, this file gets created inside "\MWMApp\data" directory. This properties file stores information related to the previous device registration (if any).

When the mobile client is un-installed at a later point in time, the BackupMDT.properties file does not get deleted as part of the un-installation process. As a workaround, the BackupMDT.properties must be deleted manually or through scripting for any changes to the MDT Tag or MDT URL.

Chapter 12

Additional Tasks

This section describes tasks that should be completed after installing Oracle Utilities Mobile Workforce Management, including:

Configuring MapViewer

This section describes how to configure a MapViewer data source for Oracle Utilities Mobile Workforce Management.

Before you can configure a MapViewer data source you must:

- Install Oracle Fusion Middleware MapViewer 11.1.1.5.1.
- Create and configure the database.

To Configure a MapViewer Data Source

1. Go to the MapViewer Application:

   Example: http://<host>:<port>/mapviewer

   Where <host> is the host name or IP address of the system where MapViewer is deployed. and <port> is the port of the WebLogic instance. If MapViewer is deployed on the same WebLogic instance then this is same as the application port.

2. Click the **Admin** button to log in as an administrator to MapViewer.

3. Click **Manage Map Viewer**, then **Configuration.**
4. Modify mapViewerConfig.xml using the Config text area.
   a. Provide the data source details for the cisadm and NAVTEQ_UTIL data sources. The following code sample contains example data sources. Change the properties according to your data sources:

```
<!-(Sample datasource configuration)
  <map_data_source name="mvdemo"
      jdbc_host="db1.my_corp.com"

      jdbc_sid="orcl"

      jdbc_port="1521"

      jdbc_user="scott"

      jdbc_password="!tiger"

      jdbc_mode="thin"

      number_of_mappers="3"

      allow_jdbc_theme_based_foi="false"

    />
```

   b. If the secure protocol (HTTPS) is enabled for the MapViewer URL, add the following to the **Map Image Settings** section of mapViewerConfig.xml:

```
<save_images_at file_prefix="omsmap"
      url="https:// <host>:<port>/mapviewer/images"
      path="../../images"
      life="0"
      recycle_interval="480"
/>
```

   Where <host> is the host name or IP address of the system where MapViewer is deployed and <port> is the port of the WebLogic instance.
5. Click **Save and Restart**.
6. To refresh the list of data sources, click **Manage Map Viewer**, then **Data sources.**
7. To confirm that the configuration is correct, click **Manage Map Tile Layers**.

Configuring MapViewer Security

When MapViewer is deployed on the same WebLogic instance as the application, follow these steps to configure MapViewer to share the security credentials of the application.

1. Add the following entry in the weblogic.xml file under <MAPVIEWER_EAR_DIR>/web.war/WEB-INF:

```
 <security-role-assignment>
   <role-name>cisusers</role-name>
   <principal-name>cisusers</principal-name>
</security-role-assignment>

<session-descriptor>
   <cookie-path>/mapviewer</cookie-path>
</session-descriptor>
```

2. Add the following entry in the web.xml file under <MAPVIEWER_EAR_DIR>/web.war/WEB-INF:

```
<security-role>
    <description>MapViewer users</description>
    <role-name>cisusers</role-name>
</security-role>
```

Oracle Location Services (eLocation)

This section describes how to configure and deploy Oracle Location Services (eLocation) for use by Oracle Utilities Mobile Workforce Management. This is required if your implementation chooses to use eLocation for routing data instead of Oracle Real-Time Scheduler.

The installation of eLocation requires the following components

- eLocation Dispatcher Servlet (elocation.ear)
- Oracle RouteServer (routeserver.ear)
- Oracle Geocoder (geocoder.ear)

To Configure eLocation

1. Download the elocation.ear file.

   To download the latest elocation.ear, log on to My Oracle Support at support.oracle.com and download Patch 13446793, "SPATIAL elocation for Mobile Workforce Management Release 12."

