Oracle Utilities Work and Asset Management

Installation Guide

Release 2.1.1 Service Pack 1

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Oracle Utilities Work and Asset Management Installation Guide for Release 2.1.1 Service Pack 1

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Preface

This guide describes how to install Oracle Utilities Work and Asset Management v2.1.1.1 and is intended for anyone interested in the process of installing Oracle Utilities Work and Asset Management.

To use this document you should have:

- Administrative privileges on the host where you are installing the software

- Experience installing and configuring application servers and other software (preferable)

Related Documents

For more information, refer to the following documents for this release:

Installation Guides

- Oracle Utilities Work and Asset Management Release Notes
- Oracle Utilities Work and Asset Management Quick Install Guide
- Oracle Utilities Work and Asset Management Installation Guide
- Oracle Utilities Work and Asset Management DBA Guide
- Oracle Utilities Work and Asset Management Licensing Information User Manual

User Guides

- Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management Business User's Guide
- Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management Administrative User Guide

Supplemental Documents

- Oracle Utilities Work and Asset Management Server Administration Guide
- Oracle Utilities Work and Asset Management Security Guide

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Acronyms

The following acronyms are used in this document:

- **WAM – Work and Asset Management** (also known as Oracle Utilities Work and Asset Management)

- **OUAF – O**racle **U**tilities **A**pplication **F**ramework

Chapter 1

Overview

This chapter provides an overview of the Oracle Utilities Work and Asset Management (WAM) product and installation process.

This section includes the following:

- Product Overview
- Installation Overview
- Installation Types
- Package Contents
- Readiness Checklist

Product Overview

Oracle Utilities Work and Asset Management is housed in the Oracle WebLogic J2EE Web Application Server. The system is comprised of two layers: web and service. The application is accessed by using a browser to connect to the web layer.

Oracle Utilities Work and Asset Management data is stored in the Oracle Database. For processing large amounts of data, the system provides a thread pool worker (batch server) which interacts with the same database.

The following figure provides an overview of the Oracle Utilities Work and Asset Management product:
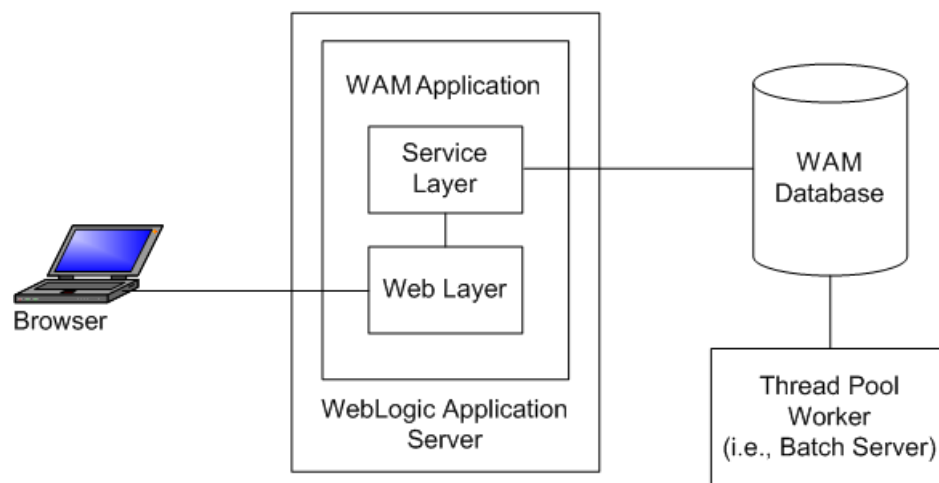
Refer to the *Business User's Guide* for information about the features and functionality in this release.

Installation Overview

Oracle Utilities Work and Asset Management consists of several components, all of which need to be installed for a successful installation. Certain prerequisite software may need to be installed before installing each of these components.

The following figure details the workflow for the initial and demo installation process.
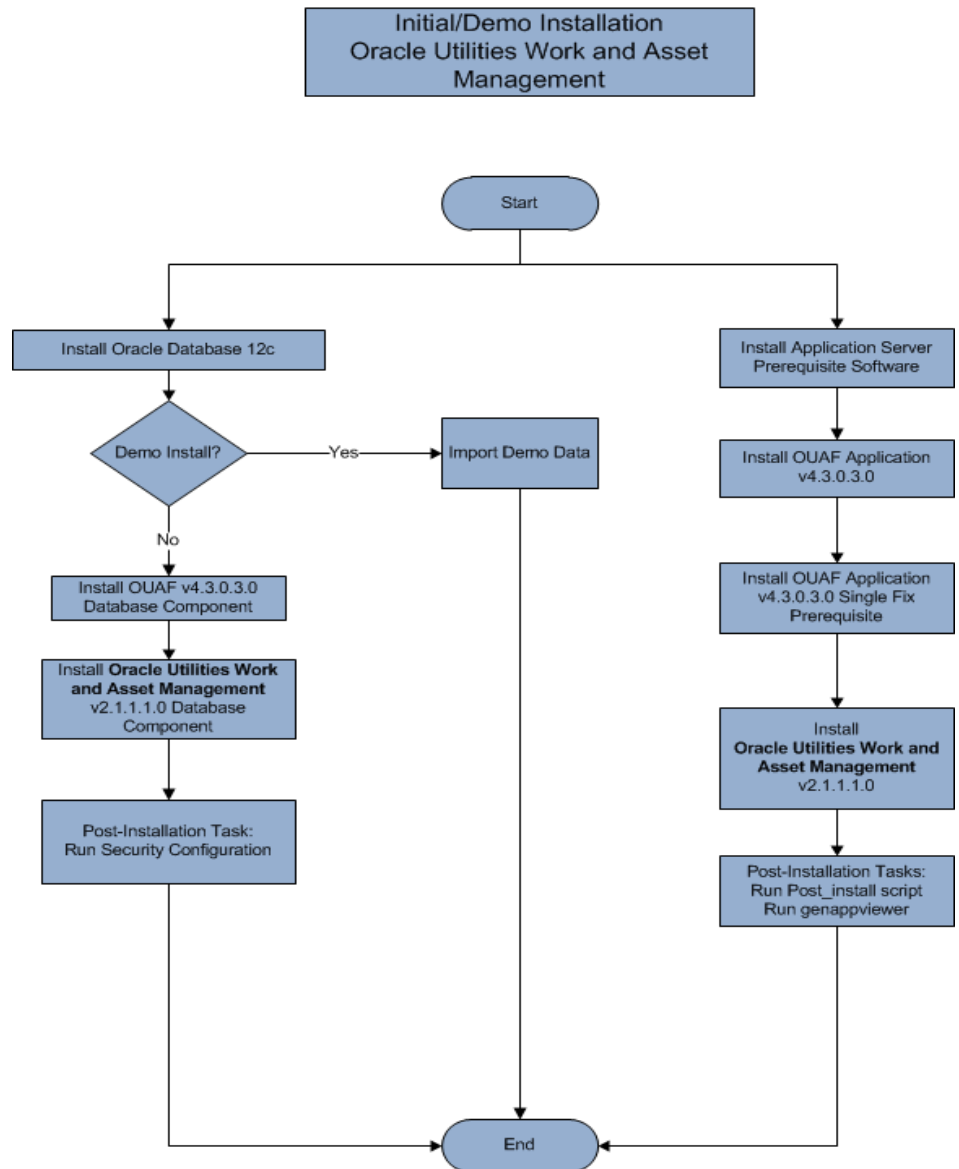
The following figure details the workflow for the upgrade installation process.
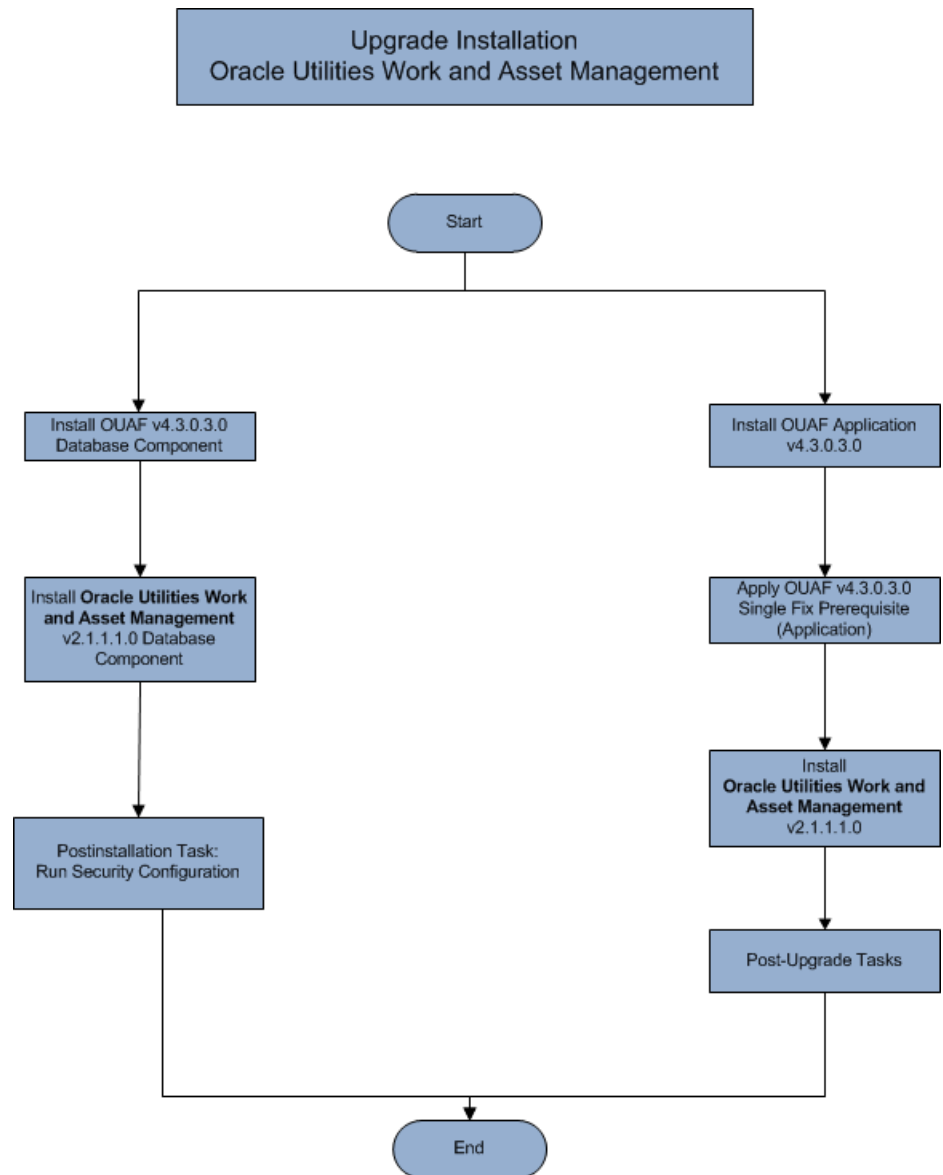
Refer to the Installation Types **section** for the list of components comprising the product.

Refer to the Prerequisite Software List for the list of prerequisite software.

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 or Installing Oracle Utilities Work and Asset Management from scratch - a base installation, typically used for a production environment

- Upgrade Installation - an upgrade installation from version 2.1.1 to 2.1.1.1.

- 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 Utilities Work and Asset Management for the first time or from scratch. Each of the following components should be installed during an initial installation:

- Database components:

    Refer to the "Initial Install" section of the *Oracle Utilities Work and Asset Management Database Administrator's Guide* for more information.

- Application components:
    - Oracle Utilities Application Framework application
    - Oracle Utilities Application Framework single fix pre-requisite rollup
    - Oracle Utilities Work and Asset Management application

For detailed steps on installing each of the above components, refer to the chapter Installing Oracle Utilities Work and Asset Management - Initial Installation.

