

# **Oracle Real-Time Scheduler**

Installation Guide

Release 2.2.0.0

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Oracle Real-Time Scheduler Installation Guide Release 2.2.0.0

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# Preface

This guide describes how to install Oracle Real-Time Scheduler.

This preface contains these topics:

- [Audience](#)
- [Related Documents](#)
- [Conventions](#)

## Audience

The Oracle Real-Time Scheduler Installation Guide is intended for system administrators installing Oracle Real-Time Scheduler.

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:

### Installation, Configuration and Release Notes

- *Oracle Real-Time Scheduler Release Notes*
- *Oracle Real-Time Scheduler Quick Install Guide*
- *Oracle Real-Time Scheduler Installation Guide*
- *Oracle Real-Time Scheduler DBA Guide*
- *Oracle Real-Time Scheduler Configuration Guide*

### User Guides

- *Oracle Real-Time Scheduler User's Guide*
- *Oracle Real-Time Scheduler Mobile Application User's Guide*

### Map Editor Installation and User Guides

- *Oracle Real-Time Scheduler Map Editor User's Guide*
- *Oracle Real-Time Scheduler Map Editor Installation Guide*

### Framework Guides

- *Oracle Utilities Application Framework V4.2.0.1 Business Process Guide*
- *Oracle Utilities Application Framework V4.2.0.1 Administration Guide*

### Supplemental Documents

- *Oracle Real-Time Scheduler Server Administration Guide*
- *Oracle Real-Time Scheduler Batch Server Administration Guide*
- *Oracle Real-Time Scheduler Security Guide*

## Conventions

The following text conventions are used in this document:

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

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

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# Chapter 1

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## Overview

This chapter provides an overview of the installation of Oracle Real-Time Scheduler. This chapter includes information on the following:

- [Installation Overview](#)
- [Installation Types](#)
- [Media Pack Components](#)

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# Installation Overview

Installing Oracle Real-Time Scheduler involves the following steps:

1. Review the different tiers of the application architecture as described in chapter [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 [Supported Platforms and Hardware Requirements](#).

Note: The installation and administration of the database server tier is described in detail in the document Oracle Real-Time Scheduler *Database Administrator's Guide*.

3. Plan your installation and install all required third-party software as described in chapter [Planning the Installation](#). The required software is listed for each supported combination of operating system and application server.
4. Install the database as described in the document Oracle Real-Time Scheduler *Database Administrator's Guide*.
5. Determine the type of installation and follow the instructions in the chapter corresponding to that type of installation.
6. Install the Mobile Client for Oracle Real-Time Scheduler on mobile devices as described in chapter [Installing the Mobile Client](#).
7. Follow the post-installation guidelines described in chapter [Additional Tasks](#).

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## Installation Types

The first step in the installation procedure is to determine the installation type that meets your business requirements. The following are the possible installation types:

**Initial Installation** - a base installation, typically used for a production environment

**Upgrade Installation**- an upgrade installation from version 2.1.0.5 to version 2.2.0.0

**Demo Installation** - a base installation with pre-populated demo data, typically used for demonstration or training purposes

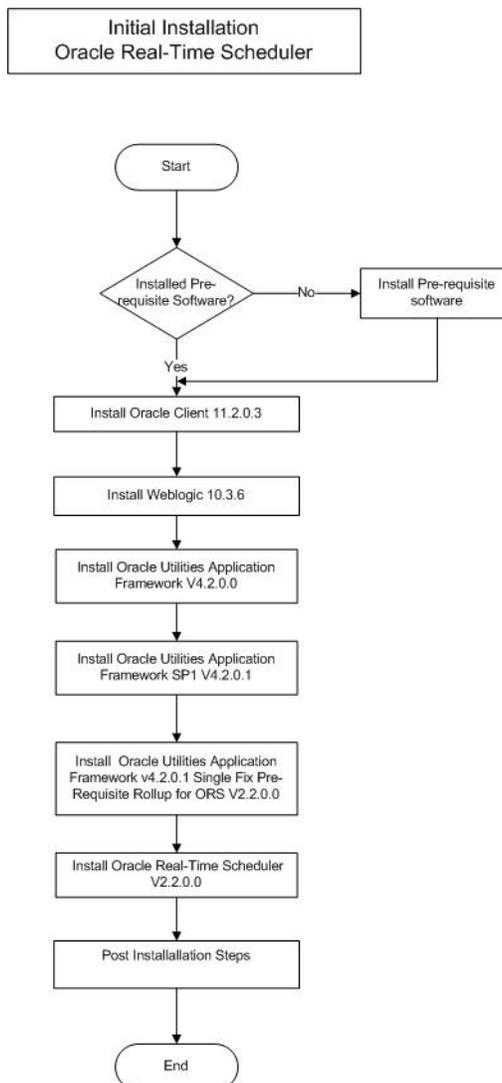
The following sections describe these installation types in detail.

### Initial Installation

This installation type is applicable when installing Oracle Real-Time Scheduler for the first time or from scratch. For an initial install, you must install all of the following components:

- Database components  
Refer to the “Initial Install” section of the Oracle Real-Time Scheduler *Database Administrator’s Guide* for more information.
- Application components
  - Oracle Utilities Application Framework application v4.2.0.0
  - Oracle Utilities Application Framework v4.2.0.0 Service Pack 1 (also referred to as v4.2.0.1)
  - Oracle Utilities Application Framework v4.2.0.1 Single Fix Pre-Requisite Rollup for ORS v2.2.0.0
  - Oracle Real-Time Scheduler v2.2.0.0

The following diagram shows a typical workflow of the initial installation process.



Refer to chapter [Installing Oracle Real-Time Scheduler - Initial Installation](#) for the detailed steps involved in installing each of these components.

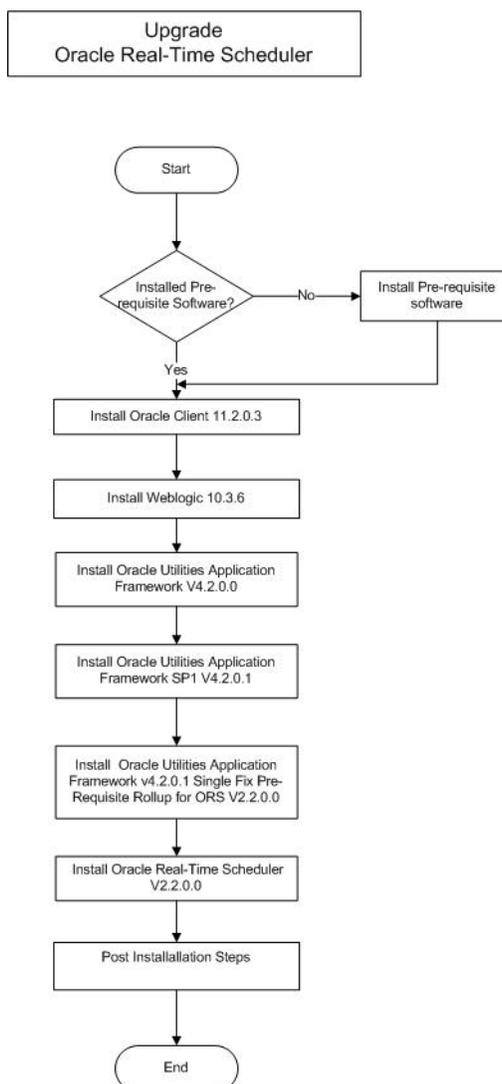
### Upgrade Installation

This installation type is applicable when upgrading Oracle Real-Time Scheduler from version v2.1.0.5 to v2.2.0.0. For an upgrade install, you must upgrade all of the following components:

- Database components  
Refer to the “Upgrade Install” section of the Oracle Real-Time Scheduler *Database Administrator’s Guide* for more information.
- Application components
  - Oracle Utilities Application Framework application v4.2.0.0
  - Oracle Utilities Application Framework v4.2.0.0 Service Pack 1 (also referred to as v4.2.0.1)
  - Oracle Utilities Application Framework v4.2.0.1 Single Fix Pre-Requirement Rollup for ORS v2.2.0.0

- Oracle Real-Time Scheduler v2.2.0.0

The following diagram shows a typical workflow of the upgrade installation process.



Refer to chapter [Upgrading Oracle Real-Time Scheduler](#) for the steps involved in upgrading each of the above components.

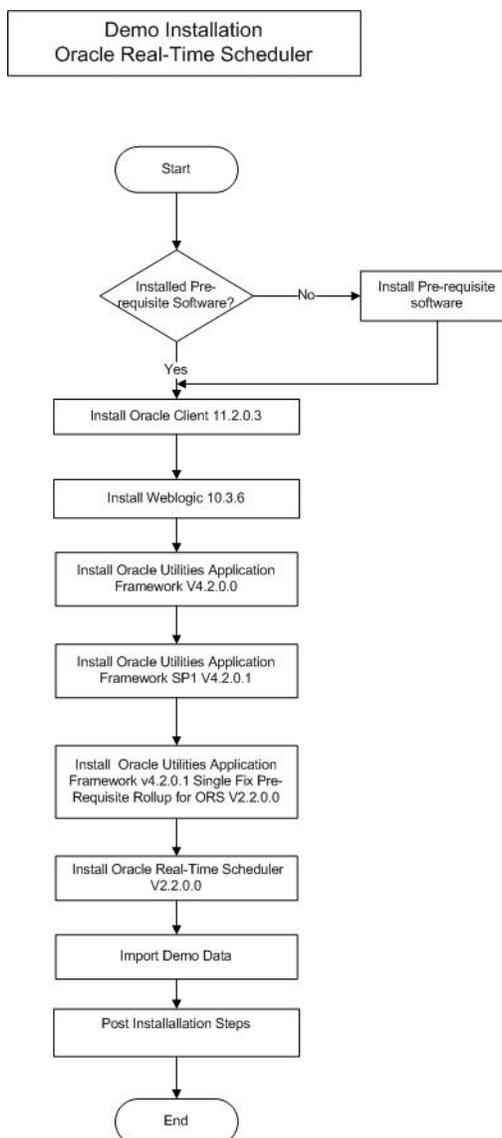
### Demo Installation

This installation type is applicable when installing a demo application of Oracle Real-Time Scheduler for demonstration or training purposes. For a demo install, you must install all of the following components:

- Database components  
Refer to the “Demo Install” section of the Oracle Real-Time Scheduler *Database Administrator’s Guide* for more information.
- Application components
  - Oracle Utilities Application Framework application v4.2.0.0
  - Oracle Utilities Application Framework v4.2.0.0 Service Pack1 (also referred to as v4.2.0.1)

- Oracle Utilities Application Framework v4.2.0.1 Single Fix Pre-Requisite Rollup for ORS v2.2.0.0
- Oracle Real-Time Scheduler v2.2.0.0

The following diagram shows a typical workflow of the demo installation process.