   Oracle RouteServer and Oracle Geocoder are included with the Oracle 11g database in the following directory: ORACLE_HOME\md\jlib

2. When eLocation is deployed on the same WebLogic instance as the application, follow these steps to configure eLocation to share the security credentials of the application.

   a. Add the following entry in the weblogic.xml file, located under <ELOCATION_EAR_DIR>/web.war/WEB-INF:

   ```
   <security-role-assignment>
   <role-name>cisusers</role-name>
   <principal-name>cisusers</principal-name>
   </security-role-assignment>
   ```

   b. Add the following entry in the web.xml file, located under <ELOCATION_EAR_DIR>/web.war/ WEB-INF:

   ```
   <security-role>
   <description>SPL users</description>
   <role-name>cisusers</role-name>
   </security-role>
   ```

3. Deploy and configure the routing engine and the geocoding service as described in the Oracle Spatial Developer's Guide 11g.

4. Deploy the eLocation EAR manually using the WebLogic console. Open the eLocation URL at: http://<environment>:<port>/elocation/admin.jsp

   The application will ask for login credentials because the web.xml and weblogic.xml files have changed. Once the login is successful, you will see the Oracle eLocation Administration page.

5. To modify the Mapper Cluster, click **Edit** on the component URL. Specify the following value:

   <http://<environment>:<port>/mapviewer/omsserver>.

Make sure that MapViewer is also deployed in the environment.

6. To modify the Geocoder Cluster, click **Edit** on the component URL. Specify the following value:

   < http://elocation.oracle.com/geocoder/gcserver>

7. To modify the Router Cluster, click **Edit** on the component URL. Specify the following value:

   http://elocation.oracle.com/routeserver/servlet/RouteServerServlet

8. Click **Apply Changes.**

Configuring the Environment for Oracle BPEL Server

Oracle BPEL Process Manager is optional software that can be used by Oracle Utilities Mobile Workforce Management for sending SMS messages. Oracle Utilities Mobile Workforce Management can be configured to send SMS via different third party gateway/SMS providers. The ability to send SMS using the Oracle BPEL Server is already provided in the base application

This section describes how to configure the Oracle Utilities Mobile Workforce Management to interact with Oracle BPEL Server.

Before configuring Oracle Utilities Mobile Workforce Management to interact with BPEL Server you must:

- Install Oracle BPEL Server.
- Configure Oracle Utilities Mobile Workforce Management with a process that receives phone numbers and messages deployed on the BPEL server.

Oracle Utilities Mobile Workforce Management uses the algorithm type F1-SMSSEND to connect to the Oracle BPEL server.

The following information will be required to set up the application to work with the BPEL server:

Option Type	Detail Description
Operation Name	The 'operation' or the method name of the SMS Web service
Password	The password for the Web service
Port Type	The 'port type' name of the SMS Web service
Server URL	The url of the BPEL/SMS gateway server
Service Name	The 'service' name of the SMS Server
User Name	The 'user name' for authentication to the Web service

Configuring the Scheduler

This section describes how to configure a scheduler as a standalone application on the TPW JVM.

After installing Oracle Utilities Mobile Workforce Management V2.1.0, please verify that the below step1 and step 2 changes are available or not. If they are not available, follow the below steps:

1. Verify that the wlfullclient.jar file is in the following directory:

   <Web Logic Home>/wlserver_10.3/server/lib

If the file is not there, generate the file by following the instructions in **Building the wlfullclient.jar File Using ANT** on page 12-6. Place the file in the above directory. The batch scheduler scripts use this jar in their classpath.

2. If you enabled the WebLogic Console Port Number, then the WebLogic console is accessed by https admin channel by default. Specify "t3s://<host>:<admin channel port>" as the WebLogic Server URL in menu item 8, JMS Configurations. Otherwise, specify "t3://<host>:<web server port>".

   See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for more information.