Upgrade Installation

This installation type is applicable when upgrading Oracle Utilities Work and Asset Management from version 2.1.1. Each of the following components should be installed during an upgrade installation:

- Database components:

    Refer to the "Upgrade Install" section of the *Oracle Utilities Work and Asset Management Database Administrator's Guide* for more information.

- Application components:
    - Oracle Utilities Application Framework application
    - Oracle Utilities Application Framework single fix pre-requisite rollup
    - Oracle Utilities Work and Asset Management application

For detailed steps on installing each of the above components, refer to the chapter Upgrading Oracle Utilities Work and Asset Management.

Demo Installation

This installation type is applicable when installing a demo application of Oracle Utilities Work and Asset Management for demonstration or training purposes. For a demo install, you must install all of the following components:

- Demo Database components:

Refer to the "Demo Install" section of the *Oracle Utilities Work and Asset Management Database Administrator's Guide* for more information.

- Application components:
  - Oracle Utilities Application Framework application
  - Oracle Utilities Application Framework single fix pre-requisite rollup
  - Oracle Utilities Work and Asset Management application

Refer to chapter Installing Oracle Utilities Work and Asset Management - Demo Installation for the steps involved in installing each of the above components.

Package Contents

The following documentation and installation packages are part of the product package.

This section includes information about:

- Documentation
- Installation Packages

Documentation

Installation Guides
- Oracle Utilities Work and Asset Management Release Notes
- Oracle Utilities Work and Asset Management Quick Install Guide
- Oracle Utilities Work and Asset Management Installation Guide
- Oracle Utilities Work and Asset Management DBA Guide
- Oracle Utilities Work and Asset Management Licensing Information User Manual

User Guides
- Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management Business User's Guide
- Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management Administrative User Guide

Supplemental Documents
- Oracle Utilities Work and Asset Management Server Administration Guide
- Oracle Utilities Work and Asset Management Security Guide

Installation Packages

- Oracle Utilities Work and Asset Management v2.1.1.1.0 Release Notes.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Install Documentation.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Quick Install Guide.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 User Documentation.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Supplemental Documentation.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Multiplatform.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Oracle Database Multiplatform.zip
- Oracle Utilities Application Framework v4.3.0.3.0 Multiplatform.zip

- Oracle Utilities Application Framework v4.3.0.3.0 Single Fix Prerequisite Rollup for Oracle Utilities Work and Asset Management v2.1.1.1.0.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Reports.zip
- Oracle Utilities Work and Asset Management v2.1.1.1.0 Esri Integration.zip

Readiness Checklist

The following checklist will guide you through the installation process of Oracle Utilities Work and Asset Management. The details for each step are presented in subsequent chapters.

1. Confirm that the recommended hardware is ready. Refer to Supported Platforms and Hardware Requirements for more details.

2. Install prerequisite software. Refer to chapter Planning the Installation for more details.

3. Ensure that you have downloaded the Oracle Utilities Work and Asset Management v2.1.1.1 components from Oracle Software Delivery Cloud.

4. Go through the Installation and Configuration Worksheets to understand the configuration menu.

5. Determine the type of the installation:

    • **Initial** Installation - For initial installation follow the instructions mentioned in Installing Oracle Utilities Work and Asset Management - Initial Installation

    • **Demo** Installation - For demo installation follow the instructions mentioned in Installing Oracle Utilities Work and Asset Management - Demo Installation

6. Perform post-installation tasks.

7. Install optional products as described in chapter Installing Optional Products.

Chapter 2

Supported Platforms and Hardware Requirements

This installation is certified to operate on many operating system, application server and database server combinations. The following sections provide information on the supported platforms and requirements, including information on:

- Operating Systems and Application Servers
- Hardware Requirements
- Application Server Memory Requirements
- Additional Notes on Supported Platforms
- Support for Software Patches and Upgrades

Operating Systems and Application Servers

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

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database
Windows 7, 8.1, 10 (64-bit) (Internet Explorer 11, Firefox ESR 45)	AIX 7.1 TL1 or 7.2 TLO (64-bit)	Power 64-bit	WebLogic 12.1.3.0+* WebSphere (Basic)/ WebSphere (ND) 8.5.5	Oracle Database 12.1.0.1+
	Oracle Enterprise Linux 6.x or 7.x (64-bit) Red Hat Enterprise Linux 6.x or 7.x (64-bit)	x86_64	WebLogic 12.1.3.0+*	Oracle Database 12.1.0.1+
	Oracle Solaris 11 (64-bit)	SPARC 64-bit	WebLogic 12.1.3.0+*	Oracle Database 12.1.0.1+

The platforms listed above are current at the time of release. For the most current supported platforms, please refer to Oracle Utilities Product Matrix on My Oracle Support (MOS) Knowledge Article (Doc ID 1454143.1). Please note the following:

* A plus sign (+) after the fourth digit in the version number indicates that this and all higher versions of WebLogic are supported. For example, 12.1.3.0+ means that 12.1.3.0 and any higher 12.1.3.x.x versions are supported.

    WebLogic 12.1.3 is currently supported for both embedded and native installations. In future releases of the product, using a later version of WebLogic, for example 12.2.*, embedded installations will be not be supported. Only the native installation will be supported.

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

Hardware Requirements

Client Side Hardware Requirements

Configuration	Processor	Memory (RAM)	Monitor (Display)
Minimum	1 GHz or faster 64-bit (x64) processor	2 GB	1280x1024
Recommended*	3 GHz or faster 64-bit (x64) processor	4 GB	1280X1024

* The Recommended configuration supports better performance of the client.

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
Install_dir Location	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.

Location	Size	Usage
Log Location	5 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	5 GB minimum	This location is used by various web server vendors to expand the application. It should be considered when installing these products. Refer to the individual web server documentation to determine the location of the temporary files.
Installation Temporary Area	4 GB	The application gets installed from this location. You need enough space to uncompress the files and install the application.
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 Server

This version of Oracle Utilities Work and Asset Management is certified on Oracle Database Server 12.1.0.1+ on the operating systems listed in the section above. The following versions of the database are supported:

- Oracle Database Enterprise Edition
- Oracle Database Standard Edition

Oracle VM Support

This version of Oracle Utilities Work and Asset Management is supported on Oracle VM 3.2.0 and 3.3.1 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.

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 3

Planning the Installation

This chapter provides information for planning an Oracle Utilities Work and Asset Management installation, including:

- Prerequisite Software List
- Installing PreRequisite Software

Before You Install

Refer to My Oracle Support for up-to-date additional information about installing Oracle Utilities Work and Asset Management.

Prerequisite Software List

Before you install Oracle Utilities Work and Asset Management, you must install prerequisite software. Refer to the respective installation documentation of the software for instructions on downloading and installing.

This section includes information on the following:

- Prerequisite Software for Application Server
- Web Browser Requirements

Prerequisite Software for Application Server

The prerequisite software for the application component of Oracle Utilities Work and Asset Management is as follows:

- Oracle Database 12c Release 1 Client

- Java 8 Update 92+ (64-bit)

- Oracle Web Logic 12c (12.1.3.0+)

- Hibernate 4.1.0 FINAL

Web Browser Requirements

The following operating system / web browser software are supported:

- Windows 7, 8.1, 10 (64-bit) with Internet Explorer 11, Firefox ESR 45

Installing PreRequisite Software

This section describes the software that needs to be installed for each of the supported operating system and application server combinations, including:

- AIX 7.1 TL01 or AIX 7.2 TL0 Application Server
- Oracle Linux 6.x or 7.x or Red Hat Linux 6.x or 7.x Application Server
- Oracle Solaris 11 Application Server

AIX 7.1 TL01 or AIX 7.2 TL0 Application Server

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

Supported Application Servers

Operating System	Chipset	Application Server
AIX 7.1 TL1 or 7.2 TLO (64-bit)	POWER 64-bit	Oracle WebLogic 12.1.3.0+ (64-bit) version

AIX Operating System Running on Power5 and Power6 Architecture

UNIX Administrator User ID

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

Description	Default Value	Customer Defined Value
Oracle Utilities Work and Asset Management Administrator User ID	cissys	
Oracle Utilities Work and Asset Management User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group).
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.
3. Set the 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 exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

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

Replace these users and groups for your installation defaults:

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

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

Oracle 12.1.0.1 Client

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 7.0 SR64 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 4.1.0 before installing Oracle Utilities Work and Asset Management.

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/
   ```

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

3. 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. Be sure to install the JDK that is supported for your platform.

4. 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 Server 12.1.3.0+ (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 12.1.3.0+.

Oracle Linux 6.x or 7.x or Red Hat Linux 6.x or 7.x Application Server

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

Supported Application Servers

Operating System	Chipset	Application Server
Oracle Linux 6.x or 7.x (64-bit) Red Hat Enterprise Linux 6.x or 7.x (64-bit)	x86_64	Oracle WebLogic 12.1.3.0+ (64-bit) version

Oracle Linux 6.x or 7.x or Red Hat Enterprise Linux 6.x or 7.x Operating System Running on x86_64 64-bit Architecture

UNIX Administrator User ID

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

Description	Default Value	Customer Defined Value
Oracle Utilities Work and Asset Management Administrator User ID	cissys	
Oracle Utilities Work and Asset Management User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.
3. Set the 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 exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created

according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

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

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

Oracle Database 12.1.0.1+

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 8 Update 92+, 64-bit

At time of release, Oracle Java packages could 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 Oracle Utilities Work and Asset Management.

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/
   ```

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

3. 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. Be sure to install the JDK that is supported for your platform.

4. 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 12.1.3.0+ (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 12.1.3.0+.

Oracle Solaris 11 Application Server

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

Supported Application Servers

Operating System	Chipset	Application Server
Oracle Solaris 11 (64-bit)	SPARC	Oracle WebLogic 12.1.3.0+ (64-bit) version

Oracle Solaris 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 Value
Oracle Utilities Work and Asset Management Administrator User ID	cissys	
Oracle Utilities Work and Asset Management User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.
3. Set the 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 exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

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

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files

User	Group	Description
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 Database 12.1.0.1+ Client

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 8 Update 92+, 64-bit

This software is only required for Oracle WebLogic installations. At the time of release, the Oracle Java packages used in the test cycle were downloaded 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 Oracle Utilities Work and Asset Management.

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/
   ```

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

3. 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. Be sure to install the JDK that is supported for your platform.

4. 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 12.1.3.0+ (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 12.1.3.0+.

Chapter 4

Installing Oracle Utilities Work and Asset Management - Initial Installation

This chapter provides instructions for installing Oracle Utilities Work and Asset Management 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:

- Initial Installation Procedure
- After the Installation
- Operating the Application

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Work and Asset Management.

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 Utilities Work and Asset Management must be complete before you can proceed with the following sections. Refer to the section "**Initial Install**" of the *Oracle Utilities Work and Asset Management 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 v4.3.0.3.0
- Installing Oracle Utilities Application Framework v4.3.0.3.0 Single Fix PreRequisite Rollup
- Installing the Oracle Utilities Work and Asset Management Application Component

Installing the Oracle Utilities Application Framework Application Component v4.3.0.3.0

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 administrator user ID.

2. Download the Oracle Utilities Application Framework V4.3.0.3.0 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-V4.3.0.3.0-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-V4.3.0.3.0-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.V4.3.0.3.0" 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.V4.3.0.3.0 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 user ID (the default is cissys on UNIX) or as a user with administrator privileges (on Windows).

2. Change directory to the <TEMPDIR>/FW.V4.3.0.3.0 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:${PERL_HOME}/lib/site_perl:<OUAF
                     Installer Decompressed location/bin/perlib>
    export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
    ```

```
                            Installer Decompressed location/bin/perlib>
       export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:$LD_LIBRARY_PATH
```

Windows:

```
set ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
set PATH=%PERL_HOME%\bin;%PATH%
```

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.

   > **Note**: The application has introduced a new feature to create a separate domain for threadpool worker. In the physical machine or virtual machine of the application, you can create a threadpool domain and through the admin console of that domain, you can deploy "Threadpoolworker.ear" to have independent control upon the threadpool worker.
   >
   > Another option is to include the threadpool worker in the application domain so whenever the application is started, its corresponding threadpool worker is also started.
   >
   > For ThreadPool Worker deployment through Admin console, configure "Web JDBC DataSource Name" as "TPWDatasource" through Admin Console and update the same in the Menu 4 options; also provide the credentials of "JDBC Database UserName/Password" to be the same as Application Server Database UserName/Password. Please see Menu 4 below for more information.