Refer to chapter [Installing Oracle Real-Time Scheduler - Demo Installation](#) for the steps involved in installing each of the above components.

## Recommendations for Creating a Production Environment

Oracle recommends that a production environment is created by using the Initial Installation installation type as described above.

If there is any custom configuration that needs to be migrated from a development or “gold” environment into production, it can be done by using Configuration Migration Assistant (CMA). Please refer to Appendix D: Configuration Migration Assistant in Oracle Real-Time Scheduler Configuration Guide document for more details about CMA.

Oracle does NOT recommend creation of a production environment either by using a Demo Installation Type or by cloning an existing Demo installation.

# Media Pack Components

## Documentation Packages

- Oracle Real-Time Scheduler V2.2.0.0 Release Notes
- Oracle Real-Time Scheduler V2.2.0.0 Quick Install Guide
- Oracle Real-Time Scheduler V2.2.0.0 Install Documentation
- Oracle Real-Time Scheduler V2.2.0.0 User Documentation
- Oracle Real-Time Scheduler V2.2.0.0 Supplemental Documentation

## Installation Packages

- Oracle Utilities Application Framework V4.2.0.0 Multiplatform
- Oracle Utilities Application Framework Service Pack1 V4.2.0.1
- Oracle Utilities Application Framework V4.2.0.1 Single Fix Prerequisite Rollup for Oracle Real-Time Scheduler V2.2.0.0
- Oracle Real-Time Scheduler V2.2.0.0 Multiplatform
- Mobile Communication Client V2.2.0.0 for Windows
- Mobile Communication Client V2.2.0.0 for Windows Mobile
- Mobile Communication Client V2.2.0.0 for Android
- Oracle Real-Time Scheduler V2.2.0.0 Oracle Database
- Oracle Real-Time Scheduler V2.2.0.0 MapEditor

# Chapter 2

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## Application Architecture Overview

This section provides an overview of the Oracle Real-Time Scheduler application architecture.

### Application Architecture

The Oracle Real-Time Scheduler application is deployed on multiple tiers.

Please see the *Oracle Real-Time Scheduler 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 Real-Time Scheduler application. Note also that a desktop machine running Microsoft Windows and the Oracle client is required to perform some of the product 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 Real-Time Scheduler.

#### 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 Real-Time Scheduler 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 Real-Time Scheduler 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

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## Supported Platforms and Hardware Requirements

This chapter includes:

- [Software and Hardware Considerations](#)
- [Operating Systems and Application Servers](#)
- [Hardware Requirements](#)
- [Application Server Memory Requirements](#)
- [Additional Notes on Supported Platforms](#)
- [Support for Software Patches and Upgrades](#)

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## 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 would Oracle Real-Time Scheduler be deployed?
  - On which web server product would Oracle Real-Time Scheduler be deployed?
  - On which database product would Oracle Real-Time Scheduler be deployed?
  - Do you plan to deploy multiple Oracle Real-Time Scheduler instances on the same physical server?
  - How do you plan to deploy Oracle Real-Time Scheduler?
    - 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 Real-Time Scheduler 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 Real-Time Scheduler 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 Real-Time Scheduler, as described in the rest of this chapter.

## Operating Systems and Application Servers

### Supported Operating Systems and Application Servers

The following tables list the operating system and application server combinations on which this version of Oracle Real-Time Scheduler is supported.

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database
	AIX 7.1 TL00 (64-bit)	POWER 64-bit	WebLogic 10.3.5+	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3
	Oracle Linux 5.8, 6.2 or 6.4 (64-bit)	x86_64	WebLogic 10.3.5+	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3
Windows 7* (IE 8.x)	(based on Red Hat Enterprise Linux 5.8, 6.2 or 6.4 (64-bit)			
	Sun Solaris 10 (64-bit) Sun Solaris 11 (64-bit)	SPARC	WebLogic 10.3.5+	Oracle 11.2.0.1, 11.2.0.2, 11.2.0.3
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.5+	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 Real-Time Scheduler** is supported on the versions of Oracle Linux specified. Because Oracle Linux is 100% userspace-compatible with Red Hat Enterprise Linux, **Oracle Real-Time Scheduler** also is supported on Red Hat Enterprise Linux for this release.

## 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 17

### Mobile Client: Software and Hardware Requirements

The following operating systems are supported by the mobile client.

- Windows 7, 8.1 (64-bit)
  - The following is the recommended hardware configuration for Windows 7, 8.1 (64-bit):

Configuration	Processor	Memory (RAM)
Recommended	Intel Core i5-2557M ULV processor	2048 MB

- Windows Mobile 6.5 Professional
- Windows Embedded Handheld 6.5 Professional
  - The following is the minimum recommended hardware configuration for Windows Mobile 6.5 Professional and Windows Embedded Handheld 6.5 Professional:

Configuration	Processor	Memory (RAM)
Minimum	XScale™ PXA270	256 MB
Recommended	624MHz processor	

- Android 2.3
  - The following is the minimum recommended hardware configuration for Android devices:

Configuration	Processor	Memory (RAM)
Minimum	1 GHz Snapdragon	512 MB
Recommended		

- Android 4.1, 4.2
  - The following is the minimum recommended hardware configuration for Android devices:

Configuration	Processor	Memory (RAM)
Minimum	Quad-core 1.6 GHz	2048 MB
Recommended	Cortex-A15 & quad-core 1.2 GHz Cortex-A7	

**Note:** This release has been tested on a Motorola MC75A device running Windows Mobile 6.5 Embedded Handheld, a Panasonic Tough Book running Windows 7 (32-bit), and a Samsung Galaxy S3 and Samsung Galaxy S4 running on Android 4.2.

### Connected MCP: Browser Platforms

These are the browser platforms supported by the connected MCP feature.

1. iOS 7.0 - Safari on iPad
2. Chrome version 32+ on Windows 7

3. Firefox version ESR17+ on Windows 7
4. Internet Explorer 8/9 on Windows 7
5. Chrome Browser on Android 4.0+
6. Chrome Browser v32+ on Android 4.2/4.3
7. Default browser on Android 4.2/4.3
8. IE Mobile 6 on Windows Mobile 6.5 Embedded Handheld

### Web/Business Application Server: Software and Hardware Requirements

Please consult the “Additional Notes on Supported Platforms” on page 6 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.

## Application Server 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
\$SPLBASE	10 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	4 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	3 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	5 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.

## Additional Notes on Supported Platforms

### Oracle Database Servers

This version is supported with Oracle Database Server 11.2.0.3 on all of the supported operating systems listed above.

The Oracle 11.2.0.3 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

### Oracle VM Support

This version of Oracle Real-Time Scheduler is supported on Oracle VM Server for x86 for supported releases of Oracle Linux and Microsoft Windows operating systems.

**Oracle Support Policy on VMWare** - Refer to My Oracle Support knowledge base article 249212.1 for Oracle's support policy on VMWare.

### Application Dependencies for Oracle Business Intelligence for Utilities

When using Oracle Real-Time Scheduler v2.2.0.0 with Oracle Business Intelligence for Utilities, you must upgrade to Oracle Utilities Advanced Spatial and Operational Analytics v2.4.0 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, v2.4.0 Service Pack 4 available on the Oracle Technology Network.

Please note that in release v2.5.0.0, the product name for “Oracle Utilities Advanced Spatial and Operational Analytics” is changed 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 4.1.0. This version should not be upgraded.