3. Configure trust keystore as WebLogic Additional Stop Argument using menu item 52 Advanced Web Application Configuration. **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for more information.

4. Run the initialSetup script.

   UNIX:

   ```
   $ cd $SPLEBASE/bin

   $ ksh ./initialSetup.sh
   ```

   Windows:

   ```
   cd %SPLEBASE%\bin

   initialSetup.cmd
   ```

5. Run the standalone batch script. For example

   UNIX:

   ```
   $ cd $SPLEBASE/bin

   $ nohup batchscheduler.sh <Node_ID> > /tmp/batchscheduler.log 2>&1
&
   ```

   Windows:

   ```
   cd %SPLEBASE%\bin

   batchscheduler.cmd <Node_ID>
   ```

   Notes:

   - The application domain node ID must be unique value across the environment. This value is used for a scheduler running from Threadpoolworker.
   - The scheduler should be disabled from the online application. The batch scheduler program invokes Threadpoolworker so there is no need to start Threadpoolworker separately.
   - The NodeID is located in the threadpoolworker logs under $SPLOUTPUT. You can locate this value by searching for "NODEID".
   - To locate the NodeID in the threadpoolworker process, search for the string "-Dspl.mwm.scheduler.nodeId="

You will get multicast issues in an AIX environment if you start the batch scheduler and the multicast listener is not enabled. The workaround for this is to enable a unicast listener. See the *Oracle Utilities Mobile Workforce Management Batch Server Administration Guide* for more details.

To Enable the Unicast Listener

1. Copy the file $SPLEBASE/splapp/standalone/config/tangosol-coherence-override.xml to tangosol-coherence-override.xml.org
2. Remove the following code in the tangosol-coherence-override.xml file:

```
<multicast-listener>

      ---------------------

      ---------------------

      </multicast-listener>
```

3. Add the following code after the </member-identity> tag in the tangosol-coherence-override.xml file:

```
<unicast-listener>

<well-known-addresses>

<socket-address id="0">

<address system-property=
"tangosol.coherence.wka">COHERENCE_CLUSTER_HOSTNAME</address>

<port system-property=
"tangosol.coherence.wka.port">COHERENCE_CLUSTER_PORT</port>

</socket-address>

</well-known-addresses>

<address system- property=
"tangosol.coherence.localhost">COHERENCE_CLUSTER_HOSTNAME
</address>

<port system-property=
"tangosol.coherence.localport">COHERENCE_CLUSTER_PORT</port>

<port-auto-adjust system-property=
"tangosol.coherence.localport.adjust">true</port-auto-adjust>

</unicast-listener>
```

4. Select the menu item 5 and General Configuration Options. Use the completed General Configuration Options Worksheet to complete this step. See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for more information.
5. Run initialSetup and start the batch scheduler.
   See the Appendix titled "Common Maintenance Activities" for additional information on common batch scheduler tasks.

Building the wlfullclient.jar File Using ANT

To Build the wlfullclient.jar File

1. Place the following build.xml file in WebLogic Installations Server/lib directory. (For example: /spl/Middleware/WLS_10.3.6/wlserver_10.3/server/lib.)

```
<project name="JarBuilder" default="run">
```

```
<property name="bea.home" value="/spl/Middleware/WLS_10.3.6"/>

<property name="wl.home" value="${bea.home}/wlserver_10.3"/>

<path id="main.class.path">

<pathelement path="${bea.home}/modules/
com.bea.core.utils_1.9.0.0.jar"/>

<pathelement path="${bea.home}/modules/
com.bea.core.jarbuilder_1.6.0.0.jar"/>

<pathelement path="${java.class.path}"/>

</path>

<target name="run">

<echo message="***ANT Script should run from inside the ${wl.home}/
server/lib **" />

<echo message="***** ********* ********* *****" />

<java classname="com.bea.jarbuilder.JarBuilder">

<classpath refid="main.class.path"/>

<jvmarg value="-d ${wl.home}/server/lib -jar wljarbuilder.jar"/>

</java>

</target>

</project>
```

2. Modify the Properties defined in the ANT script according to your Installation directory:

```
<property name="bea.home" value="/spl/Middleware/WLS_10.3.6?/>

<property name="wl.home" value="${bea.home}/wlserver_10.3?/>
```

   Note: Change the com.bea.core.utils_1.9.0.0.jar and com.bea.core.jarbuilder_1.6.0.0.jar file names, if there are any version conflicts.