```
************************************
* Environment Installation Options *
************************************
 1. Environment ID, Roles, Third Party Software Configuration
      Environment ID:
      Server Roles:                    batch, online
      Oracle Client Home Directory:
      Web Java Home Directory:
      Hibernate JAR Directory:
      ONS JAR Directory:
      Web Application Server Home Directory:
      WebLogic Server Thin-Client JAR Directory:
      ADF Home Directory:
      OIM OAM Enabled Environment:
 2. Keystore Options
      Import Keystore Directory:
      Store Type:                                      JCEKS
      Alias:                                           ouaf.system
```

```
                Alias Key Algorithm:                      AES Alias Key
                Size:                         128
                HMAC Alias:                                 ouaf.system.hmac
                Padding:                                      PKCS5Padding
                Mode:                  CBC
 50. Environment Installation Options
                Environment Mount Point:
                Log Files Mount Point:
                Environment Name:
                Web Application Server Type:
                Install Application Viewer Module:              true
                Install Demo Generation Cert Script:           true
                Install Sample CM Source Code:                 true


Each item in the above list should be configured for a successful
install.
Choose option (1,2,50, <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>
        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>
        Weblogic SSL Port Number:    <Mandatory>
        Weblogic Console Port Number: <Mandatory>
        WebLogic Additional Stop Arguments:
        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
        Deploy using Archive Files:          true
        Deploy Application Viewer Module:    true
        Enable The Unsecured Health Check Service:  false
        MDB RunAs User ID:
        Super User Ids:

 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>
            Web JDBC DataSource Name:  TPWDataSource
            JDBC Database User ID: <Mandatory>
            JDBC Database Password: <Mandatory>
            Database Name: <Mandatory>
            Database Server: x.x.x.x
            Database Port:   1521
            ONS Server Configuration:
            Database Override Connection String:
            Character Based Database: false
            Oracle Client Character Set NLS_LANG: AMERICAN_AMERICA.AL32UTF8

  5. General Configuration Options
        Batch RMI Port:                                 <mandatory>

        RMI Port number for JMX Business:              <optional>
        RMI Port number for JMX Web:                   <optional>
        JMX Enablement System User ID:                 <optional>
        JMX Enablement System Password:                <optional>
        Coherence Cluster Name:                        <optional>
        Coherence Cluster Address:                     <optional>
        Coherence Cluster Mode:                       prod<Mandatory>
        Coherence Cluster Port:                       1000<Mandatory>

  6. SSL Certificate Keystore
        Certificate Keystore Type:                      DEMO
        Identify Keystore File:
        Identify Keystore File Type:               jks
        Identify Keystore Password:
        Identity Private Key Alias:                ouaf_demo_cert
        Trust Keystore File:
        Trust Keystore File Type:                  jks
        Trust Keystore Password:
        Trust Private Key Alias:                   ouaf_demo_cert

Each item in the above list should be configured for a successful
install.

Choose option (1,2,3,4,5,6 <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.

Installing Oracle Utilities Application Framework v4.3.0.3.0 Single Fix PreRequisite Rollup

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Work and Asset Management. The patches are available as a convenience rollup inside the zip file 'Oracle Utilities Application Framework v4.3.0.3.0 Single Fix Prerequisite Rollup for Oracle Utilities Work and Asset Management v2.1.1.1.0.zip' which is part of the downloaded Media Pack.

For a list of the patches that are included in this rollup, refer to Appendix Application Framework Prerequisite Patches.

Follow these steps for installing the application patches on top of Oracle Utilities Application Framework 4.3.0.3.0:

1. Copy the file, WAM-V21110-FW-PREREQ-MultiPlatform.jar, in the delivered package to a <TEMPDIR>. Unjar using below command:

   ```
   jar -xvf WAM-V21110-FW-PREREQ-MultiPlatform.jar
   ```

2. Initialize the Framework environment that you want to install the Framework patch rollup into:

   UNIX:

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

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

3. Install application patches:

   a. Navigate to the <temp location>/ FW-V4.3.0.3.0-Rollup/Application folder

   b. Execute the group installation script:

      Unix /Linux:

      ```
      chmod a+x installSFgroup.sh
      chmod a+x FW*/*.sh
      ./installSFgroup.sh
      ```

      Windows:

      ```
      installSFgroup.cmd
      ```

Installing the Oracle Utilities Work and Asset Management Application Component

This section describes how to install the application component of Oracle Utilities Work and Asset Management, including:

- Copying and Decompressing Install Media
- Installing the Application Component
- Performing Post-Installation Tasks

Copying and Decompressing Install Media

The Oracle Utilities Work and Asset Management installation file is delivered in jar format for both UNIX and Windows platforms.

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

1. Log in to the application server host as the administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.

2. Download the Oracle Utilities Work and Asset Management V2.1.1.1.0 Multiplatform from Oracle Software Delivery Cloud.

3. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Work and Asset Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

4. Copy the file, WAM-V2.1.1.1.0-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.

5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf WAM-V2.1.1.1.0-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 W1.V2.1.1.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing the Application Component

Follow the steps below to install Oracle Utilities Work and Asset Management application component:

1. Log in to the application server host as the administrator user ID (default cissys).

2. Change directory:

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

where <install_dir> is the location where the Oracle Utilities Asset Management Base application component is installed.

3. Initialize the environment by running the appropriate command:

   UNIX:

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

   Windows:

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

4. If the environment is running, stop it by running the appropriate command:

   UNIX:

```
./spl.sh stop
```

   Windows:

```
spl.cmd stop
```

5. Change to the <TEMPDIR>/W1.V2.1.1.1.0 Directory.

6. Execute the install script:

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

   UNIX:

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

   Windows:

```
install.cmd
```

   Note: •If you are using demo certificates, please execute the below command before starting the environment:

   UNIX:

```
cd $SPLEBASE/bin
perl demo_gen_cert.plx
```

   Windows:

```
cd %SPLEBASE%/bin
perl demo_gen_cert.plx
```

Once the install has finished successfully, generate the app viewer as described below.

Performing Post-Installation Tasks

1. Generate the appviewer by following the steps below:

    a. Change the directory.

        ```
        cd <install_dir>/bin ,
        ```
        where <install_dir> is Oracle Utilities Work and Asset Management Application
        Component installation directory

    b. Run the script to generate the appviewer.

        UNIX:

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

        Windows:

        ```
        genappvieweritems.cmd
        ```

3. Create a default Oracle Utilities Work and Asset Management user by following the steps
    below:

    a. For HTTP (Non-SSL) Connections:

        ```
        ant -f $SPLEBASE/splapp/userAdmin.xml -
        Dadmin.server.url=t3:<weblogic-host>:<weblogic-port> -
        Dadmin.user=<weblogic-admin-username> -Dadmin.password=<weblogic-
        admin-password> -Duser.name=WAMUSER -Duser.password=<password>
        ```

    b. For HTTPS (SSL) Connections:

        ```
        ant -f $SPLEBASE/splapp/userAdmin.xml -
        Dadmin.server.url=t3s:<weblogic-host>:<weblogic-port> -
        Dadmin.user=<weblogic-admin-username> -Dadmin.password=<weblogic-
        admin-password> -Duser.name=WAMUSER -Duser.password=<password>
        ```

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 Utilities Work and Asset Management Server Administration Guide* for more information on further configuring and operating the system.

Chapter 5

Upgrading Oracle Utilities Work and Asset Management

This chapter provides instructions for upgrading Oracle Utilities Work and Asset Management from version 2.1.1 to version 2.1.1.1. This chapter includes:

- **Before You Upgrade**
- **Upgrade Procedure**
- **After the Upgrade**
- **Operating the Application**
- **Installing Service Packs and Patches**

Before You Upgrade

Review the list of operating system, application server and database server combinations that this version of Oracle Utilities Work and Asset Management is certified to operate on, in the chapter **Supported Platforms and Hardware Requirements**.

For further assistance, contact My Oracle Support before you upgrade.

Note: If you are upgrading a previously installed application server, it is recommended that you make a backup before you start the upgrade procedure. The upgrade installation will remove your existing environment including your configurations.

Upgrade Procedure

The upgrade installation procedure consists of:

- **Database Component Upgrade**
- **Application Components Upgrade**

Database Component Upgrade

Upgrade of the database component of Oracle Utilities Work and Asset Management must be complete before you can proceed with the following sections. Refer to the section "**Upgrade Install**" of the *Oracle Utilities Work and Asset Management Database Administrator Guide*, which provides instructions on upgrading the database component.

Application Components Upgrade

A successful upgrade consists of the following steps:

- **Upgrading the Oracle Utilities Application Framework Application Component**

- **Installing Oracle Utilities Application Framework v4.3.0.3.0 Single Fix PreRequisite Rollup**

- **Upgrading the Oracle Utilities Work and Asset Management Application Component**

    Note: From the application-side perspective, an upgrade installation is equivalent to a fresh installation.

Upgrading the Oracle Utilities Application Framework Application Component

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

- **Copying and Decompressing Install Media**

- **Setting Permissions for the cistab file in UNIX**

- **Upgrading 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 V4.3.0.3.0 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-V4.3.0.3.0-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-V4.3.0.3.0-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.V4.3.0.3.0" 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.V4.3.0.3.0 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 upgrade process. The installation utility does not create a backup of existing environment.

Upgrading the Application Component

This section outlines the steps for upgrading 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 bin folder.

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

   where <install_dir> is the location where the Oracle Utilities Asset Management Base application component is installed.

3. Initialize the environment by running the appropriate command:

   UNIX:

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

   Windows:

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

4. Change directory to the <TEMP_DIR>/FWV4.3.0.3.0 directory.

   NOTE: While installing the FW V4.3.0.3.0 from the previous environment to v2.1.1.1.0 the install utility removes the existing environment and re-creates the environment. Make a backup before you proceed with installing FW V4.3.0.0 to retain any configurations for future reference.

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

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

6. The Oracle Utilities Application Framework specific menu appears.

7. Follow the messages and instructions that are produced by the application installation utility.

8. Select each menu item to configure the values. For detailed description of the values, refer to Appendix **Installation and Configuration Worksheets**.

9. 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.

    > **Note**: The application has introduced a new feature to create a separate domain for threadpool worker. In the physical machine or virtual machine of the application, you can create a threadpool domain and through the admin console of that domain, you can deploy "Threadpoolworker.ear" to have independent control upon the threadpool worker.

    > Another option is to include the threadpool worker in the application domain so whenever the application is started, its corresponding threadpool worker is also started.