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



# Chapter 4

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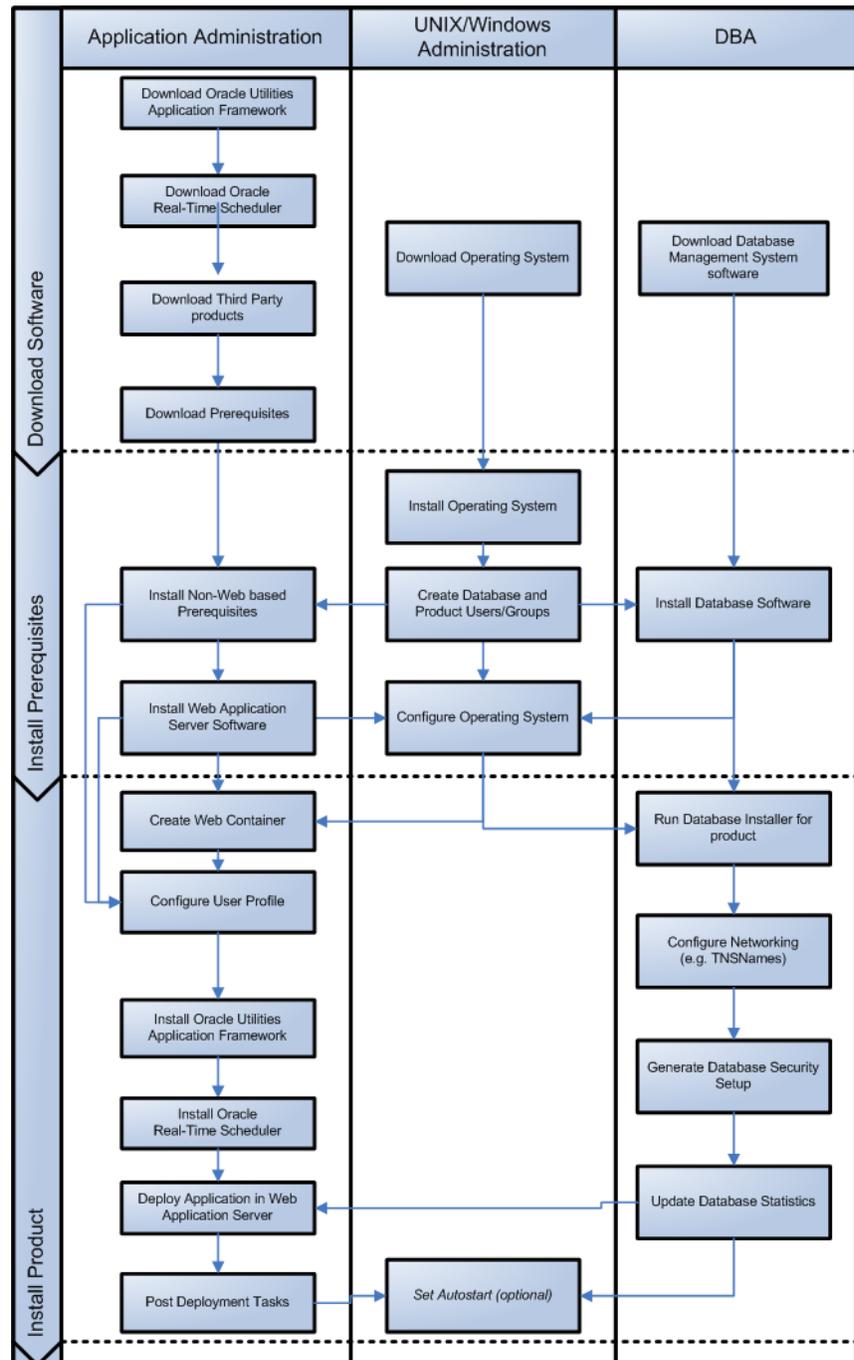
## Planning the Installation

This chapter provides information for planning an Oracle Real-Time Scheduler installation, including:

- [Installation and Configuration Overview](#)
- [Installing Prerequisite Third-Party Software](#)
- [Installation Readiness Checklist](#)

## Installation and Configuration Overview

The following diagram provides an overview of the steps that need to be taken to install and configure Oracle Real-Time Scheduler :



## Installing Prerequisite Third-Party Software

This section describes the software that needs to be installed for each of the supported operating system and application server combinations. It contains the following sub-sections:

- [AIX 7.1 Operating System](#)
- [Oracle Linux 6.4 or Red Hat Linux 6.4 Operating System](#)

- [Solaris 10/11 Operating System](#)
- [Windows 2008 Operating System](#)

## AIX 7.1 Operating System

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) TL00	POWER 64-bit	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

### Web/Application Server Tier

#### AIX 7.1 TL00 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 Values
Oracle Real-Time Scheduler Administrator User ID	cissys	
Oracle Real-Time Scheduler 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 desired hard/soft limit of the file handler 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 exist 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 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 11.2.0.3 — 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 SR15 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 4.1.0.FINAL

You must install Hibernate before installing Oracle Real-Time Scheduler.

Follow the steps below to install Hibernate:

1. Create a Hibernate jar external depot:

```
export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>
```

2. Download the hibernate-release-4.1.0.Final.zip file from <http://sourceforge.net/projects/hibernate/files/hibernate4/>

3. Click the "4.1.0.Final" link to download the zip file.

4. Extract the contents of the archive file:

```
jar xvf hibernate-release-4.1.0.Final.zip
```

**Note:** You must have Java JDK installed on the machine to use the jar command. Make sure you install the JDK supported for your platform.

5. Copy the jar files to your Hibernate jar directory (\$HIBERNATE\_JAR\_DIR) using the following commands:

```
cp hibernate-release-4.1.0.Final/lib/optional/ehcache/ehcache-core-2.4.3.jar
$HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/optional/ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
```

## 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)

---

### **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:** Please make sure you only use the version of Oracle ADF certified with Weblogic server.

Note: Oracle recommends that you install Oracle Application Developer Framework (ADF) instead of Oracle JDeveloper.

### **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>

### **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/mapviewer/downloads/index.html>

### **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>

# Oracle Linux 6.4 or Red Hat Linux 6.4 Operating System

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 6.4 (64-bit) Red Hat Enterprise Linux 6.4(64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

## Web/Application Server Tier

### Oracle Linux 6.4 or Red Hat Enterprise Linux 6.4 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 Values
<Product Name> Administrator User ID	cissys	
<Product Name> 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.

Set the desired hard/soft limit of the file handler 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 exist 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 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 11.2.0.3 — 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 65, 64-bit

At the time of release, the latest patch of the Oracle Java 6.0 package can be obtained from:

<https://support.oracle.com>

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 4.1.0.FINAL

You must install Hibernate before installing <Product Name>.

Follow the steps below to install Hibernate:

1. Create a Hibernate jar external depot:

```
export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>
```

2. Download the `hibernate-release-4.1.0.Final.zip` file from <http://sourceforge.net/projects/hibernate/files/hibernate4/>

3. Click the “4.1.0.Final” link to download the zip file.

4. Extract the contents of the archive file:

```
jar xvf hibernate-release-4.1.0.Final.zip
```

**Note:** You must have Java JDK installed on the machine to use the `jar` command. Make sure you install the JDK supported for your platform.

5. Copy the jar files to your Hibernate jar directory (`$HIBERNATE_JAR_DIR`) using the following commands:

```
cp hibernate-release-4.1.0.Final/lib/optional/ehcache/ehcache-core-2.4.3.jar
$HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/optional/ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
```

## 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)

### **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:** Please make sure you only use the version of Oracle ADF certified with Weblogic server.

Note: Oracle recommends that you install Oracle Application Developer Framework (ADF) instead of Oracle JDeveloper.

### **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>

### **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/mapviewer/downloads/index.html>

### **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>

# Solaris 10/11 Operating System

This section describes the software requirements for operating the application using the Sun Solaris 11 application server.

## Supported Application Servers

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

## Web/Application Server Tier

### Solaris 10/11 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 Values
<Product Name> Administrator User ID	cissys	
<Product Name> 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 desired hard/soft limit of the file handler 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 exist 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 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 11.2.0.3 — 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 65, 64-bit

This software is only required for Oracle WebLogic installations.

At the time of release, the latest patch of the Oracle Java 6.0 package can be obtained from:

<https://support.oracle.com>

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 4.1.0.FINAL

You must install Hibernate before installing <Product Name>.

Follow the steps below to install Hibernate:

1. Create a Hibernate jar external depot:

```
export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>
```

2. Download the `hibernate-release-4.1.0.Final.zip` file from <http://sourceforge.net/projects/hibernate/files/hibernate4/>

3. Click the “4.1.0.Final” link to download the zip file.

4. Extract the contents of the archive file:

```
jar xvf hibernate-release-4.1.0.Final.zip
```

**Note:** You must have Java JDK installed on the machine to use the `jar` command. Make sure you install the JDK supported for your platform.

5. Copy the jar files to your Hibernate jar directory (`$HIBERNATE_JAR_DIR`) using the following commands:

```
cp hibernate-release-4.1.0.Final/lib/optional/ehcache/ehcache-core-2.4.3.jar
$HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/optional/ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR
```

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
```

## 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)

### **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:** Please make sure you only use the version of Oracle ADF certified with Weblogic server.

Note: Oracle recommends that you install Oracle Application Developer Framework (ADF) instead of Oracle JDeveloper.

### **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>

### **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/mapviewer/downloads/index.html>

### **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>

# Windows 2008 Operating System

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 11.2.0.3 — 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 65, 64-bit

This software is only required for Oracle WebLogic installations.

At the time of release, the latest patch of the Oracle Java 6.0 package can be obtained from:

<https://support.oracle.com>

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 4.1.0FINAL

You must install Hibernate before installing <Product Name>.

Follow the steps below to install Hibernate:

1. Create a Hibernate jar external depot:
 

```
set HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>
```
2. Download the hibernate-release-4.1.0.Final.zip file from <http://sourceforge.net/projects/hibernate/files/hibernate4/>

3. Click the "4.1.0.Final" link to download the zip file.

4. Extract the contents of the archive file:

```
jar xvf hibernate-release-4.1.0.Final.zip
```

**Note:** You must have Java JDK installed on the machine to use the jar command. Make sure you install the JDK supported for your platform.

5. Copy the jar files to your Hibernate jar directory (%HIBERNATE\_JAR\_DIR%) using the following commands:

```
copy hibernate-release-4.1.0.Final/lib/optional/ehcache/ehcache-core-2.4.3.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/optional/ehcache/hibernate-ehcache-4.1.0.Final.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/required/hibernate-commons-annotations-4.0.1.Final.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/required/hibernate-core-4.1.0.Final.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/required/hibernate-jpa-2.0-api-1.0.1.Final.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/required/javassist-3.15.0-GA.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.1.0.CR2.jar %HIBERNATE_JAR_DIR%
```