3. Login to $SPLEBASE and run the following command:

```
/spl/Middleware/WLS_10.3.6/wlserver_10.3/server/bin/ setWLSENV.sh
```

Unix:

```
cd $SPLEBASE

Run  /spl/Middleware/WLS_10.3.6/wlserver_10.3/server/bin/
     setWLSENV.sh
```

Windows:

```
cd %SPLEBASE%

Run C:\spl\Middleware\WLS_10.3.6\wlserver_10.3\server\bin\
   setWLSENV.sh
```

4. Change the directory to "/spl/Middleware/WLS_10.3.6/wlserver_10.3/server/lib" folder :

```
#> cd /spl/Middleware/WLS_10.3.6/wlserver_10.3/server/lib

#>ant
```

5. When the ant script has executed successfully, the file wlfullclient.jar is generated in the following directory: /spl/Middleware/WLS_10.3.6/wlserver_10.3/server/lib

   Note: For common Batch Scheduler start/stop tasks, please refer Appendix Common Maintenance Activities.

Configuring the Batch Scheduler for Different Servers

This section describes how to configure the batch scheduler to point to a different application server, or "target server". The target server has to be installed following the same steps as described for installing Oracle Utilities Mobile Workforce Management. These steps can also be followed to run the batch scheduler(s) from a different server than the target server. In the following steps, substitute the appropriate values for the environment.

To Configure the Scheduler to Point to a Different Target Server

1. Install Oracle Real-Time Scheduler application.
2. Stop the environment if running.

   UNIX:
   ```
   $SPLEBASE/bin/spl.sh stop
   ```

   Windows:
   ```
   %SPLEBASE%\bin\spl.cmd stop
   ```

3. In the application menu, select the menu item 8 to configure JMS settings. Enter the menu items for the target server. Use the completed JMS Configuration Worksheet to assist you with this step. See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for more information.
4. Select the menu item 9 to specify ORS environment description and enter the menu items for the target server. Use the completed ORS Environment Description Worksheet to complete this step.See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for more information.
5. Verify that the wlfullclient.jar file is in the following directory: <Web Logic Home>/ wlserver_10.3/server/lib. If it is not, generate the file by following the instructions in **Building the wlfullclient.jar File Using ANT** on page 12-6. The batch scheduler scripts use this jar in their classpath.
6. Enter the WebLogic Console Port Number for the target server using menu item 52 Advanced Web Application Configuration. See **Oracle Real-Time Scheduler Installation and Configuration Worksheets** on page 4-31 for more information.
7. Run the initialSetup script:

   UNIX:
   ```
   $SPLEBASE/initialSetup.sh
   ```

   Windows:
   ```
   %SPLEBASE%\initialSetup.cmd
   ```

8. Run the standalone batch scheduler script, which now points to the target server. See Appendix Common Maintenance Activities for details on how to start and stop the batch scheduler.

WebLogic Production Server Considerations

By default, WebLogic Server is configured with two keystores, to be used for development only. These keystores should not be used in a production environment.

Configuring Identity and Trust

Private keys, digital certificates, and trusted certificate authority certificates establish and verify identity and trust in the WebLogic Server environment. WebLogic Server is configured with a default identity keystore DemoIdentity.jks and a default trust keystore DemoTrust.jks. In addition, WebLogic Server trusts the certificate authorities in the cacerts file in the JDK. This default keystore configuration is appropriate for testing and development purposes. However, these keystores should not be used in a production environment.