    > For ThreadPool Worker deployment through Admin console, configure "Web JDBC DataSource Name" as "TPWDatasource" through Admin Console and update the same in the Menu 4 options; also provide the credentials of "JDBC Database UserName/Password" to be the same as Application Server Database UserName/Password. Please see Menu 4 below for more information.

```
************************************
* Environment Installation Options *
************************************
 1. Environment ID, Roles, Third Party Software Configuration
       Environment ID:
       Server Roles:                    batch, online
       Oracle Client Home Directory:        <Mandatory>
       Web Java Home Directory:             <Mandatory>
       Hibernate JAR Directory:
       ONS JAR Directory:
       Web Application Server Home Directory:  <Mandatory>
       WebLogic Server Thin-Client JAR Directory:
       ADF Home Directory:
       OIM OAM Enabled Environment:
 2. Keystore Options
       Import Keystore Directory:
       Store Type:                       JCEKS
       Alias:                            ouaf.system
       Alias Key Algorithm:              AES Alias Key
       Size:                             128
       HMAC Alias:                       ouaf.system.hmac
       Padding:                          PKCS5Padding
       Mode:                         CBC
 50. Environment Installation Options
       Environment Mount Point:             <Mandatory>
       Log Files Mount Point:               <Mandatory>
       Environment Name:                    <Mandatory>
       Web Application Server Type:
       Install Application Viewer Module:           true
       Install Demo Generation Cert Script:         true
       Install Sample CM Source Code:               true
```

```
Each item in the above list should be configured for a successful
install.
Choose option (1,2,50, <P> Process, <X> Exit):
```

10. 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>
       Web JDBC DataSource Name:  TPWDataSource
       JDBC Database User ID: <Mandatory>
       JDBC Database Password: <Mandatory>
       Database Name: <Mandatory>
       Database Server: x.x.x.x
       Database Port:   1521
       ONS Server Configuration:
       Database Override Connection String:
       Character Based Database: false
       Oracle Client Character Set NLS_LANG: AMERICAN_AMERICA.AL32UTF8

 5. General Configuration Options
       Batch RMI Port:                                  <mandatory>
       RMI Port number for JMX Business:                <optional>
       RMI Port number for JMX Web:                     <optional>
```

```
JMX Enablement System User ID:                  <optional>
JMX Enablement System Password:                 <optional>
Coherence Cluster Name:                         <optional>
Coherence Cluster Address:                      <optional>
Coherence Cluster Mode:                      prod<Mandatory>
Coherence Cluster Port:                      1000<Mandatory>
```

Each item in the above list should be configured for a successful install.

```
Choose option (1,2,3,4,5, <P> Process, <X> Exit):
```

11. 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.

12. Once the upgrade install has finished, the installation log location appears on the screen. If the log does not list any error messages, the upgrade installation of the application component of Oracle Utilities Application Framework is complete. You can now upgrade Oracle Utilities Asset Management Base as described in the following section.

Installing Oracle Utilities Application Framework v4.3.0.3.0 Single Fix PreRequisite Rollup

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Work and Asset Management. The patches are available as a convenience rollup inside the zip file 'Oracle Utilities Application Framework v4.3.0.3.0 Single Fix Prerequisite Rollup for Oracle Utilities Work and Asset Management v2.1.1.1.0.zip' which is part of the downloaded Media Pack.

For a list of the patches that are included in this rollup, refer to Appendix **Application Framework Prerequisite Patches**.

Follow these steps for installing the application patches on top of Oracle Utilities Application Framework 4.3.0.3.0:

1. Copy the file WAM-V21110-FW-PREREQ-MultiPlatform.jar in the delivered package to a <TEMPDIR>. Unjar using below command:

    ```
    jar -xvf WAM-V21110-FW-PREREQ-MultiPlatform.jar
    ```

2. Initialize the Framework environment that you want to install the Framework patch rollup into:

    UNIX:

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

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

3. Install application patches:

    a. Navigate to the <temp location>/ FW-V4.3.0.3.0-Rollup/Application folder

    b. Execute the group installation script:

    Unix /Linux:

    ```
    chmod a+x installSFgroup.sh
    chmod a+x FW*/*.sh
    ./installSFgroup.sh
    ```

    Windows:

    ```
    installSFgroup.cmd
    ```

Upgrading the Oracle Utilities Work and Asset Management Application Component

This section describes how to install the application component of Oracle Utilities Work and Asset Management, including:

- **Copying and Decompressing Install Media**

- **Upgrading the Application Component**

- **Performing Post-Upgrade Tasks**

Copying and Decompressing Install Media

The Oracle Utilities Work and Asset Management installation file is delivered in jar format for both UNIX and Windows platforms.

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

1. Log in to the application server host as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.

2. Download the Oracle Utilities Work and Asset Management v2.1.1.1.0 Multiplatform from Oracle Software Delivery Cloud.

3. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Work and Asset Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

4. Copy the file WAM-v2.1.1.1.0-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.

5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf WAM-v2.1.1.1.0-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 W2.V2.1.1.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Upgrading the Application Component

Follow the steps below to install Oracle Utilities Work and Asset Management application component:

1. Log in to the application server host as Oracle Utilities Work and Asset Management Administrator (default cissys).

2. Change directory:

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

where <install_dir> is the location where the Oracle Utilities Asset Management Base application component is installed.

3. Initialize the environment by running the appropriate command:

UNIX:

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

Windows:

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

4. If the environment is running, stop it by running the appropriate command:

   UNIX:

   ```
   ./spl.sh stop
   ```

   Windows:

   ```
   spl.cmd stop
   ```

5. Change to the <TEMPDIR>/W2.V2.1.1.1.0 Directory.

6. Execute the install script:

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

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Once the upgrade install has finished successfully, execute post upgrade steps as described in the following section, Post Upgrade Tasks.

Performing Post-Upgrade Tasks

1. Generate the appviewer by following the steps below:

   a. Change the directory.

      ```
      cd <install_dir>/bin
      ```
      where <install_dir> is Oracle Utilities Work and Asset Management Application Component installation directory

   b. Run the script to generate the appviewer.

      UNIX:

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

      Windows:

      ```
      genappvieweritems.cmd
      ```

After the Upgrade

After you complete the upgrade 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 Utilities Work and Asset Management Server 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

Installing Oracle Utilities Work and Asset Management - Demo Installation

This chapter provides instructions for setting up a demo application of Oracle Utilities Work and Asset Management useful for demonstration or training purposes. This chapter includes:

- Demo Installation Procedure

- After the Installation

- Operating the Application

Before You Install

Oracle recommends that you do not clone the demonstration environment as a basis for a new production environment. The demonstration environment typically includes transactional data that will be irrelevant to your production environment and can cause unexpected issues if it is not purged correctly. The recommended process is to start a new production environment from a new installation and migrate "clean" system data (such as business objects and algorithms) and administrative data (such as sample activity types or other administrative entities) from the demonstration and/or test or development environments as applicable.

Please refer to the Administrative Guide for more information or contact Oracle Support.

Demo Installation Procedure

The demo installation procedure consists of:

- Database Component Installation

- Application Components Installation

Database Component Installation

Installation of the database component of Oracle Utilities Work and Asset Management must be complete before you can proceed with the following sections. Refer to the *Oracle Utilities Work and Asset Management Database Administrator's Guide*, which provides instructions on installing the database component with pre-populated demo data.

Application Components Installation

A successful installation consists of the following steps:

- Installing the Oracle Utilities Application Framework Application Component v4.3.0.3.0

- Installing Oracle Utilities Application Framework v4.3.0.3.0 Single Fix PreRequisite Rollup

- Installing the Oracle Utilities Work and Asset Management Application Component

Installing the Oracle Utilities Application Framework Application Component v4.3.0.3.0

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 administrator user ID.

2. Download the Oracle Utilities Application Framework V4.3.0.3.0 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-V4.3.0.3.0-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-V4.3.0.3.0-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.V4.3.0.3.0" 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.V4.3.0.3.0 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 user ID (the default is cissys on UNIX) or as a user with administrator privileges (on Windows).

2. Change directory to the <TEMPDIR>/FW.V4.3.0.3.0 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:${PERL_HOME}/lib/site_perl:<OUAF
                    Installer Decompressed location/bin/perlib>
export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
                    Installer Decompressed location/bin/perlib>
export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:$LD_LIBRARY_PATH
```

Windows:

```
set ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
set PATH=%PERL_HOME%\bin;%PATH%
```

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.

   > **Note**: The application has introduced a new feature to create a separate domain for threadpool worker. In the physical machine or virtual machine of the application, you can create a threadpool domain and through the admin console of that domain, you can deploy "Threadpoolworker.ear" to have independent control upon the threadpool worker.
   >
   > Another option is to include the threadpool worker in the application domain so whenever the application is started, its corresponding threadpool worker is also started.
   >
   > For ThreadPool Worker deployment through Admin console, configure "Web JDBC DataSource Name" as "TPWDatasource" through Admin Console and update the same in the Menu 4 options; also provide the credentials of "JDBC Database UserName/Password" to be the same as Application Server Database UserName/Password. Please see Menu 4 below for more information.

```
************************************
* Environment Installation Options *
************************************
 1. Environment ID, Roles, Third Party Software Configuration
      Environment ID:
      Server Roles:                  batch, online
      Oracle Client Home Directory:
      Web Java Home Directory:
      Hibernate JAR Directory:
      ONS JAR Directory:
```

```
                    Web Application Server Home Directory:
                    WebLogic Server Thin-Client JAR Directory:
                    ADF Home Directory:
                    OIM OAM Enabled Environment:
 2. Keystore Options
                    Import Keystore Directory:
                    Store Type:                            JCEKS
                    Alias:                                 ouaf.system
                    Alias Key Algorithm:              AES Alias Key
                    Size:                        128
                    HMAC Alias:                            ouaf.system.hmac
                    Padding:                               PKCS5Padding
                    Mode:                CBC
 50. Environment Installation Options
                    Environment Mount Point:
                    Log Files Mount Point:
                    Environment Name:
                    Web Application Server Type:
                    Install Application Viewer Module:            true
                    Install Demo Generation Cert Script:         true
                    Install Sample CM Source Code:               true


Each item in the above list should be configured for a successful
install.
Choose option (1,2,50, <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>
        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>
        Weblogic SSL Port Number:   <Mandatory>
        Weblogic Console Port Number: <Mandatory>
        WebLogic Additional Stop Arguments:
        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
        Deploy using Archive Files:           true
        Deploy Application Viewer Module:     true
        Enable The Unsecured Health Check Service:   false
        MDB RunAs User ID:
```

```
                    Super User Ids:

   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>
          Web JDBC DataSource Name:  TPWDataSource
          JDBC Database User ID: <Mandatory>
          JDBC Database Password: <Mandatory>
          Database Name: <Mandatory>
          Database Server: x.x.x.x
          Database Port:   1521
          ONS Server Configuration:
          Database Override Connection String:
          Character Based Database: false
          Oracle Client Character Set NLS_LANG: AMERICAN_AMERICA.AL32UTF8

   5. General Configuration Options
          Batch RMI Port:                             <mandatory>

          RMI Port number for JMX Business:           <optional>
          RMI Port number for JMX Web:                <optional>
          JMX Enablement System User ID:              <optional>
          JMX Enablement System Password:             <optional>
          Coherence Cluster Name:                     <optional>
          Coherence Cluster Address:                  <optional>
          Coherence Cluster Mode:                 prod<Mandatory>
          Coherence Cluster Port:                 1000<Mandatory>

   6. SSL Certificate Keystore
          Certificate Keystore Type:                  DEMO
          Identify Keystore File:
          Identify Keystore File Type:            jks
          Identify Keystore Password:
          Identity Private Key Alias:             ouaf_demo_cert
          Trust Keystore File:
          Trust Keystore File Type:               jks
          Trust Keystore Password:
          Trust Private Key Alias:                ouaf_demo_cert

Each item in the above list should be configured for a successful
install.

Choose option (1,2,3,4,5,6 <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.

Installing Oracle Utilities Application Framework v4.3.0.3.0 Single Fix PreRequisite Rollup

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Work and Asset Management. The patches are available as a convenience rollup inside the

zip file 'Oracle Utilities Application Framework v4.3.0.3.0 Single Fix Prerequisite Rollup for Oracle Utilities Work and Asset Management v2.1.1.1.0.zip' which is part of the downloaded Media Pack.

For a list of the patches that are included in this rollup, refer to Appendix Application Framework Prerequisite Patches.

Follow these steps for installing the application patches on top of Oracle Utilities Application Framework 4.3.0.3.0:

1. Copy the file, WAM-V21110-FW-PREREQ-MultiPlatform.jar, in the delivered package to a <TEMPDIR>. Unjar using below command:

   ```
   jar -xvf WAM-V21110-FW-PREREQ-MultiPlatform.jar
   ```

2. Initialize the Framework environment that you want to install the Framework patch rollup into:

   UNIX:

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

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

3. Install application patches:

   a. Navigate to the <temp location>/ FW-V4.3.0.3.0-Rollup/Application folder

   b. Execute the group installation script:

      Unix /Linux:

      ```
      chmod a+x installSFgroup.sh
      chmod a+x FW*/*.sh
      ./installSFgroup.sh
      ```

      Windows:

      ```
      installSFgroup.cmd
      ```

Installing the Oracle Utilities Work and Asset Management Application Component

This section describes how to install the application component of Oracle Utilities Work and Asset Management, including:

- Copying and Decompressing Install Media
- Installing the Application Component
- Performing Post-Installation Tasks

Copying and Decompressing Install Media

The Oracle Utilities Work and Asset Management installation file is delivered in jar format for both UNIX and Windows platforms.

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

1. Log in to the application server host as the administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.

2. Download the Oracle Utilities Work and Asset Management V2.1.1.1.0 Multiplatform from Oracle Software Delivery Cloud.

3. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Work and Asset Management application environment. This

can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

4. Copy the file, WAM-V2.1.1.1.0-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.

5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf WAM-V2.1.1.1.0-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 W1.V2.1.1.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing the Application Component

Follow the steps below to install Oracle Utilities Work and Asset Management application component:

1. Log in to the application server host as the administrator user ID (default cissys).

2. Change directory:

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

where <install_dir> is the location where the Oracle Utilities Asset Management Base application component is installed.

3. Initialize the environment by running the appropriate command:

UNIX:

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

Windows:

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

4. If the environment is running, stop it by running the appropriate command:

UNIX:

```
./spl.sh stop
```

Windows:

```
spl.cmd stop
```

5. Change to the <TEMPDIR>/W1.V2.1.1.1.0 Directory.

6. Execute the install script:

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

UNIX:

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

Windows:

```
install.cmd
```

Note: •If you are using demo certificates, please execute the below command before starting the environment:

UNIX:

```
cd $SPLEBASE/bin
perl demo_gen_cert.plx
```

Windows:

```
cd %SPLEBASE%/bin
perl demo_gen_cert.plx
```

Once the install has finished successfully, generate the app viewer as described below.

Performing Post-Installation Tasks

1. Generate the appviewer by following the steps below:

   a. Change the directory.

   ```
   cd <install_dir>/bin ,
   ```
   where <install_dir> is Oracle Utilities Work and Asset Management Application Component installation directory

   b. Run the script to generate the appviewer.

   UNIX:

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

   Windows:

   ```
   genappvieweritems.cmd
   ```

2. Create a default Oracle Utilities Work and Asset Management user by following the steps below:

   a. For HTTP (Non-SSL) Connections:

   ```
   ant -f $SPLEBASE/splapp/userAdmin.xml -
   Dadmin.server.url=t3:<weblogic-host>:<weblogic-port> -
   Dadmin.user=<weblogic-admin-username> -
   Dadmin.password=<weblogic-admin-password> -Duser.name=WAMUSER -
   Duser.password=<password>
   ```

   b. For HTTPS (SSL) Connections:

   ```
   ant -f $SPLEBASE/splapp/userAdmin.xml -
   Dadmin.server.url=t3s:<weblogic-host>:<weblogic-port> -
   Dadmin.user=<weblogic-admin-username> -
   Dadmin.password=<weblogic-admin-password> -Duser.name=WAMUSER -
   Duser.password=<password>
   ```

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 Utilities Work and Asset Management Server Administration Guide* for more information on further configuring and operating the system.

Chapter 7

Additional Tasks

This section describes tasks that should be completed after installing Oracle Utilities Work and Asset Management, including:

- Importing Self-Signed Certificates

- Integrating Existing Customer Modifications

- Customizing Configuration Files

- Integrating Existing Customer Modifications

- Generating the Application Viewer

- Configuring the Environment for Batch Processing

- Configuring Secure Sockets Layer (SSL)

- Domain Templates (Linux Weblogic 12.1.3.0+ only)

- Database Patching

Importing Self-Signed Certificates

If you are using self-signed certificates and the Inbound Web Services (IWS) feature, then it is necessary to import these certificates into the Oracle Utilities Application Framework truststore file.

Perform the following commands:

1. Start Weblogic.

2. Initialize a command shell and setup the environment by running the following:

Unix:

```
$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
 For example:
/ouaf/TEST_ENVIRON1/bin/splenviron.sh -e TEST_ENVIRON1
```

Windows:

```
%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:

```
$SPLEBASE/bin/initialSetup.sh -i
```
Windows:

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

> **Note**: This needs to be performed before deploying the IWS application.

Customizing Configuration Files

If you wish to make customer modifications to various configuration files, create a 'CM copy' of the template file or a user exit. This preserves your changes whenever initialSetup is executed; otherwise, your changes to the delivered template files will be lost if it is patched in the future:

For example, to customize hibernate properties of the SPLWeb web application, perform the following:

1. Locate the hibernate.properties.template in the $SPLEBASE/templates directory

2. Copy the file to cm.hibernate.properties.template.

3. Apply your changes to cm.hibernate.properties.template.

4. Update application war file with the latest changes by executing the following command:

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

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

Refer to the Oracle Utilities Application Framework SDK documentation for more details.

Integrating Existing Customer Modifications

Existing Customer Modifications (CM) applied to an application server on an earlier release cannot be applied directly to a later version. CM code needs to be applied from an SDK version compatible with this release.

Refer to SDK documentation for more information about migrating CM code.

Generating the Application Viewer

You may extend application viewer capabilities within an environment by generating additional items. These include information about algorithm types, algorithms, maintenance objects and data dictionary information. The Javadoc indexes are also re-built.

To generate the additional items in the application viewer, perform the following:

1. Shut down the environment.

2. Initialize a command shell and setup the environment by running the following:

   Unix:

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

   For example:

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

   Windows:

   %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.

Building Javadocs Indexes

Rebuilding Javadoc indexes is already part of generating application viewer above. However, there are times when you need to run it separately. For example, this is required after customer modifications (CM) have been applied to an environment when it includes Java code.

Perform the following to rebuild the Javadoc indexes.

Windows:

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

UNIX:

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

Configuring the Environment for Batch Processing

See the *Server Administration Guide* for information on configuring the environment for batch processing.

Customizing the Logo

To replace the Oracle Utilities logo on the main menu with another image, put the new image <customer_logo_file>.png 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>.png

UNIX:

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

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.

Configuring Secure Sockets Layer (SSL)

Secure Sockets Layer (SSL) provides secure connections by allowing two applications connecting over a network to authenticate each other's identity and by encrypting the data exchanged between the applications. Authentication allows a server, and optionally a client, to verify the identity of the application on the other end of a network connection. Encryption makes data transmitted over the network intelligible only to the intended recipient

Follow these steps to configure Secure Sockets Layer:

1. Obtain an identity (private key and digital certificates) and trust (certificates of trusted certificate authorities) for WebLogic Server.

    Use the digital certificates, private keys, and trusted CA certificates provided by the WebLogic Server, the CertGen utility, the keytool utility, or a reputable vendor such as Entrust or Verisign to perform this step.

2. Store the identity and trust.

    Private keys and trusted CA certificates which specify identity and trust are stored in keystores.

3. Configure the identity and trust keystores for WebLogic Server in the WebLogic Server Administration Console.

    See "Configure keystores" in the Oracle WebLogic Server Administration Console Online Help.

    For additional information on configuring keystores, refer to http://docs.oracle.com/middleware/1213/wls/WLACH/taskhelp/security/ConfigureKeystoresAndSSL.html

4. Set SSL configuration options for the private key alias and password in the WebLogic Server Administration Console.

    Optionally, set configuration options that require the presentation of client certificates (for two-way SSL).

    For additional information, refer to the following topics:

    *   Servers: Configuration: SSL (*http://docs.oracle.com/middleware/1213/wls/WLACH/pagehelp/Corecoreserverserverconfigssltitle.html*)

- Configure two-way SSL (*http://docs.oracle.com/middleware/1213/wls/WLACH/taskhelp/security/ConfigureTwowaySSL.html*)

- Obtaining and Storing Certificates for Production Environments (*http://docs.oracle.com/middleware/1213/wls/SECMG/identity_trust.htm#SECMG798*)

- Configuring Keystores with WebLogic Server (*http://docs.oracle.com/middleware/1213/wls/SECMG/identity_trust.htm#SECMG383*)

  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.

The identity and trust keystore files and other SSL certificate related options are configured using the configureEnv.sh|cmd utility.

Setting Up an Application Keystore

This section describes how to set up a keystore in your system. The keystore is used for functionality such as digital signatures for document numbers, and encryption for credit card security.

Note that this different from the Oracle Utilities Application Framework (also called the system) keystore and the weblogic SSL keystores.

For additional information about document numbers, digital signatures, and encryption, see the online help.

For additional information about using the Java keytool utility, see the following section of the Oracle Java SE documentation:

http://docs.oracle.com/javase/7/docs/technotes/tools/solaris/keytool.html

Follow this procedure to set up the keystore in your environment:

1. Generate the keystore. The following command creates the file ".mykeystore" in directory ${SPLEBASE}:

```
keytool -genkeypair -alias <keyalias> -keyalg RSA -sigalg
SHA256withRSA -keystore ${SPLEBASE}/<filename> -keysize 1024
-storetype JCEKS -dname "CN=<name>, OU=<unit>, O=<organization>,
C=<country>" -validity 365
```

For example:

```
keytool -genkeypair -alias ouaf.application -keyalg RSA -sigalg
SHA256withRSA -keystore ${SPLEBASE}/.mykeystore -keysize 1024
-storetype JCEKS -dname "CN=Mark Jones, OU=TUGBU, O=Oracle, C=US"
-validity 365
```

The utility will prompt you for the keystore and key passwords. Make sure that they are the same.

2. Configure the following template files by adding the following entries:

For WebLogic Server:

- To enable in WebLogic, edit the following in ${SPLEBASE}/templates/startWeblogic.sh.template:

```
JAVA_OPTIONS="$JAVA_OPTIONS
-Dcom.oracle.ouaf.keystore.file=$SPLEBASE/<filename>"

JAVA_OPTIONS="$JAVA_OPTIONS
-Dcom.oracle.ouaf.keystore.password=<keystore_password>"
```

For <keystore_password>, use the same password entered in the keytool utility.

- To enable this in batch, edit the threadpoolworker.properties.template:

```
com.oracle.ouaf.keystore.file=@force_forward_slash(SPLEBASE)@/
.mykeystore
com.oracle.ouaf.keystore.password=<keystore_password>
```

Note: Because the path needs to be passed with forward slashes even on Windows platforms, the force_forward_slash function will convert any "\" to "/".

For <keystore_password>, use the same password entered in the keytool utility.

For WebSphere Server:

- Create the password file.

  ```
  echo ab987c | tr -d '\n'>$SPLEBASE/.passFile
  ```

  Note: In above command, please replace "ab987c" with your password string.