```
copy hibernate-release-4.1.0.Final/lib/required/jboss-transaction-api_1.1_spec-1.0.0.Final.jar %HIBERNATE_JAR_DIR%
```

### 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)

### 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:** Please make sure you only use the version of Oracle ADF certified with Weblogic server.

Note: Oracle recommends that you install Oracle Application Developer Framework (ADF) instead of Oracle JDeveloper.

### 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>

### 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/mapviewer/downloads/index.html>

**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>

---

# Installation Readiness 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 “Installing Prerequisite Third-Party Software” on page 2 for more information).
  - Oracle Client 11.2.0.3 (for connecting to Oracle database)
  - Java 1.6.0.65
  - Hibernate 4.1.0FINAL
  - Geocoding and Map related data - Currently, Oracle Real-Time Scheduler only supports Navteq as the provider of maps and location data. For instructions on installing geocoding and map related data, please contact your specific Navteq vendor. The disk space required for installation is around 60 GB.
  - Oracle BPEL Process Manager 11g (optional)
3. Install application server.
  - Oracle WebLogic 11gR1 (10.3.6)
4. Install Oracle Application Development Framework (ADF) 11g (11.1.1.6.0) or Oracle JDeveloper 11g (11.1.1.5.0+). Ensure the version of Oracle ADF is compatible with the version of Weblogic installed.

**Note:** You can choose to install either Oracle Application Developer Framework (ADF) or Oracle JDeveloper. However, Oracle recommends that you install ADF instead of Oracle JDeveloper.
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. Deploy the Oracle Real-Time Scheduler application.
11. Perform Post installation tasks.

# Chapter 5

---

## Installing Oracle Real-Time Scheduler - Initial Installation

This chapter provides instructions for installing Oracle Real-Time Scheduler from scratch.

**Note:** The software components that are required for an initial installation are available for download from the Oracle Software Delivery Cloud.

This chapter includes information on the following:

- [Before You Install](#)
- [Initial Installation Procedure](#)
- [After the Installation](#)
- [Operating the Application](#)
- [Installing Service Packs and Patches](#)

## Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Real-Time Scheduler.

## Initial Installation Procedure

The initial installation procedure consists of:

- [Database Component Installation](#)
- [Application Components Installation](#)

## Database Component Installation

Installation of the database component of Oracle Real-Time Scheduler must be complete before you can proceed with the following sections. Refer to the section “**Initial Install**” of the Oracle Real-Time Scheduler *Database Administrator's Guide*, which provides instructions on installing the database component.

## Application Components Installation

A successful installation consists of the following steps:

- [Installing the Oracle Utilities Application Framework Application Component v4.2.0.0](#)
- [Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 1](#)
- [Installing Oracle Utilities Application Framework v4.2.0.1 Single Fix PreRequisite Rollup for ORS V2.2.0.0](#)
- [Installing the Oracle Real-Time Scheduler v2.2.0.0](#)

### Installing the Oracle Utilities Application Framework Application Component v4.2.0.0

This section describes how to install the application component of Oracle Utilities Application Framework, including:

- [Copying and Decompressing Install Media](#)
- [Setting Permissions for the cistab file in UNIX](#)
- [Installing the Application Component](#)

#### 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 Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.2.0.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

**Note:** 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.

4. Copy the file FW-V4.2.0.0.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:
 

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.0.0-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.V4.2.0.0.0" is created. It contains the installation software for the Oracle Utilities framework application server.

### Setting 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.V4.2.0.0.0 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 the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Change directory to the <TEMPDIR>/FW.V4.2.0.0.0 directory.
3. 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:${PERL_HOME}/lib/site_perl:<OUAF
  Installer Decompressed location/data/bin/perl5lib>
export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
  Installer Decompressed location/data/bin/perl5lib>
```

```
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%
```

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

**UNIX:**

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

**Windows:**

```
install.cmd
```

5. The Oracle Utilities Application Framework specific menu appears.
6. Follow the messages and instructions that are produced by the application installation utility.
7. Select each menu item to configure the values. For detailed description of the values, refer to Appendix [Application Framework Installation and Configuration Worksheets](#).
8. Below are the mandatory list 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.

```
*****
* Environment Installation Options *
*****
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:
   Web Application Server Home Directory: <Mandatory>
   ADF Home Directory:
   OIM OAM Enabled Environment:

50. Environment Installation Options
    Environment Mount Point: <Mandatory> - Install Location
    Log Files Mount Point: <Mandatory> - ThreadPoolWorker Logs
                                   Location
    Environment Name: <Mandatory>
    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):

9. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu.

```
*****
* 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):

10. 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.

11. 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. You can now install Oracle Utilities Application Framework v4.2.0.0 Service Pack1 as described in the following section

## Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 1

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

- [Copying and Decompressing Install Media](#)
- [Preparing for the Installation](#)
- [Installing the Service Pack](#)

### 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-V4.2.0.1.0-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-V4.2.0.1.0-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 FW.V4.2.0.1.0 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/splenvirom.sh -e $SPLENVIRON
```

#### Windows:

```
%SPLEBASE%\bin\splenvirom.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.V4.2.0.1.0 directory.
2. Execute the script:

**UNIX:**

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

**Windows:**

```
installSP.cmd
```

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

**Installing Oracle Utilities Application Framework v4.2.0.1 Single Fix PreRequisite Rollup for ORS V2.2.0.0**

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-v2.2.0.0.0-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. Upon extracting the zip file 'Application-Server-Multiplatform' sub-directory will be created.
4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' to install Application related FW patch.

**Installing the Oracle Real-Time Scheduler v2.2.0.0**

This section describes how to install the application component of Oracle Real-Time Scheduler, including:

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 V2.2.0.0.0 Multiplatform.zip' and copy the file ORS-V2.2.0.0.0-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-V2.2.0.0.0-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.V2.2.0.0.0 is created.

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

**UNIX:**

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

**Windows:**

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

5. Stop the application server instance if running.
6. Change to the <TEMPDIR>/ORS.V2.2.0.0.0 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
```

The Oracle Real-Time Scheduler Application specific menu opens.

8. Select the following menu items and enter mandatory fields.  
Refer to the [Oracle Real-Time Scheduler Installation and Configuration Worksheets](#) for more information.

8. JMS Configuration

```
Context Factory: <Mandatory> Weblogic
WebLogic Server URL: <Mandatory> Weblogic
Weblogic System User ID: <Mandatory> Weblogic
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>
Allow Self Signed SSL Certificates: <Mandatory>
```

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

**UNIX:**

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

**Windows:**

```
cd %SPLEBASE%\runtime
```

```
ORS_postinstall.cmd
```

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

Once the install has finished successfully, execute post installation steps as described in the following section, [Performing Post-Installation Tasks](#).

## Performing Post-Installation Tasks

### Run the post-install script

1. Change directory.  
`cd <install_dir>/bin`

where <install\_dir> is the location where the Oracle Real-Time Scheduler application component is installed.

2. Initialize the environment by running the appropriate command:

#### UNIX:

```
./splenviron.sh -e <ENV NAME>
```

#### Windows:

```
splenviron.cmd -e <ENV NAME>
```

3. Change to the <TEMPDIR>/MWM-V2.2.0.0.0

Run the post-installation script:

#### UNIX:

```
$cd $SPLEBASE/runtime
$ksh ./cdfDeploy.sh
```

Note: 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:\> cdfDeploy.cmd
```

### Generate the appviewer

1. Generate the appviewer by following the steps below:

#### UNIX:

```
ksh ./genappvieweritems.sh
```

#### Windows:

```
genappvieweritems.cmd
```

## After the Installation

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 Appendix [Installation and Configuration Worksheets](#) for details.
4. Confirm that the database is ready.
5. Generate appviewer.
6. Start the application server. For instructions, refer to Appendix [Common Maintenance Activities](#).
7. To operate the application, refer to the following section.

## Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the Oracle Real-Time Scheduler *Administration Guide* for more information on further configuring and operating the system.

## 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, refer to 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 6

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## Upgrading Oracle Real-Time Scheduler

This chapter provides instructions for upgrading Oracle Real-Time Scheduler from v2.1.0.5 to v2.2.0.0.

**Note:** The software components that are required for an upgrade installation are available for download from the Oracle Software Delivery Cloud.

This chapter includes information on the following:

- [Before You Upgrade](#)
- [Upgrade Installation Procedure](#)
- [After the Installation](#)
- [Operating the Application](#)
- [Installing Service Packs and Patches](#)

## Before You Upgrade

### MCP Version Control Enhancement

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 “Deploying the Application to Mobile Devices,” in the Oracle Real-Time Scheduler *Configuration Guide*.

### Processing Stale RSI messages

RSI messages are messages that are sent from the MCP device to the server. After a system upgrade, due to serialization issues, older RSI messages may not be recoverable. Therefore, RSI messages must be processed before an upgrade.

To process stale RSI messages, follow the procedure below:

1. To check for RSI messages which are in a non-finalized state (stale RSI messages), run the SQL query:

```
select count(*) from m1_srvr_status where status_lookup_flg = 'M1QU'
```
2. If this query returns any records (count > 0), run the RSI Batch Process job (Batch Name: M1-RSIBP).
3. This batch job processes queued RSI messages.
  - If the record executed successfully, the status of the record is changed to Delivered (M1DE).
  - If any application error occurred, the status of the record is changed to Error (M1ER).
4. After completion of batch process, run the following SQL query:

```
select count(*) from m1_srvr_status where status_lookup_flg = 'M1QU'
```

If running this query returns any records (count > 0), those records may not be recoverable.
5. Continue with the system upgrade.

In addition, refer to My Oracle Support for up-to-date additional information on Oracle Real-Time Scheduler.

## Upgrade Installation Procedure

The upgrade procedure consists of:

- [Database Component Upgrade](#)
- [Application Components Upgrade](#)
- [Mobile Client Upgrade](#)

## Database Component Upgrade

Upgrading of the database component of Oracle Real-Time Scheduler must be complete before you can proceed with the following sections. Refer to the section “**Upgrade Install**” of the Oracle Real-Time Scheduler *Database Administrator's Guide*, which provides instructions on installing the database component.