To configure identity and trust for a server:

1. Obtain digital certificates, private keys, and trusted CA certificates from the CertGen utility, Sun Microsystem's keytool utility, or a reputable vendor such as Entrust or Verisign. You can also use the digital certificates, private keys, and trusted CA certificates provided by the WebLogic Server kit. The demonstration digital certificates, private keys, and trusted CA certificates should be used in a development environment only.
2. Store the private keys, digital certificates, and trusted CA certificates. Private keys and trusted CA certificates are stored in a keystore.
3. Configure the identity and trust keystores for a WebLogic Server instance on the Configuration: Keystores page.

By default, WebLogic Server is configured with two keystores, to be used for development only.

- DemoIdentity.jks: Contains a demonstration private key for WebLogic Server. This keystore establishes an identity for WebLogic Server.
- DemoTrust.jks: Contains a list of certificate authorities trusted by WebLogic Server. This keystore establishes trust for WebLogic Server.

These keystores are located in the WL_HOME\server\lib directory and the JAVA_HOME\jre\lib\security directory. For testing and development purposes, the keystore configuration is complete. Use the steps in this section to configure identity and trust keystores for production use.

Refer to the WebLogic documentation to configure identity and trust keystores for production use (Secure servers and resources > Configure identity and trust/Set up SSL)

> **Note:** Depending on your choice of implementation you may need to change some configuration files. These files are managed by templates and will be overwritten if the procedures documented in "Customizing Configuration Files" are not followed.

Building Javadoc Indexes

The following script rebuilds the Javadocs indexes in the application viewer java module. This is necessary after customer modifications (CM) have been applied to an environment. You need to run this script only if the customer modification includes Java code.)

Windows:

```
%SPLEBASE%\bin\buildJavadocsIndex.cmd
```

UNIX:

```
ksh $SPLEBASE/bin/buildJavadocsIndex.sh
```

Configuring the Environment for Batch Processing

See the *Oracle Utilities Mobile Workforce ManagementBatch Server Administration Guide* for information on configuring the environment for batch processing.

Customizing Configuration Files

You may wish to make customer modifications to various configuration files. To do so, you should locate the configuration file you want to customize and edit it manually.

Configuration files are generated from delivered templates in the Oracle Utilities installation and are populated by values entered by the installation utility during the configuration process. In future upgrades of Oracle Utilities application software versions, some templates may be changed to reflect new software version requirements. In this case, the upgrade process will back up your customized configuration file and will regenerate a configuration file based on a new template. You will need to review the new configuration file and apply your customized changes back if still applicable for the new version.

For configuration files that are located in a web application (for example, web.xml, hibernate.properties), of the web application during installation process, you will not be able to edit the configuration files directly.

You will need to follow the procedure:

- Locate the configuration file you want to customize in the directory $SPLEBASE/etc/conf.
- Apply your changes.
- Update application war file with the latest changes by executing the following command:

  Unix:

  ```
  $SPLEBASE/bin/initialSetup.sh
  ```

  Windows:

  ```
  %SPLEBASE%\bin\initialSetup.cmd
  ```

Customizing the Logo

To replace the Oracle Utilities logo on the main menu with another image, put the new image<customer_logo_file>.gif file into the directory $SPLEBASE/etc/conf/root/cm and create a new "External" Navigation Key called CM_logoImage. To do that, run the Oracle Utilities application from the browser with the parameters: http://<hostname>:<port>/<Web Context>/ cis.jsp?utilities=true&tools=true. From the Admin menu, select Navigation Key. Add the above Navigation Key with its corresponding URL Override path. The syntax for the URL path is:

Windows:

http://<host name>:<port>/<Web Context>/cm/<customer_logo_file>.gif

UNIX:

http://<host name>:<port>/<Web Context>/cm/<customer_logo_file>.gif.