- Add Keystore entries to spl.properties templates:

  Open each of the five spl.properties templates mentioned below and add the following two lines in each of the templates

  ```
  com.oracle.ouaf.keystore.file=@SPLEBASE@/.mykeystore
  com.oracle.ouaf.keystore.passwordFileName=@force_forward_slash(
  SPLEBASE)@/.passFile
  ```

  List of spl.properties templates (located in ${SPLEBASE}/templates/ folder):

    - spl.properties.iws.template
    - spl.properties.template
    - spl.properties.service.template
    - spl.properties.XAIApp.template
    - spl.properties.standalone.template

3. Re-initialize the environment to propagate these changes by executing the initialSetup.sh/ cmd.

4. Restart the environment.

Domain Templates (Linux Weblogic 12.1.3.0+ only)

The intended use of the domain templates is for native/clustered installation of the Oracle Utilities Application Framework environment into a Weblogic domain. The domain template(s) defines the core set of resources within a Weblogic domain, including an Administration Server along with the basic configuration information for a Oracle Utilities Application Framework based application. The domain template is a "snapshot" of the delivered embedded "splapp" domain. When working with domain templates you will need to manage the application (stopping, starting, deployment, undeployment) utilizing the Weblogic delivered utilities.

- Install and configure application stack (Oracle Utilities Application Framework and the product application)

  Note: Environment will need to be configuring to deploy in ear format.

- Review domain templates (Simple /Complex)

- Execute config.sh and enter the path of the domain template file

- Configure domain

- Complete domain configuration

  Note: Configure nodemanager.properties and setDomainEnv.sh

- Update SPLEBASE (ENVIRON.INI)

Detailed Description

The product installation includes a two predefined WebLogic Server Domain templates. The delivered domain templates are located under the SPLEBASE:

$SPLEBASE/tools/domaintemplates

- Oracle-Utilities-Simple-Linux-12.1.3.0.0.jar

- Oracle-Utilities-Complex-Linux-12.1.3.0.0.jar

The Simple Domain Template is for use with one machine and does not include a Weblogic cluster, this domain configuration is similar to current delivered embedded splapp domain, with the exception that there will be two Weblogic servers (utilities_server1 and a "Admin Server").

The Complex Domain Template is configured for use with a pre-configured Weblogic cluster, with one machine configured, node manager settings, and one managed server configured.

The delivered domain templates defines the full set of resources within an Oracle Utilities Application Framework domain including:

- Demo certificates (the demo certificates will need to be updated for production use)
- Setting of XML Registry Settings
- Setting of Default users and groups
- Machine configuration
- Default Users and Groups

    Note: The Users and Groups match the delivered values delivered with the embedded domain.

- JTA Settings
- Node Manager Settings
- WebLogic Server

Configure Node Manager Properties to allow SSL

Follow the steps below to update the nodemanager.properties with the correct Private Key Passphrase.

Under the following location: DOMAIN_HOME/nodemanager update the following properties in the nodemanager.properties file:

- CustomIdentityKeyStorePassPhrase=
- CustomIdentityPrivateKeyPassPhrase=

Set these to the value "0uaf_demo_c3rt"

> **Note**: At first when the node manager is started, the values in the file will be encrypted. These values will need to updated in production configuration with the proper values based on your configuration.

Configure setDomainEnv.sh Script

You will need to set the value of SPLEBASE with the proper value for your implementation. Under the following location, DOMAIN_HOME/bin, update the setDomainEnv.sh file and add the following

```
SPLEBASE="${SPLEBASE}"
```

> **Note**: You will need to update ${SPLEBASE} with appropriate value based on your configuration.

Update SPLEBASE

The following update in the configuration indicates if the embedded configuration is being utilized or if the environment is a native installation to Weblogic. When this item is populated in the environment, the delivered base tools will be able to identify that the starting and stopping of the environment are being done under the domain home.

1. Initialize the Environment: splenviron.sh –e <Environment_Name>

2. Execute: configureEnv.sh –a

3. Select Menu Item: 52. Advanced Web Application Configuration

    ==

4. 02. Configuration Option: Domain Home Location

    Current Value <ENTER>:

    The Weblogic Domain Home location, when this parameter is populated you will need to use the native Weblogic tools for maintenance (starting, stopping, deployment, and undeployment).

    Enter Value: <Enter your domain home location>

5. Once the Domain Home location has been completed, Enter <P> Process

Update setDomainEnv.sh

Edit setDomainEnv.sh and change antlr, serializer and xalan jar versions to the following:

*   antlr-2.7.7.jar

*   serializer-2.7.2.jar

*   xalan-2.7.2.jar

Database Patching

The database patching utility is delivered under SPLEBASE and is Java-based so you are able to create a standalone package to be able to install database patches on a separate server that has Java 7 installed. You can also install database patches using the components that are delivered under SPLEBASE without the need to move the database patching utility to a different server.

The following is an overview of the process to install database patches on a separate server. You will need to create a jar file containing the utilities and supporting files to allow you to run the database patch installer on another server.

To generate the jar file:

1. Initialize a command shell:

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

UNIX:

Log on to your UNIX box as the Oracle Utilities Administrator (default cissys) and open a shell prompt.

In the following example, replace the variables

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

* $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/DEMO/bin/splenviron.sh -e DEMO
```

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\DEMO\bin\splenviron.cmd -e DEMO
```

2. Execute the following script to generate the jar file.

   UNIX:

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

   Windows:

   ```
   %SPLEBASE%\bin\createDBStandlone.cmd
   ```

   > **Note**: By default, the output jar db_patch_standalone.jar is created in SPLEBASE/tools/dbstandalone. You can use the –l option to change the default directory.

3. Transfer the generated jar (db_patch_standalone.jar) to the Windows/Unix machine where you want to run the database patching utility.

4. Extract the contents of the archive file:

   ```
   jar xvf db_patch_standalone.jar
   ```

   > **Note**: You must have Java 7 JDK installed on the machine to use the jar command. Be sure to install the JDK that is supported for your platform.

Overview of Database Patching Application

The database patching utility requires you have Java 7 JDK installed on the machine to execute the database patch application process.

The patch application process will perform following items to account for executing patch application under SPLEBASE or on a standalone server.

The database patch application utility will look do the following when it is executed:

• Checks to see if the environment variable $SPLEBASE is set.

If the $SPLEBASE variable is set, the utility uses the libraries under $SPLEBASE to apply the patch.

• When the $SPLEBASE is not set, the utility checks to see if the TOOLSBIN environment variable is set.

If the TOOLSBIN is set, the utility uses the libraries under the TOOLSBIN location.

• When both SPLEBASE and TOOLSBIN environment are not set, the utility prompts for the location of the TOOLSBIN.

The TOOLSBIN is the location of the of the application scripts ouafDatabasePatch.sh[cmd]

Unix Example: - The TOOLSBIN location would be set to /ouaf/dbpatch/bin

```
export TOOLSBIN=/ouaf/dbpatch/bin
```

Unix Sample - Database Patch Application (ouafDatabasePatch.sh)

>**Note**: The default permissions (ouafDatabasePatch.sh), may need to be adjusted to be executed by your user and group, when applying database fixes.

• Sample Execution – Passing a Password

```
    ./ouafDatabasePatch.sh -x ouafadm -p "-t O -d
CISADM_Z1_12C_43030_BLD001,slc04lds:1522:Z143Q12C"
```

• Sample Execution – Prompting for a Password

```
   ./ouafDatabasePatch.sh  -p "-t O -d
CISADM_Z1_12C_43030_BLD001,slc04lds:1522:Z143Q12C"
```

• Sample Execution - passing in the tools bin location

```
  /ouafDatabasePatch.sh -u
       ouafDatabasePatch.sh [-h] [-u] [-v] [-x] [-t tools dir] [-p
ouafparms]
           -h   displays help of ouafpatch
           -u   displays usage of ouafDatabasePatch.sh
           -v   displays version of ouafpatch
           -x   password to be passed to ouafpatch
           -b   location of the tools bin directory
           -p   parameters directly passed to ouafpatch
                must be the last parameter passed and
                be enclosed with quotes
```

WINDOWS Example:

The TOOLSBIN location would be set to c:\ouaf\dbpatch\bin

```
   SET TOOLSBIN=c:\ouaf\dbpatch\bin
```

Windows Sample - Database Patch Application (ouafDatabasePatch.cmd)

• Sample Execution – Passing a Password

ouafDatabasePatch.cmd -x password -p "-t O -d
SCHEMA_NAME,DBSERVER:DBPORT:DBSID"

• Sample Execution – Prompting for a Password

ouafDatabasePatch.cmd –p "-t O -d SCHEMA_NAME,DBSERVER:DBPORT:DBSID C"

• Sample Execution - passing in the tools bin location

ouafDatabasePatch.cmd -b "C:\temp\db_patch_standalone\bin" -p "-t O -d
SCHEMA_NAME,DBSERVER:DBPORT:DBSID -c
C:\temp\dbrollup\CDXPatch2\CDXPatch.ini"

Windows Sample Usage

```
     ouafDatabasePatch.cmd -u
     USAGE:
     USAGE:ouafDatabasePatch.cmd[-h] [-u] [-v] [-x] [-b tools dir] [-
p ouafparms]
     USAGE:          -h   displays help of ouafpatch
     USAGE:          -u   displays usage of ouafDatabasePatch.cmd
     USAGE:          -v   displays version of ouafpatch
     USAGE:          -x   password to be passed to ouafpatch
     USAGE:          -b   location of the tools bin directory
     USAGE:          -p   parameters directly passed to ouafpatch
```

```
USAGE:                must be enclosed with quotes: "   "
USAGE:
USAGE:
USAGE:
```

Chapter 8

Installing Optional Products

This chapter describes the optional products that can be installed. These should be completed after installing Oracle Utilities Work and Asset Management. These products include:

- Oracle BI Publisher
- Esri ArcGIS Server

Oracle BI Publisher

This section describes the steps required to configure Oracle Utilities Work and Asset Management and Oracle BI Publisher to support an Oracle BI Publisher reporting solution. This section includes:

- Supported BI Publisher Versions
- About Oracle BI Publisher Enterprise
- Configuring the System to Enable Reports
- Sample Reports Supplied with the Product
- Sample Reports Supplied with the Product

Supported BI Publisher Versions

At the time of release, supported Oracle BI Publisher versions for include:

- **Windows:** BI Publisher 11g (11.1.1.7.0)
- **Unix:** BI Publisher 11g (11.1.1.7.0)

About Oracle BI Publisher Enterprise

Oracle BI Publisher Enterprise provides the tools for:

- Making reports available over the web (establishing the required report server processes)
- Integrating reports with the Oracle Utilities Work and Asset Management system
- Scheduling reports to run on a regular basis
- Managing instances of the reports that have been created by a previous run
- Managing user access to the report instances

Installing Oracle BI Publisher Enterprise

This section assumes that you have already installed Oracle BI Publisher Enterprise such that requests can be pointed to the Oracle BI Publisher Enterprise running on Windows or Unix.

> **Note:** If you are running the BI Publisher server on a Linux or Unix machine that does not have an X Server installed, reports that contain images may not be properly generated.
>
> To fix this, specify the following property at the java command line:
>
> `-Djava.awt.headless=true`

Configuring the System to Enable Reports

This section describes the steps needed to configure your system to enable reports, including:

- Configuring the System to Invoke Oracle BI Publisher Enterprise Real-time
- Interfacing with Oracle BI Publisher Enterprise Batch Scheduler

Configuring the System to Invoke Oracle BI Publisher Enterprise Real-time

In order to invoke Oracle BI Publisher Enterprise from within Oracle Utilities Work and Asset Management, the system must be configured accordingly.