## Application Components Upgrade

A successful upgrade consists of the following steps:

- [Installing the Oracle Utilities Application Framework Application Component v4.2.0.0](#)
- [Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 1](#)
- [Installing Oracle Utilities Application Framework v4.2.0.1 Single Fix PreRequisite Rollup for ORS V2.2.0.0](#)
- [Installing the Oracle Real-Time Scheduler Component v2.2.0.0](#)

### Installing the Oracle Utilities Application Framework Application Component v4.2.0.0

This section describes how to install the application component of Oracle Utilities Application Framework, including:

- [Copying and Decompressing Install Media](#)
- [Setting Permissions for the cistab file in UNIX](#)
- [Installing the Application Component](#)

#### 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 Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.2.0.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

**Note:** 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.

4. Copy the file FW-V4.2.0.0.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.0.0-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.V4.2.0.0.0" is created. It contains the installation software for the Oracle Utilities framework application server.

### Setting 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.V4.2.0.0.0 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 the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Change directory to the <TEMPDIR>/FW.V4.2.0.0.0 directory.
3. 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:${PERL_HOME}/lib/site_perl:<OUAF
    Installer Decompressed location>/data/bin/perl
export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
    Installer Decompressed location>/data/bin/perl
export LD_LIBRARY_PATH=${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%
```

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

#### UNIX:

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

**Windows:**

```
install.cmd
```

5. The Oracle Utilities Application Framework specific menu appears.
6. Follow the messages and instructions that are produced by the application installation utility.
7. Select each menu item to configure the values. For detailed description of the values, refer to Appendix [Installation and Configuration Worksheets](#).
8. Below are the mandatory list 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.

```
*****
* Environment Installation Options *
*****
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:
  Web Application Server Home Directory: <Mandatory>
  ADF Home Directory:
  OIM OAM Enabled Environment:

50. Environment Installation Options
    Environment Mount Point: <Mandatory> - Install Location
    Log Files Mount Point:<Mandatory> - ThreadPoolWorker Logs
                                   Location

    Environment Name:<Mandatory>
    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):

9. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu.

```
*****
* 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):

10. 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.
11. 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. You can now install Oracle Utilities Application Framework v4.2.0 Service Pack1 as described in the following section

## Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 1

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

- [Copying and Decompressing Install Media](#)
- [Preparing for the Installation](#)
- [Installing the Service Pack](#)

### 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-V4.2.0.1.0-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-V4.2.0.1.0-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 FW.V4.2.0.1.0 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:

```
$SPLBASE/bin/splenvron.sh -e $SPLENVIRON
```

#### Windows:

```
%SPLBASE%\bin\splenvron.cmd -e %SPLENVIRON%
```

3. Stop the environment, if running:

#### UNIX:

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

#### Windows:

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

### Installing the Service Pack

Follow these steps to install the service pack:

1. Change to the <TEMPDIR>/FW.V4.2.0.1.0 directory.
2. Execute the script:

**UNIX:**

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

**Windows:**

```
installSP.cmd
```

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

### Installing Oracle Utilities Application Framework v4.2.0.1 Single Fix PreRequisite Rollup for ORS V2.2.0.0

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-v2.2.0.0.0-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.

Upon extracting the zip file 'Application-Server-Multiplatform' sub- directory will be created.
3. Refer to the Readme.txt inside 'Application-Server-Multiplatform' to install Application related FW patch.

### Installing the Oracle Real-Time Scheduler Component v2.2.0.0

This section describes how to install the application component of Oracle Real-Time Scheduler, including:

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 V2.2.0.0.0 Multiplatform.zip' and copy the file ORS-V2.2.0.0.0-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-V2.2.0.0.0-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.V2.2.0.0.0 is created.
4. Initialize the Oracle Real-Time Scheduler environment that you want to install the product into.

**UNIX:**

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

**Windows:**

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

5. Stop the application server instance if running.
6. Change to the <TEMPDIR>/ORS.V2.2.0.0.0 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
```

The applicationspecific menu opens.

8. Select the following menu items and enter mandatory fields.  
Refer to the [Oracle Real-Time Scheduler Installation and Configuration Worksheets](#) for more information.

8. JMS Configuration

```
Context Factory: <Mandatory> Weblogic
WebLogic Server URL: <Mandatory> Weblogic
Weblogic System User ID: <Mandatory> Weblogic
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>
Allow Self Signed SSL Certificates: <Mandatory>
```

9. Choose the options for configuration and enter P to proceed with the installation.
10. 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
```

**Performing Post-Installation Tasks**

1. Run the post install script by following the steps below:
  - a. Change directory.

```
cd <install_dir>/bin
```

where <install\_dir> is the location where the Oracle Real-Time Scheduler application component is installed.

- b. Initialize the environment by running the appropriate command:

**UNIX:**

```
./splenviron.sh -e <ENV NAME>
```

**Windows:**

```
splenviron.cmd -e <ENV NAME>
```

- c. Change to the <TEMPDIR>/MWM-v2.2.0.0.0

- d. Run the post-installation script:

**UNIX:**

```
$cd $SPLEBASE/runtime
$ksh ./cdfDeploy.sh
```

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

```
chmod 755 cdfDeploy.sh
```

**Windows:**

```
C:\> cd %SPLEBASE%\runtime
C:\> cdfDeploy.cmd
```

5. Generate the appviewer by following the steps below:

**UNIX:**

```
ksh ./genappvieweritems.sh
```

**Windows:**

```
genappvieweritems.cmd
```

## Mobile Client Upgrade

**Note:** Oracle Utilities supports a direct upgrade of the mobile client of Oracle Real-Time Scheduler from v2.1.0.5 to v2.2.0.0.

This section consists of:

- [Upgrading the Mobile Client on Windows](#)
- [Upgrading the Mobile Client on Android](#)
- [Registering the Mobile Device](#)

### Upgrading the Mobile Client on Windows

This section consists of:

- [Upgrading the Mobile Client on Windows 7](#)
- [Upgrading the Mobile Client on Windows Mobile](#)

#### Upgrading the Mobile Client on Windows 7

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

**Command-line option**

To upgrade the mobile client on Windows 7, execute the following command:

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

**(OR)**

### GUI Option

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

1. Extract OracleMWM.msi from ORS-V2.2.0.0.0-Mobile-Client-Win.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 Real-Time Scheduler 2.2.0. 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.

### Upgrading the Mobile Client on Windows Mobile

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

#### Silent Update option

To upgrade the mobile client on Windows Mobile using the silent option, execute the **UpdateMCP link** file present inside ORS-V2.2.0.0.0-Mobile-Client-WinMobile.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 upgrade the mobile client on Windows Mobile using the GUI, follow the steps below:

1. Extract OracleMWM.CAB from ORS-V2.2.0.0.0-Mobile-Client-WinMobile.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.

### Upgrading the Mobile Client on Android

To upgrade 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 ORS-V2.2.0.0.0-Mobile-Client-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 Real-Time Scheduler application server before it can start using the application features. Ensure that the Oracle Real-Time Scheduler application is installed and running before registering the mobile device.

Please refer to the Oracle Real-Time Scheduler *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.

## After the Installation

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 Appendix [Installation and Configuration Worksheets](#) for details.
4. Confirm that the database is ready.
5. Generate appviewer.
6. Start the application server. For instructions, refer to Appendix [Common Maintenance Activities](#).
7. To operate the application, refer to the following section.

## Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the Oracle Real-Time Scheduler *Administration Guide* for more information on further configuring and operating the system.

## 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, refer to 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 7

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## Installing Oracle Real-Time Scheduler - Demo Installation

This chapter provides instructions for installing Oracle Real-Time Scheduler for demo purpose.

**Note:** The software components that are required for an demo installation are available for download from the Oracle Software Delivery Cloud.

This chapter includes information on the following:

- [Before You Install](#)
- [Demo Installation Procedure](#)
- [After the Installation](#)
- [Operating the Application](#)
- [Installing Service Packs and Patches](#)

## Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Real-Time Scheduler.

## Demo Installation Procedure

The initial installation procedure consists of:

- [Database Component Installation](#)
- [Application Components Installation](#)

## Database Component Installation

Installation of the database component of Oracle Real-Time Scheduler must be complete before you can proceed with the following sections. Refer to the section “**Demo Install**” of the Oracle Real-Time Scheduler *Database Administrator's Guide*, which provides instructions on installing the database component.

## Application Components Installation

A successful installation consists of the following steps:

- [Installing the Oracle Utilities Application Framework Application Component v4.2.0.0](#)
- [Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 1](#)
- [Installing Oracle Utilities Application Framework v4.2.0.1 Single Fix PreRequisite Rollup for ORS V2.2.0.0](#)
- [Installing the Oracle Real-Time Scheduler Component v2.2.0.0](#)

### Installing the Oracle Utilities Application Framework Application Component v4.2.0.0

This section describes how to install the application component of Oracle Utilities Application Framework, including:

- [Copying and Decompressing Install Media](#)
- [Setting Permissions for the cistab file in UNIX](#)
- [Installing the Application Component](#)

#### 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 Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.2.0.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

**Note:** 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.

4. Copy the file FW-V4.2.0.0.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.0.0-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.V4.2.0.0.0" is created. It contains the installation software for the Oracle Utilities framework application server.

### Setting 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.V4.2.0.0.0 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 the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Change directory to the <TEMPDIR>/FW.V4.2.0.0.0 directory.
3. 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:${PERL_HOME}/lib/site_perl:<OUAF
    Installer Decompressed location>/data/bin/perl5
export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
    Installer Decompressed location>/data/bin/perl5
```

```
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%
```

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

**UNIX:**

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

**Windows:**

```
install.cmd
```

The Oracle Utilities Application Framework specific menu appears.