The root directory may be deployed in war file format for runtime environment (SPLApp.war). Use provided utilities to incorporate your cm directory into SPLApp.war file.

Generating the Application Viewer

You may extend application viewer capabilities within an environment by generating additional items. The additional items that can be generated include algorithm type and related algorithm information, maintenance object information and data dictionary information.

To Generate the Additional Items In the Application Viewer:

1. Shut down the environment.
2. Initialize a command shell:

   The scripts that are provided with the system need to be run from a shell prompt on the machine that you installed the application on. Before such scripts can be run the shell must be "initialized" by running the splenviron script provided with the system.

   Unix:
   You will need to logon to your UNIX box as the Oracle Utilities Administrator (default cissys) and open a shell prompt. In the following example you should replace the variables

   $SPLEBASE with the Full directory name that you installed the application into

   and

   $SPLENVIRON with the name you gave to the environment at installation time.

   To initialize the environment enter:

   $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON

   For example:

   ```
   /ouaf/TEST_ENVIRON1/bin/splenviron.sh -e TEST_ENVIRON1
   ```

   Windows:
   The command window should be opened on the Windows server that you installed the application on.

   In the below example you should replace the following variables:

   - **%SPLEBASE% :** The Full directory name that you installed the application into
   - **%SPLENVIRON%:** The name you gave to the environment at installation time.

   To initialize the environment type the following in your command prompt:

   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%

   For example:

   ```
   D:\ouaf\TEST_ENVIRON1\bin\splenviron.cmd -e TEST_ENVIRON1
   ```

3. Execute the following script to generate all information.

   UNIX:
   ```
   ksh $SPLEBASE/bin/genappvieweritems.sh
   ```

   Windows:
   ```
   %SPLEBASE%\bin\genappvieweritems.cmd
   ```

4. Restart your application

Installation Verification Checklist

After you complete the installation, verify the following:

1. Verify installation logs created under decompressed installer location for any errors.
2. Confirm installation logs do not contain any errors.
3. Confirm all the configurations are correct. Refer to Installation and Configuration Worksheets for details.
4. Confirm that the database is ready.
5. Start the application server. For instructions, refer to Appendix Common Maintenance Activities.
6. Verify Application deployment status.
   a. Login to Weblogic Console.
   b. Click on Deployment link
   b. Verify the following application deployments are Active or not.
      - SPLService
      - "SPLWeb
      - "SPLAdf
      - "Mapviewer
3. Verify the Data Source Configuration.
4. To operate the application, refer to the next section.

Accessing the Application

1. Start up the environment by running the following command:

   UNIX:
   ```
   spl.sh start
   ```

   Windows:
   ```
   spl.cmd start
   ```

2. Follow the messages on the screen along with the logs in $SPLSYSTEMLOGS directory to ensure that the environment was started successfully.
3. If the startup failed, identify the problem by reviewing the log files. Resolve any issues before attempting to restart the environment.
4. Once the application is up and running (can be viewed from logs file) then try to access the application via below URL

   http://<host name>:<port name>/<WebContext>

Appendix A

Common Maintenance Activities

This appendix lists frequently-used commands that you use to perform common maintenance activities, such as starting and stopping the environment and thread pool worker, modifying the configuration items.

Run the following commands to perform these common tasks:

To Initialize the Environment

1. Go the directory <install_dir>/bin.
2. Run the following command:

   UNIX:
   ```
   ./splenviron.sh -e <Env_Name>
   ```

   Windows:
   ```
   splenviron.cmd -e <Env_Name>
   ```

To Start the WebLogic Server

1. Initialize the environment.
2. Run the following command:

   UNIX:
   ```
   ./spl.sh start
   ```

   Windows:
   ```
   spl.cmd start
   ```

To Stop the Batch Server

1. To Stop the BatchScheduler:

   UNIX:
   ```
   cd $SPLEBASE/bin
   batchscheduler.sh stop
   ```

   Windows:
   ```
   cd %SPLEBASE%\bin
   batchscheduler.cmd stop
   ```

To Start the Batch Scheduler

1. Run the following command:

   UNIX:
   ```
   cd $SPLEBASE/bin
   ```

```
nohup batchscheduler.sh NodeID > /tmp/batchscheduler.log 2>&1 &
```