Specifying Reporting Tool Options

The following information should be defined on Reporting Tool Options table:

- **Reporting Server** is the web server URL where the reporting tool is installed.

- **Reporting Folder** defines the name of the directory on the Oracle BI Publisher server where reports are located. The Oracle Utilities Work and Asset Management reporting tool algorithm constructs the URL needed to open Oracle BI Publisher Enterprise based on the information provided on Reporting Options.

  The same folder name should be used as a report folder in Oracle BI Publisher Enterprise where reports are published.

Reporting Tool Algorithm

The base product provides an Installation Options system event called Reporting Tool which should contain an algorithm which invokes the reporting tool in real-time. Oracle Utilities Work and Asset Management provides an algorithm type called F1-BIPR-INV, which invokes Oracle BI Publisher Enterprise.

This algorithm relies on information defined in the Reporting Options table: the reporting server and folder names for accessing the reporting tool. The algorithm constructs several strings, for example, the URL of the BI Publisher, information about the report being requested and user info in the format expected by Oracle BI Publisher Enterprise. The Java program returns the correct URL to the browser. The browser then opens a BI Publisher Enterprise window with the appropriate URL.

To use the F1-BIPR-INV algorithm type to invoke Oracle BI Publisher Enterprise, perform the following steps:

1. Create an algorithm for this algorithm type.

2. On the installation options, add an entry to the algorithm collection with an algorithm entity of Reporting Tool and indicate the algorithm created in the previous step.

Interfacing with Oracle BI Publisher Enterprise Batch Scheduler

Presently Oracle Utilities Work and Asset Management does not provide support for batch jobs with Oracle BI Publisher. Please use Oracle BI Publisher directly in order to schedule reports to run in batch.

Sample Reports Supplied with the Product

The system provides several sample reports that may be used by your organization as a starting point for creating a new report. The following sections provide instructions on how to set up your implementation environment to use the sample reports.

If you would like to use any of the sample reports, you need to perform some steps to be able to execute them in an implementation environment. This section walks you through the steps needed, including:

- Unzipping Oracle Utilities Work and Asset Management Report Files

- Oracle Functions and Packages

- Publishing the Sample Reports in Oracle BI Publisher Enterprise

- Preparing Oracle BI Publisher Enterprise Server For integration

- Copying a Report Definition From the Demonstration Database

- Copying a Report Definition From the Demonstration Database

Unzipping Oracle Utilities Work and Asset Management Report Files

Unzip the 'Oracle Utilities Work and Asset Management v2.1.1.1.0 Reports.zip' file from the installation media into an empty directory. We'll refer to this directory as the reports extract folder.

> **Note**: By default, the reports provided are read only. You will need to reset the permissions on the files before making any changes, for example, to configure the default data source.

Oracle Functions and Packages

Each report has one or more corresponding database functions and packages that store the business logic to fetch the data from the database. This data is then presented in the report.

The installation media contains the required database functions and packages. These files are in the reports extract folder under ..\WAM-V21110-Reports\BIPublisher\functions\oracle.

The prerequisite for Oracle Utilities Work and Asset Management reports to work against the target database is setting up of a RPTUSER database user. This user should have read access to all Oracle Utilities Work and Asset Management database objects and execution privilege on the stored procedures that the reports access.

The steps involved in setting up the RPTUSER are:

1. Create or refresh the Oracle functions and packages.

   - Using SQLPLUS, log in to the target database as the user CISADM.
     This user owns Oracle Utilities Work and Asset Management schema objects.

   - Execute the script CDX_rptfn.sql by entering the following command at the SQL prompt:
     SQL> @CDX_rptfn.sql
     ("SQL>" denotes the SQL prompt and doesn't need to be typed).

2. Create the RPTUSER.

   - Navigate to the Database\Oracle folder.

- Edit the file CDX_rptuser.sql to match your requirements.
  Ensure that you review the user password and the default and temporary tablespace names for the user.

- Log in to the target database as a DBA user using SQLPLUS.

- Execute the script by entering following command at SQL prompt:
  SQL> @CDX_rptuser.sql

3. Compile the report function.
   SQL> @CDX_compfn.sql

4. Configure security.
   This involves generating synonyms in RPTUSER and granting it privileges to execute the stored procedures and read the Oracle Utilities Work and Asset Management tables. The utility prompts you to answer for the following questions:

   - Enter the Oracle user that owns the schema (e.g. CISADM): **CISADM**

   - Enter the password for the CISADM user: **CISADM**

   - Enter the name of the Oracle Database: *Your_db*

   - Enter a comma-separated list of Oracle users in which synonyms need to be created (e.g. cisuser,cisread): **RPTUSER**

   - Select the following options:

     - (A/a): Generate security for All objects in the Database?

     - (O/o): Generate security for specific Objects inputted in this terminal?

     - (F/f): Generate security for specific objects generated from an input File?

     <<<< select A to generate security to all objects >>>>

The utility runs and configures security for the Oracle Utilities Work and Asset Management objects.

Publishing the Sample Reports in Oracle BI Publisher Enterprise

The installation media contains sample reports provided with the system. The report files are in the reports extract folder under ..\WAM-V21100-Reports\BIPublisher\reportFiles.

Configuring Oracle BI Publisher Enterprise

This section assumes that you have already installed Oracle BI Publisher Enterprise.

> **Note:** If you install Oracle BI Publisher Enterprise in a location other than the default installation directory, adjust the path descriptions to match your actual install directories.

The first step you need to take in order to use any of the samples is to publish the report in Oracle BI Publisher Enterprise. You need to create a folder in Oracle BI Publisher Enterprise named as defined on Reporting Options table in Oracle Utilities Work and Asset Management and publish the report extracted to the reports extract folder.

Create a folder named **WAM** in the *BI_Repository_Path*\Reports folder. Copy all Oracle BI Publisher sample reports into the WAM folder.

> **Note:** To check for the location of your BI repository path, log in to the BI console as an Administrator and go to **Administration, Server Configuration.** If the repository type is File System, the path will be seen in Catalog region. If the repository type is not File System you cannot load the sample reports.

Please refer to the Oracle BI Publisher Enterprise documentation for more information.

Preparing Oracle BI Publisher Enterprise Server For integration

The WAM Reporting Options Table should include the following information about Reporting Server and Folder:

- Reporting Folder: WAM

- Reporting Server: URL of reporting server. For example: http://sf-ugbu.splwg.com:9704

If you want to have a different name for your reporting folder, you can rename the **WAM** folder on the server and put the corresponding value on the Reporting options table.

Accessing the BI Publisher Enterprise Server

1. Access the BI Publisher Enterprise Server as Administrator.

2. On the Admin tab define a **JDBC Connection** section under **Data Sources**, and add a new data source using **Add Data Source**.

   Create a new Data Source named **WAM** with connection details pointing to the Oracle Utilities Work and Asset Management database using the RPTUSER credentials set up in the prior section.

3. Test Connection to make sure the Database connection is successful and save changes using **Apply**.

Configuring a new group in WebLogic

1. Configure a group within WebLogic for Authentication called "BIConsumer".

2. Create an Application Role called "WAM Reports" to access the BI Publisher reports.

3. Associate the member "BIConsumer" with the "WAM Reports" Application Role.
   The role will now be visible from within the BI Publisher Enterprise. Within BI Publisher Enterprise, for the Role Name **WAM Reports** you just created, click on **Add Folders** to add the WAM sample reports to the Allowed Folders.

   Do the same for Role Name **WAM Reports**. Click on **Add Data Sources** to add the Oracle Utilities Work and Asset Management data source to the Allowed Data Sources.

4. To include appropriate Roles for Role Name **WAM Reports**, click on **Add Role**.

Uploading Reports to BI Publisher

From BI publisher server console, upload reports to BI Publisher. To do so:

1. Select **Administration**, **System Maintenance**, and then click **Server Configuration**.

2. Scroll down to the **Catalog** section and verify that the path to the repository folder is correct in the BI Publisher repository field and is pointing to the **WAM** folder to which reports were copied.

3. Click **Upload to BI Presentation Catalog** to upload the reports to BI Publisher.

Verifying the Data Model Details

From BI publisher server console, verify that the data model details are correct. To do so:

1. From the Reports folder, select the data model of the report.

2. Click **Edit** to edit the data model.

3. Select **Data Model** from the tree on the left.

4. Verify that the following are correct:

   - Default Data Source: Set the data source name created in Step 2 of section Accessing the BI Publisher Enterprise Server.

   - Oracle DB Default Package: Set this to **W1_BI_RPT.**

- XML Output Options: Ensure that the option **Include Parameters Tag** is checked.

5. Verify that the data model is pointing to the correct report. Select a report from the Reports folder and click **Edit**. Hover on the Data Model link to check it is pointing to the correct data model.

   To modify the data model, click the magnifying glass icon and select the correct data model.

Verifying Sample BI Publisher Reports on the Server:

1. Log in to Oracle BI Publisher Server as a user belonging to BIConsumers.

2. Verify that all sample reports provided appear in the **WAM** folder.

Single-sign-on and more sophisticated security must be tailored to the specific implementation.

Copying a Report Definition From the Demonstration Database

In order to use one of the sample reports in your Oracle Utilities Work and Asset Management region, you must define the meta-data for the report. The demonstration database contains the report definition and all its related data for each sample report.

The data present in the demonstration application should be manually created in the database that is being used by the current Oracle Utilities Work and Asset Management application.

1. To copy the data, access the data in Oracle Utilities Work and Asset Management demonstration application using the following menu navigation:

   Admin -> R -> Report Definition

2. Click on Search. In the report code field, enter % and click search.

For each report visible in the search results, follow the steps below to copy the report definitions:

1. Click on the report to see the report definition details.

2. In the current Oracle Utilities Work and Asset Management application, access the same menu navigation to manually create the records.

   Admin -> R -> Report Definition

3. Click **Add**.

4. Enter the same values for the report definition that are present in the report definition details of the Oracle Utilities Work and Asset Management demo environment.

5. Click **Save**.

Esri ArcGIS Server

The GIS Integration uses ESRI ArcGIS server to allow users to view asset layers on a map, and to create and view work requests and work orders on the map.

Refer to the GIS integration section of the *Oracle Utilities Work and Asset Management Administrative Guide* for configuration information after installing.

> **Note**: For Esri integration functionality, you must purchase Esri ArcGIS Server software or online cloud subscription from Esri.
>
> For demonstration purposes, the Oracle Utilities Work and Asset Management demo data was configured to use the Esri Water Distribution Network demo map provided by Esri (http://www.arcgis.com/home/item.html?id=b0608f7dccdf480eb8d02771ebe72d87). Instructions on how to load and acquire this demo content are available from Esri.

Perform the following for initial installation and importing the GIS metadata:

- Installing the Esri ArcGIS Server
- Verifying Pre-Requisites
- Importing Feature Classes to Database
- Deploying Map Packages

Notes on SSL:

- Oracle Utilities Work and Asset Management is set up with SSL (https) *enabled* as default.
- Esri ArcGIS is set up with SSL (https) *disabled* as default.

Installing the Esri ArcGIS Server

1. Install ArcGis on a server different from the Oracle Utilities Work and Asset Management server. Esri ArcGIS 10.4.1 is supported.

2. Please refer to instructions available on the ArcGIS (http://resources.arcgis.com/) website for more information.

Verifying Pre-Requisites

Ensure that the following pre-requisite conditions are met, before proceeding with importing feature classes to database and deploying map packages:

- ArcGIS for Desktop Software must be installed.
- ArcGIS for Server Software must be installed.
- ESRI ArcGIS DB must be created.
- ESRI ArcGIS DB connection must be created.
- ESRI ArcGIS DB must be registered in ArcGIS server.