5. Follow the messages and instructions that are produced by the application installation utility.
6. Select each menu item to configure the values. For detailed description of the values, refer to Appendix [Installation and Configuration Worksheets](#).
7. Below are the mandatory list 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.

```
*****
* Environment Installation Options *
*****
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:
   Web Application Server Home Directory: <Mandatory>
   ADF Home Directory:
   OIM OAM Enabled Environment:

50. Environment Installation Options
    Environment Mount Point: <Mandatory> - Install Location
    Log Files Mount Point:<Mandatory> - ThreadPoolWorker Logs
                                   Location
    Environment Name:<Mandatory>
    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):

8. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu.

```
*****
* 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):

9. 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.

10. 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. You can now install Oracle Utilities Application Framework v4.2.0 Service Pack1 as described in the following section

## Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 1

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

- [Copying and Decompressing Install Media](#)
- [Preparing for the Installation](#)
- [Installing the Service Pack](#)

### 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-V4.2.0.1.0-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-V4.2.0.1.0-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 FW.V4.2.0.1.0 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/splenvron.sh -e $SPLENVIRON
```

#### Windows:

```
%SPLEBASE%\bin\splenvron.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.V4.2.0.1.0 directory.
2. Execute the script:

**UNIX:**

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

**Windows:**

```
installSP.cmd
```

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

### Installing Oracle Utilities Application Framework v4.2.0.1 Single Fix PreRequisite Rollup for ORS V2.2.0.0

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-V2.2.0.0.0-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. Upon extracting the zip file 'Application-Server-Multiplatform' sub- directory will be created.
4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' to install Application related FW patch.

### Installing the Oracle Real-Time Scheduler Component v2.2.0.0

This section describes how to install the application component of Oracle Real-Time Scheduler, including:

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 V2.2.0.0.0 Multiplatform.zip' and copy the file ORS-V2.2.0.0.0-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-V2.2.0.0.0-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.V2.2.0.0.0 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.V2.2.0.0.0 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. The Oracle Real-Time Scheduler Application specific menu opens.
9. Select the following menu items and enter mandatory fields.  
Refer to the [Oracle Real-Time Scheduler Installation and Configuration Worksheets](#) for more information.

8. JMS Configuration

```
Context Factory: <Mandatory> Weblogic
WebLogic Server URL: <Mandatory> Weblogic
Weblogic System User ID: <Mandatory> Weblogic
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>
```

10. Choose the options for configuration and enter P to proceed with the installation.

11. Execute the following command:

**UNIX:**

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

**Windows:**

```
cd %SPLEBASE%\runtime
```

```
ORS_postinstall.cmd
```

**Note:** On UNIX, ensure that you have the proper execute permission on ORS\_postinstall.sh

## After the Installation

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 Appendix [Installation and Configuration Worksheets](#) for details.
4. Confirm that the database is ready.
5. Generate appviewer.
6. Start the application server. For instructions, refer to Appendix [Common Maintenance Activities](#).
7. To operate the application, refer to the following section.

## Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the Oracle Real-Time Scheduler *Administration Guide* for more information on further configuring and operating the system.

## 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, refer to 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 8

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## Installing the Mobile Client

This chapter describes how to install the Mobile Client for Oracle Real-Time Scheduler. It is intended for implementers and system administrators responsible for configuration and initial setup of the mobile application.

This chapter includes:

- [Installing the Mobile Client on Windows](#)
- [Installing the Mobile Client on Android](#)

## Installing the Mobile Client on Windows

This section describes how to install the Oracle Real-Time Scheduler Mobile Client Runtime on Windows Platforms. This section includes:

- [Installing on Windows 7](#)
- [Installing on Windows Mobile](#)
- [Mobile Device Registration](#)
- [Uninstalling the Mobile Client](#)

### Installing on Windows 7

1. Extract OracleMWM.msi from ORS-V2.2.0.0.0-Mobile-Client-Win.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 Real-Time Scheduler 2.2.0 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 ORS-V2.2.0.0.0-Mobile-Client-WinMobile.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 Real-Time Scheduler application server before it can start using the application features. Ensure that the Oracle Real-Time Scheduler application is installed and running before registering the mobile device.

Please refer to the Oracle Real-Time Scheduler *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 7.

#### 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 Real-Time Scheduler 2.2.0 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 Real-Time Scheduler 2.2.0 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 Real-Time Scheduler. 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](#)
- [Uninstalling Android MCP](#)

### 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)

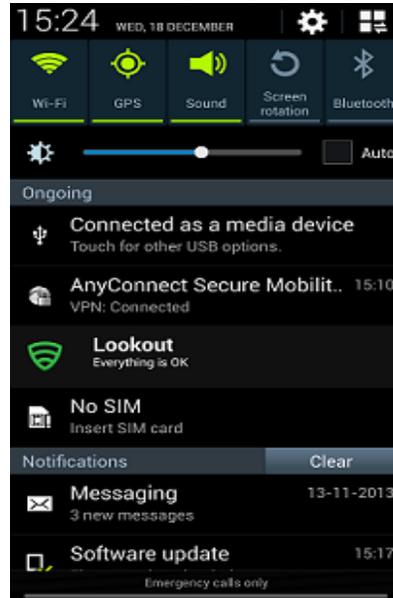
This section describes the SD Card method only.

**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

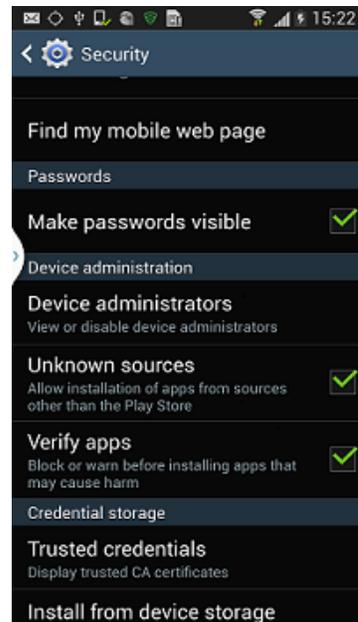
1. Extract OracleMWM.apk from the ORS-V2.2.0.0.0-Mobile-Client-Android.zip file and copy it to a temporary directory.

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

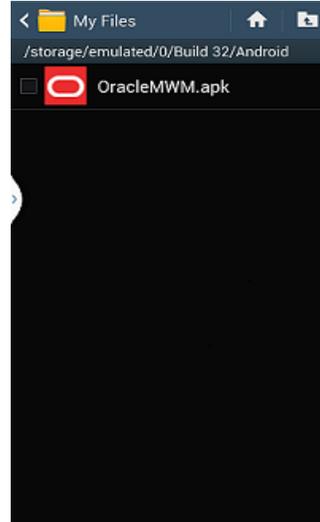


3. Copy the OracleMWM.apk file to the removable disk (select **My Computer** for the drive letter).
4. Disconnect the device from the desktop or laptop, or choose the **Charge only** connection type.
5. Verify that non-Market applications can be installed.

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.



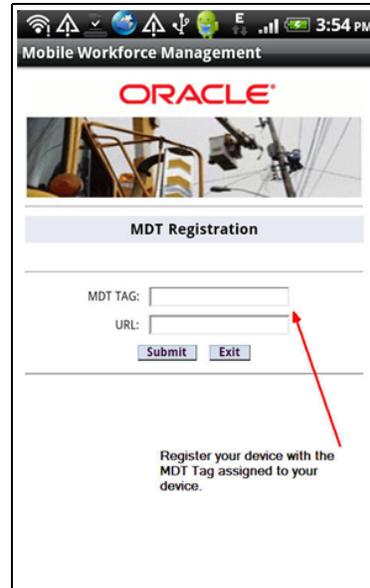
7. Confirm the installation by clicking **Install**.
8. The application will now be installed.
9. After the application is installed, click **Done**.

## 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 9

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## Additional Tasks

This chapter describes tasks that should be completed after installing Oracle Real-Time Scheduler including:

- [Configuring MapViewer](#)
- [Oracle Location Services \(eLocation\)](#)
- [Configuring the Environment for Oracle BPEL Server](#)
- [Configuring the Scheduler](#)
- [Configuring Business Service SDK](#)
- [WebLogic Production Server Considerations](#)
- [Building Javadoc Indexes](#)
- [Configuring the Environment for Batch Processing](#)
- [Customizing Configuration Files](#)
- [Customizing the Logo](#)
- [Generating the Application Viewer](#)
- [Installation Verification Checklist](#)
- [Accessing the Application](#)

## Configuring MapViewer

This section describes how to configure a MapViewer data source.

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>MapView user 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 Real-Time Scheduler. 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 user 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 asks 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 Real-Time Scheduler for sending SMS messages. Oracle Real-Time Scheduler 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 Real-Time Scheduler to interact with Oracle BPEL Server.

Before configuring Oracle Real-Time Scheduler to interact with BPEL Server you must:

- Install Oracle BPEL Server.
- Configure Oracle Real-Time Scheduler with a process that receives phone numbers and messages deployed on the BPEL server.

Oracle Real-Time Scheduler 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:

## Configuring the Scheduler

**Note:** From Oracle Real-Time Scheduler v2.2.0 onwards, the location of these scheduler log files can no longer be configured from the online application. The scheduler log files are now written in the same location as the TPW and the batch files, under `$SPLOUTPUT`.

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

After installing Oracle Real-Time Scheduler V2.2.0.0, please verify that the below step1 and step 2 changes are available. If they are not available, follow the below steps:

1. 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 appendix [Application Framework Installation and Configuration Worksheets](#) for more information.

- Configure trust keystore as WebLogic Additional Stop Argument using menu item 52 Advanced Web Application Configuration. See appendix [Application Framework Installation and Configuration Worksheets](#) for more information.
- Run the initialSetup script.