Windows:

```
cd %SPLEBASE%\bin
batchscheduler.cmd  NODEID
```

Note: The application domain node ID must be unique value across the environment.This value is used for a scheduler running from Threadpoolworker.

To Stop the Batch Scheduler

1. To stop the batch scheduler

   UNIX:

   ```
   cd $SPLEBASE/bin

   batchscheduler.sh stop
   ```

   Windows:

   ```
   cd %SPLEBASE%\bin

   batchscheduler.cmd stop
   ```

To Check Whether the BatchScheduler is running:

1. To check whether the batch scheduler is running

   UNIX:

   ```
   cd $SPLEBASE/bin
   batchscheduler.sh check
   ```

   Windows:

   ```
   cd %SPLEBASE%\bin
   batchscheduler.cmd check
   ```

To Modify the Configuration Values

1. Initialize the environment.
2. Run the following command:

   UNIX:

   ```
   ConfigureEnv.sh
   ```

   Windows:

   ```
   configureEnv.cmd
   ```

   The configuration utility launches menu items. Select any Menu option.
3. Change the menu values.
4. After you change the menu values, press P to write the changes to the configuration file.
5. To apply the changes to the environment, run the initial setup script:

   ```
   InitialSetup.sh,
   ```

To Modify the Advanced Menu Option Values

1. Initialize the environment.

   The configuration utility launches menu items.

2. Run the following command:

   UNIX:
   ```
   ConfigureEnv.sh -a
   ```

   Windows:
   ```
   configureEnv.cmd -a
   ```

3. Select any menu option.
4. Change the menu values.
5. To apply the changes to the environment, run initial setup script:

   ```
   InitialSetup.sh
   ```

Appendix B

Application Framework Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Real-Time Scheduler. The patches listed below are available as a convenience rollup, ORS-v2.1.0.6-FW-PREREQ-Multiplatform.zip, which is included in the downloaded Media Pack. Please refer to the instructions contained inside the rollup directory for steps to install the patches.

13924693	14000864	14222314	16065760	16068452
16186979	16192379	16192480	16217203	16286921
16343972	16344889	16356298	16474468	16489896
16511614	16522849	16537956	16546925	16619506
16620519	16622418	16659406	16672921	16681080
16694110	16792321	16806914	16849565	16859812
16889187	16919009	16934534	16974331	17027605
17066121	17068480	17086479	17160530	17180419
17254746	17343322	17421748	17441879	17456202
17489467	17535618	17557027	17570792	17597770
17606887	17754366	17821521	18078181	18092813
18220238	18378021	18380154		

Appendix C

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4. castor-1.3.1-xml-schema.jar
5. cglib-2.2.jar
6. classycle.1.1.jar
7. commons-beanutils-core-1.8.1.jar
8. commons-cli-1.1.jar
9. commons-codec-1.4.jar
10. commons-collections-3.1.jar
11. commons-fileupload-1.2.1.jar
12. commons-httpclient-3.0.1.jar
13. commons-io-1.3.2.jar
14. commons-lang-2.2.jar
15. ehcache-1.2.3.jar
16. log4j-1.2.15.jar
17. qdox.1.6.1.jar
18. serializer-2.7.1.jar
19. stax2.jar
20. velocity.1.4.jar
21. wstx-asl-3.2.1.jar
22. xalan-mod-2.7.1.jar
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Notice concerning usage of Mime-Lite Perl Module

This is MIME::Lite 3.01 Maintenance release

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