**UNIX:**

```
$ cd $$PLEBASE/bin
$ ksh ./initialSetup.sh
```

**Windows:**

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

- Run the standalone batch script. For example

**UNIX:**

```
$ cd $$PLEBASE/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 \$\$PLOUTPUT. 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 Real-Time Scheduler *Batch Server Administration Guide* for more details.

**To Enable the Unicast Listener**

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

```
<multicast-listener>
-----
-----
</multicast-listener>
```

- 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 appendix [Application Framework Installation and Configuration Worksheets](#) 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.

## 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 Real-Time Scheduler. 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 appendix [Application Framework Installation and Configuration Worksheets](#) for more information 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 appendix [Application Framework Installation and Configuration Worksheets](#) for more information for more information.
5. Enter the WebLogic Console Port Number for the target server using menu item 52 Advanced Web Application Configuration. See appendix [Application Framework Installation and Configuration Worksheets](#) for more information for more information.
6. Run the initialSetup script:

#### UNIX:

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

**Windows:**

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

7. 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.

## Configuring Business Service SDK

For details about configuring business service SDK, see the *Configuration Guide*.

## 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 Real-Time Scheduler *Batch 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>/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.
  - Login to Weblogic Console.
  - Click on **Deployment** link.
  - Verify that the following application deployments are Active
    - SPLService
    - SPLWeb
    - SPLAdf
    - Mapviewer
7. Verify the Data Source Configuration.
8. Confirm that the map file (mal) exists in the required location.
9. Ensure that ulimit is set (applicable for non-Windows platforms).
10. Ensure that the geocode algorithm is set.
11. 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

---

---

## Installation and Configuration Worksheets

### Application Framework Installation and Configuration Worksheets

#### 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_H OME***	The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client.  Example Location: /oracle/client/product/11.2.0.3	
Web Java Home Directory	JAVA_HOME***	Java home that will be used by the web application server.  Example Location: /ouaf/java/jdk1.6.0_65	

---

Menu Option	Name Used in Documentation	Usage	Customer Install Value
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_65	
COBOL Home Directory	COBDIR	COBOL installation location directory.  Example Location: /opt/SPLcobAS51WP6	
Hibernate JAR Directory	HIBERNATE_JAR_DIR***	Location on the disk where the hibernate410FINAL.jar is installed.	
*ONS JAR Directory	ONS_JAR_DIR	Location on the disk where the ons-11.2.0.3.jar file is installed.  **Required for Oracle RAC installation. See the Server Administration Guide for more information.	
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/11.2.0.3  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 ADF is installed.  Example Location: /ouaf/jdev11_1_1_6	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
OIM OAM Enabled Environment	OPEN_SPML_ENABLED_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 11.2.0.3, 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.

## 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>***	<p>The mount point into which the application is installed. For example: /ouaf for UNIX and C:\ouaf for Windows.</p> <p>This mount point <b>MUST</b> exist and the administrator user ID <b>MUST</b> be able to write to this directory. (This is the user ID that is created specifically to administer the environments; the default is cissys). The installation sets permissions on all subdirectories installed under this directory.</p> <p>See &lt;SPLENVIRON&gt; below for more information on how this mount point is used.</p>	
Log File Mount Point	<SPLDIROUT>***	<p>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.</p> <p>This mount point <b>MUST</b> exist and the administrator user ID <b>MUST</b> be able to write to this directory. (This is the user ID that is created specifically to administer the environments; the default is cissys).</p> <p>For each environment initialized, the application logs will be written to the directory &lt;SPLDIROUT&gt;/&lt;SPLENVIRON&gt;</p> <p>Note: Later in the installation the splenvron.sh (splenvron.cmd) script will set the \$SPLOUTPUT (%SPLOUTPUT%) environment variable to point to &lt;SPLDIROUT&gt;/&lt;SPLENVIRON&gt;</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Name	<SPLENVIRON>***	<p>A descriptive name to be used as both a directory name under the mount point &lt;SPLDIR&gt; and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV.</p> <p>On installation a directory &lt;SPLDIR&gt;/&lt;SPLENVIRON&gt; is created, under which the Oracle Utilities Application Framework and Oracle Real-Time Scheduler software resides.</p> <p>When multiple environments are set up on the machine you will typically have directories such as: /ouaf/DEV01/.... /ouaf/CONV/....</p> <p>Each of these contains a complete version of the Oracle Utilities Application Framework and Oracle Real-Time Scheduler.</p> <p>Note: Later in the installation process, the splenviron.sh (splenviron.cmd) script will set \$SPLEBASE (%SPLEBASE%) environment variable to point to &lt;SPLDIR&gt;/&lt;SPLENVIRON&gt;</p>	
Database Type	<CMPDB>***	<p>Type of a database to connect an environment to.</p> <p>Valid values: oracle: Oracle</p> <p>Defaulted value: oracle</p> <p>Note: Not all database types are supported on all platforms; refer to the Supported Platforms section for details.</p>	oracle
Web Application Server Type	<SPLWAS>***	<p>A web application server for the environment to be used. The following value must be selected:</p> <p>Valid values: WLS: WebLogic WAS: WebSphere WASND: WebSphere ND</p> <p>Note: Not all web application servers are supported on all platforms; refer to Supported Platforms section for details.</p>	

---

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Installation Application Viewer Module	<WEB_ISAPPVIEWER> ***	<p>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.</p> <p>Valid values:</p> <ul style="list-style-type: none"><li>true: Application Viewer module will be installed.</li><li>false: Application Viewer module will not be installed.</li></ul> <p>Defaulted value: true</p> <p>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.</p>	

---

---

## Environment Description

### 1. Environment Description

Environment Description:

<b>Menu Option</b>	<b>Name Used in Documentation</b>	<b>Usage</b>	<b>Customer Install Value</b>
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	
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.	
WebLogic JNDI Password	WEB_WLSYSPASS***	The password the application uses to connect to the EJB component through JNDI  This is a security value.	

Menu Option	Name Used in Documentation	Usage	Customer Install 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.  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.  This is a security value.	
WebLogic Server Name	WEB_WLS_SERVERNAME	The name of the WebLogic server where the web application resides.  Default value: 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".	
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.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Expanded Directories	WEB_ISEXPANDED* **	<p>When the value is “true” the web application will be deployed in exploded directory format (no WAR files).</p> <p>When the value is “false”, the web application will be deployed in ear file format.</p> <p>Valid values: true: Environment expanded (no WAR files) false: Environment with WAR/EAR files</p> <p>Default value: false</p>	
Application Viewer Module	WEB_ISAPPVIEWER* **	<p>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.</p> <p>Note: With either value the application viewer module will still be managed by the upgrade process.</p> <p>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.</p> <p>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</p> <p>Default value: true</p>	

## 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***	<p>The database user ID that has been configured on the database for the web application server connection.</p> <p>This is a security value.</p>	
Web Application Database Password	DBPASS***	<p>The database password that has been configured on the database for the web application connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
MPL Database User ID	MPL_DBUSER***	<p>The database user ID that has been configured on the database for the MPL server connection.</p> <p>This is a security value.</p>	
MPL Database Password	MPL_DBPASS***	<p>The database password that has been configured on the database for the MPL server connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
XAI Database User ID	XAI_DBUSER***	<p>The database user ID that has been configured on the database for the XAI server connection.</p> <p>This is a security value.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
XAI Database Password	XAI_DBPASS***	<p>The database password that has been configured on the database for the XAI server connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
Batch Database User ID	BATCH_DBUSER***	<p>The database user ID that has been configured on the database for the batch connection.</p> <p>This is a security value.</p>	
Batch Database Password	BATCH_DBPASS***	<p>The database password that has been configured on the database for the batch connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
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	<p>ONS Server Configuration is required for Oracle RAC FCF.</p> <p>See the Server Administration Guide for more information.</p> <p>This is an optional value.</p>	
Database Override Connection String	DB_OVERRIDE_CONNECTION	<p>This connection string can be used to override the database information entered above for RAC installation.</p> <p>Set this string to override the standard database connection string, as entered above.</p> <p>See the Server Administration Guide for more information.</p> <p>This is an optional value.</p>	

---

<b>Menu Option</b>	<b>Name Used in Documentation</b>	<b>Usage</b>	<b>Customer Install Value</b>
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 Oracle Real-Time Scheduler *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	
Batch Mode	BATCH_MODE***	Valid values: CLUSTERED or DISTRIBUTED  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  Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Mode	COHERENCE_CLUSTER_MODE***	Valid values: dev (Development) prod (Production)  Default value: dev	

## 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	<p>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).</p> <p>Default value: 5</p> <p>Note: This will be only used and activated when BATCHENABLED is set to true.</p>	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	<p>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.</p> <p>Valid values: true, false</p> <p>Default value: false</p> <p>Note: This will be only used and activated when BATCHENABLED is set to true.</p>	
JMX Enablement System User ID	BSN_JMX_SYSUSER	<p>Example value: user</p> <p>This value is optional.</p>	
JMX Enablement System Password	BSN_JMX_SYSPASS	<p>Example value: admin</p> <p>Note: This value will be saved in encrypted format.</p> <p>This value is optional.</p>	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_PERFORMANCE	<p>JMX Port for business application server monitoring.</p> <p>This needs to be set to an available port number on the machine.</p> <p>This value is optional.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMANCE	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:
    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:      192
    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	
JVM Child Additional Options	JVM_ADDITIONAL_OPT	Additional JVM options that are passed to the Child JVM.  Note: For WebLogic installation only.	
Web Application Java Initial Heap Size	WEB_MEMORY_OPT_MIN***	Initial 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.	
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.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Additional Options	WEB_ADDITIONAL_OPT***	<p>Additional options that will be passed in to the web application server JVM.</p> <p>Note: For WebLogic installation only.</p> <p>Replace the value of SPLEBASE with the actual value.</p> <p>UNIX:</p> <pre>-Xrs -XX:+ShowMessageBoxOnError - XX:+UseGCOverheadLimit - Doracle.security.jps.config=SPLEBASE/ splapp/config/jps-config.xml - Ddomain.home=SPLEBASE/splapp</pre> <p>Windows:</p> <pre>-Xrs -XX:+ShowMessageBoxOnError - XX:+UseGCOverheadLimit - Doracle.security.jps.config=SPLEBASE/ splapp/config/jps-config.xml - Ddomain.home=SPLEBASE/splapp</pre> <p>AIX:</p> <pre>-Xrs -XX:+ShowMessageBoxOnError - XX:+UseGCOverheadLimit - Doracle.security.jps.config=SPLEBASE/ splapp/config/jps-config.xml - Ddomain.home=SPLEBASE/splapp - Djava.awt.headless=true</pre>	
Ant Min Heap Size	ANT_OPT_MIN	<p>Minimum Heap Size passed to ANT JVM.</p> <p>Default value: 200</p>	
Ant Max Heap Size	ANT_OPT_MAX	<p>Maximum Heap Size passed to ANT JVM.</p> <p>Default value: 800</p>	
Ant Additional Options	ANT_ADDITIONAL_OPT	<p>Additional options that are passed into the ANT JVM.</p>	
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	<p>Minimum heap size passed to the Thread Pool Worker.</p> <p>Default value: 512 Recommended value is 1024.</p>	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	<p>Maximum heap size passed to the Thread Pool Worker.</p> <p>Default value: 1024 Recommended value is 2048.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Thread Pool Worker Java Max Perm Size	BATCH_MEMORY_O PT_MAXPERMSIZE	Maximum perm size passed to the Thread Pool Worker  Default value: 768	
Thread Pool Worker Additional Options	BATCH_MEMORY_A DDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. This is an optional free form field.	
Additional Runtime Classpath	ADDITIONAL_RUNT IME_CLASSPATH***	Additional Classpath Options passed in when starting the WebLogic JVM  Note: For WebLogic installation only.  Replace the value of SPLEBASE with the actual value.  Unix: SPLEBASE/splapp/standalone/lib/ commons-cli-1.1.jar:SPLEBASE/splapp/ standalone/lib/log4j- 1.2.15.jar:SPLEBASE/splapp/standalone/ lib/ jakarta-regexp-1.5.jar  Windows: SPLEBASE/splapp/standalone/lib/ commons-cli-1.1.jar;SPLEBASE/splapp/ standalone/lib/log4j-1.2.15.jar; SPLEBASE/splapp/standalone/lib/ jakarta-regexp-1.5.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: Batch
Cluster URL:
Strip HTML Comments: false
Authentication Login Page Type: FORM
Application Viewer Form Login Page: loginPage.jsp
Application Viewer Form Login Error Page:formloginPage.jsp
Help Form Login Page: loginPage.jsp: /loginPage.jsp
Help Form Login Error Page: /formLoginError.jsp
Web Form Login Page: /loginPage.jsp
Web Form Login Error Page: /formLoginError.jsp
Web Security Role: cisusers
Web Principal Name: cisusers
Application Viewer Security Role: cisusers
Application Viewer 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	<p>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.</p> <p>The Secure Sockets implementation is disabled in the default configuration.</p> <p>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.</p> <p>Example value: 6501</p> <p>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.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic Console Port Number	WLS_ADMIN_PORT	<p>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.</p> <p>Note: For WebLogic installation only.</p> <p>This value is optional.</p>	
Batch Cluster URL	WEB_BATCH_CLUSTER_URL	<p>Example:</p> <pre>service:jmx:rmi:///jndi/rmi:// [host]:[TPW JMX port]/oracle/ouaf/ batchConnector</pre>	
WebLogic Additional Stop Arguments	ADDITIONAL_STOP_ARGS_WEBLOGIC***	<p>WebLogic Additional Stop Arguments</p> <p>This value is required when running the WebLogic Console Port Number and the Application using SSL.</p> <p>Example values:</p> <pre>-Dweblogic.security.TrustKeyStore= DemoTrust -Dweblogic.security.TrustKeystoreType= CustomTrust</pre> <p>Note: For Production additional actions are required. Do NOT run Production with Demo certificates</p> <p>Refer to the WLS installation guide - Configuring Identity and Trust</p> <p>Note: For WebLogic installation only. This is an optional value.</p>	
StripHTMLComments: false	STRIP_HTML_COMMENTS	<p>Stripping HTML (and JavaScript) comments will increase the security of the system.</p> <p>Default value: false</p> <p>Valid values: true, false</p>	
Authentication Login Page Type	WEB_WLAUTHMETHOD	<p>Specifies which authentication mode should be used. To switch off OUAF Login Page enter: BASIC</p> <p>Valid values: FORM, BASIC</p> <p>Default value: FORM</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Viewer Form Login Page	WEB_APPVIEWER_FORM_LOGIN_PAGE	Specify the jsp file used to login into the application.  Default value: /loginPage.jsp	
Application Viewer Form Login Error	WEB_APPVIEWER_FORM_LOGIN_ERROR_PAGE	Specify the jsp file used to login into the application.  Default value: / formLoginError.jsp	
Help Form Login Page	WEB_HELP_FORM_LOGIN_PAGE	Specify the jsp file used to login into the application.  Default value: /loginPage.jsp	
Help Form Login Error Page	WEB_HELP_FORM_LOGIN_ERROR_PAGE	Specify the jsp file used to login into the application.  Default value: / formLoginError.jsp	
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	
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	
Application Viewer Security Role	WEB_APPVIEWER_ROLE_NAME	Specify the name of the security role.	
Application Viewer Principal Name	WEB_APPVIEWER_PRINCIPAL_NAME	Specify the name of the security name.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
This is a development environment	WEB_ISDEVELOPMENT	<p>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.</p> <p>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.</p> <p>Valid values: true, false</p> <p>Default value: false</p>	
Preload All Pages on Startup	WEB_PRELOADALL	<p>This controls if the pages should be pre-loaded during the startup of the application or not.</p> <p>Valid values: true, false</p> <p>Default value: false</p>	
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

### 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  Default 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. 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 the previous chapter dealing with installing application server pre-requisite 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	

<b>Menu Option</b>	<b>Name Used In Documentation</b>	<b>Usage</b>	<b>Customer Install Value</b>
Weblogic System Password	WLS_PASSWORD***	On the configuration step of Oracle Real-Time Scheduler 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.	
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

## 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_ISLOC AL***	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  
 Allow self signed SSL certificates: 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: true	
Allow Self Signed SSL Certificates	ALLOW_SELFSIGNED_SSL***	Set this value to true to allow self signed SSL certificates.  Default: false	

Note: \*\*\* denotes mandatory field options that are required for the product installation.

# Appendix B

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## 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 *Server Administration Guide* specific to this product, 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 Oracle WebLogic, the Oracle Utilities Application Framework installation uses the WebLogic API to encrypt the User ID and password that perform admin functions for the WebLogic application servers. Please refer to the 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.

# Appendix C

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## Application Framework Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Real-Time Scheduler 2.2.0.0. The patches listed below are available as a convenience rollup, ORS-V2.2.0.0.0-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.

11067376	12617593	14192814	14240578	14319206
14521962	14524888	14527006	14539076	14544366
14544452	14545944	14559104	14560564	14565634
14565651	14579412	14581708	14592799	14594616
14600735	14602866	14609627	14614586	14621732
14626695	14631396	14644644	14664647	14671706
14676277	14698961	14700423	14708140	14708436
14729592	14730885	14736454	14736785	14744330
14745556	14770392	14772030	14775075	14789571
14797345	14840823	15841356	15858191	15873943
15877611	15880329	15905379	15992222	16167603
16190087	16212989	16219683	16303599	16316995
16343977	16374017	16385299	16396059	16398499
16398679	16418659	16425774	16437301	16448289
16449617	16472132	16480050	16482296	16487106
16495223	16497621	16504198	16504293	16520616
16530304	16538157	16547650	16552932	16554947
16568048	16579180	16581770	16586472	16592440
16603628	16635023	16659790	16670760	16671538
16675764	16675844	16675996	16677131	16679063
16679656	16689329	16689704	16694153	16708885
16717970	16736533	16743893	16758539	16777821

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16787349	16787374	16802088	16806989	16816282
16844187	16850247	16850309	16850688	16858291
16864647	16874883	16881183	16904379	16908713
16917344	16925436	16925841	16931822	16935190
16939783	16950639	16956686	16986814	16989121
16999381	17022658	17029908	17042684	17049686
17055049	17061689	17067655	17076211	17154339
17165623	17171626	17179383	17214853	17273482
17273787	17278843	17279812	17285833	17316663
17341218	17365200	17369164	17377813	17384099
17404820	17418262	17420015	17432895	17438161
17445631	17450267	17450419	17458194	17471956
17472596	17478927	17489370	17517777	17517869
17533662	17535672	17555647	17560947	17562184
17570797	17583089	17589610	17592316	17748078
17754375	17797353	17831268	17887503	17901801
17906822	18017118			

# Appendix D

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## 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:** Batchscheduler is a wrapper over TPW. You can also pass regular TPW arguments to batchscheduler. Node ID parameter is now no longer used in v2.2.0.0 but is retained for backward compatibility.

**To Stop the Batch Scheduler**

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:**

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 E

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## User Documentation

This section provides instructions for installing the Oracle Real-Time Scheduler user documentation that is supplied with the system. Oracle Real-Time Scheduler user documentation is provided in PDF format for printing.

The documentation is also provided in HTML format located inside the Oracle Real-Time Scheduler 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 Real-Time Scheduler User Guide
- F1: Oracle Utilities Application Framework Administration and Business Process Guides

### Installing Stand-Alone Online Help

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

To install the help for stand-alone operation, copy the help.war from the Oracle Real-Time Scheduler server (environment) or from the 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 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 Real-Time Scheduler 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 Real-Time Scheduler 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.

# Appendix F

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