Importing Feature Classes to Database

1. Download Oracle Utilities Work and Asset Management v2.1.1.1 ESRI Integration component from the Oracle Utilities Work and Asset Management v2.1.1.1 package.

2. Copy the file to the server on which ArcGIS is installed.

3. Unzip the downloaded file to some directory <MetadataDir>.

4. For each XML file in <MetadataDir>/xmlWorkspaceDocument, follow the procedure mentioned below to import Feature Classes to Database:

a. Launch the **ArcCatalog** application from the **Start Menu** -> **Arcgis**.

b. Right click on the Database connection. Click **Connect**.

c. Right click on the Database connection again.

d. Select **Import**->**XML Workspace Document**.

e. On the **Import XML Workspace Document** dialog, select **Schema Only** option.

f. Browse and select the XML file to import from <MetadataDir>/ xmlWorkspaceDocument directory.

g. Click **Next**.

h. Click **Finish**.

Deploying Map Packages

1. Launch the **ArcMap** application from **Start Menu** -> **ArcMap.**

2. In the **ArcMap** application, click **Geoprocessing** -> **Arc Toolbox**.

3. Perform the following steps to extract the 'Map Package' for each map package file(.mpk) in <MetadataDir>/mapPackage directory:

   a. From the ArcToolbox tree, expand **Data Management Tools**.

   b. Expand **Package**.

   c. Select **Extract Package**.

   d. In the **Input Package** field, provide the location of .mpk file.

   e. In the **Output Folder** field, provide the target directory to which map package file should be extracted.

   f. Click **OK**.

4. Perform the following steps once for each extracted map package file:

   a. Launch the **ArcMap** application from **Start Menu** -> **ArcMap.**

   b. In the ArcMap application, click **File** -> **Open** to open the Extracted Map Package Document. Use the file under v101 directory.

   c. Once the document is opened, under the **Layers** tree on the left, right click on the layer and **Select Layer Properties**.

   d. On the **Layer Properties** dialog, click the **Source** tab.

   e. Click **Set Data Source** to set the data source.

   f. Navigate to the Database connection and select the Feature Class (Example: SDE.W1_Activity) corresponding to the currently selected layer (Example: W1_Activity) and click **Add**.

   g. Click **Apply** on the Layer Properties dialog.

   h. In the Arc Map application, share the Map Document as a service using **File->Share As->Service**.

   i. Click **Service** and perform the below steps.

   j. Select **Publish a Service** and click **Next**.

   k. Select the server connection and provide the Service Name and click **Next**.

   l. Click **Create New Folder** and enter a folder name relevant to the environment.

   m. Click **Continue**.

n. In the service editor, select **Capabilities** tab from the left hand side menu and select **Feature Access** check box.

o. Click **Publish** button at the top right corner of the service editor dialog.

You should see a success message after the publish is successful.

Appendix A

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 B

Installation and Configuration Worksheets

Application Framework Installation and Configuration Worksheets

Environment ID, Roles, Third Party Software Configuration

```
*************************************
* Environment Installation Options *
*************************************
1. Environment ID, Roles, Third Party Software Configuration
        Environment ID:
        Server Roles:
        Oracle Client Home Directory:
        Web Java Home Directory:
        Hibernate JAR Directory:
        ONS JAR Directory:
        Web Application Server Home Directory:
        WebLogic Server Thin-Client JAR Directory:
        ADF Home Directory:
        OIM OAM Enabled Environment:                      false
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment ID	ENVIRONMENT_ID	Identifier to associate different application servers as part of the same environment. On a new installation, the default is a random 8 digit number.	
Server Roles	SERVER_ROLES	The type of role the server performs whether for batch or online. A server may be configured to have an online and/or batch role. Only the menu items appropriate to the role will appear on the menus, and only the appropriate scripts will be executable in the application server.	
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client. Example Location: /oracle/client/product/12.1.0.2.0	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Java Home Directory	JAVA_HOME	Java home that will be used by the web application server. Example Location: /ouaf/java/jdk1.8.0_31	
Hibernate JAR Directory	HIBERNATE_JAR_DIR	Location on the disk where the hibernate jar files are installed.	
**ONS JAR Directory	ONS_JAR_DIR	Location on the disk where the ons-12.1.0.1.jar file is installed. **Required for Oracle RAC installation. See the *Server Administration Guide* for more information.	
Web Application Server Home Directory	WEB_SERVER_HOME	Location on the disk where the application server is installed. Example Location: WebLogic: /ouaf/middleware/wlserver_12.1.3 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 WebSphere: /ouaf/IBM/WebSphere/AppServer WebSphere ND: /ouaf/IBM/WebSphereND/	
WebLogic Server Thin-Client JAR Directory	WLTHINT3CLIENT_JAR_DIR	Location where wlthint3client.jar is located. Populate only if WEB_SERVER_HOME is empty and if the application needs to access JMS from a batch job.	
* ADF Home Directory	ADF_HOME	Location on the disk where ADF is installed. Example Location: /ouaf/jdev11_1_1_8 Note: This is an optional 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 items 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, from the ORACLE_HOME path:

    $ORACLE_HOME/opmn/lib/ons.jar

During the installation the relevant option should be populated with the folder location of the ons.jar.

Keystore Options

Note: The keystore is a set of files used for encryption, decryption and hash generation. The files reside in the following location:

<SPLEBASE>/ks/.ouaf_keystore

<SPLEBASE>/ks/.ouaf_storepass

In order to run the application correctly, data encryption, decryption and hash generation of data in the database and on the application server must be performed using the same keystore; otherwise, the application will fail.

Please review the Security Guide for more information on setting up keystores.

```
2. Keystore Options
    Import Keystore Directory:
    Store Type:                         JCEKS
    Alias:                              ouaf.system
    Alias Key Algorithm:                AES
    Alias Key Size:                     128
    HMAC Alias:                         ouaf.system.hmac
    Padding:                            PKCS5Padding
    Mode:                               CBC
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Import Keystore Directory	KS_IMPORT_ KEYSTORE_ FOLDER	Specify this option if you want to import the keystore files from an external location or directory, during the installation process. This is needed when the customer has an existing environment that has a keystore and the database your new application server. After installation is complete, to configure keystore options, perform the following sequence: configureEnv.sh|cmd –i (enter keystore options) initialSetup.sh|cmd –s (loads keystore) configureEnv.sh|cmd (reenter ouaf encrypted security information such as passwords) initialSetup.sh|cmd (distribute the encrypted data) If this option is left empty, the install process creates a new keystore from scratch.	
Store Type	KS_STORETYPE	Value used for keytool option –storetype **Default value**: JCEKS	
Alias	KS_ALIAS	Value used for keytool option –alias **Default value**: ouaf.system	
Alias Key Algorithm	KS_ALIAS_KEYALG	Value used for keytool option -keyalg	
Alias Key Size	KS_ALIAS_KEYSIZE	Value used for keytool option -keysize	
HMAC Alias	KS_HMAC_ALIAS	Value used for keytool option -alias The following values are fixed: - HMAC Alias Key Algorithm: HmacSHA256 - HMAC Alias Key Size: 256 **Default value**: ouaf.system.hmac	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Padding	KS_PADDING	Value used for encryption/decryption **Default value**: PKCS5Padding	
Mode	KS_MODE	Value used for encryption/decryption Default Vaule: CBC	

Environment Installation Options

```
50. Environment Installation Options
        Environment Mount Point:
        Log Files Mount Point:
        Environment Name:
        Web Application Server Type:              WLS
        Install Application Viewer Module:        true
        Install Demo Generation Cert Script:      true
        Install Sample CM Source Code:            true
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Mount Point	<SPLDIR>	The mount point into which the application is installed. For example: /ouaf for UNIX and C:\ouaf for Windows. This mount point MUST exist and the administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the product environments; the default is cissys). The installation sets permissions on all subdirectories installed under this directory. See <SPLENVIRON> below for more information on how this mount point is used.	
Log File Mount Point	<SPLDIROUT>	A mount point that will contain any application output or application logs. Example value is /ouaf/sploutput for UNIX installation or C:\ouaf\sploutput for Windows. This mount point MUST exist and the administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the product environments; the default is cissys). For each environment initialized, the application logs will be written to the directory <SPLDIROUT>/ <SPLENVIRON> Note: Later in the installation the splenviron.sh (splenviron.cmd) script will set the $SPLOUTPUT (%SPLOUTPUT%) environment variable to point to:<SPLDIROUT>/<SPLENVIRON>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Name	<SPLENVIRON>	A descriptive name to be used as both a directory name under the mount point <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV. On installation a directory <SPLDIR>/<SPLENVIRON> is created, under which the Oracle Utilities Application Framework and Oracle Utilities Work and Asset Management software resides. When multiple environments are set up on the machine you will typically have directories such as: /ouaf/DEV01/.... /ouaf/CONV/.... Each of these contains a complete version of the Oracle Utilities Application Framework and Oracle Utilities Work and Asset Management. Note: Later in the installation process, the splenviron.sh (splenviron.cmd) script will set $SPLEBASE (%SPLEBASE%) environment variable to point to <SPLDIR>/<SPLENVIRON>	
Web Application Server Type	<SPLWAS>	A web application server for the environment to be used. The following value must be selected: **Valid values**: WLS: WebLogic WAS: WebSphere WASND: WebSphere ND Note: Not all web application servers are supported on all platforms; refer to Supported Platforms section for details.	
Installation Application Viewer Module	<WEB_ ISAPPVIEWER>	Denotes if the Application Viewer Web Module will be installed in the environment. When this value is set to false the application viewer will not be accessible in the environment. **Valid values**: true: Application Viewer module will be installed. false: Application Viewer module will not be installed. **Default value**: true Note: When the value of false is selected, the Application Viewer will only be installed at a later date by a complete reinstall of the application.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Install Demo Generation Cert Script	CERT_INSTALL_ SCRIPT	You can install/uninstall later by executing the following script: perl [INSTALL_PACKAGE_FOLDER]/installAR.plx **Valid values**: true: Demo Generation Cert Script will be installed. false: Demo Generation Cert Script will not be installed. **Default value**: true	
Install Sample CM Source Code	CM_INSTALL_ SAMPLE	You can install/uninstall later by executing the following script: perl [INSTALL_PACKAGE_FOLDER]/installAR.plx **Valid values**: true: Sample CM Source Code will be installed. false: Sample CM Source Code will not be installed. **Default value**: true	

Environment Description

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

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

WebLogic Business Application Server Configuration

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Business Server Host	BSN_WLHOST	The host name on which the 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>
      Weblogic SSL Port Number:
      Weblogic Console Port Number:
      WebLogic Additional Stop Arguments:
      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
      Deploy Using Archive Files:                  true
      Deploy Application Viewer Module:            true
      Enable The Unsecured Health Check Service:   false
      MDB RunAs User ID:
      Super User Ids:                              SYSUSER
```

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>	
Weblogic SSL Port Number	WEB_WLSSLPORT	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. For Production, additional actions are required. Do NOT run Production with Demo certificates Example value: 6501	
Weblogic Console Port Number	WLS_ADMIN_PORT	The port number to access the WebLogic Console using https You will use this port when accessing the WebLogic Console Example value: 6500	
Weblogic Additional Stop Arguments	ADDITIONAL_STOP_ WEBLOGIC	This value will be needed when running the WebLogic Console using a different port number (e.g.) -Dweblogic.security.TrustKeyStore=DemoTrust -Dweblogic.security.TrustKeystoreType=CustomTrust	
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 "ouafjndi". This is a security value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic JNDI Password	WEB_WLSYSPASS	The password the application uses to connect to the EJB component through JNDI. Note: The required value for an initial installation is "jndiadmin". This value will be saved in encrypted format. This is a security value; it will be encrypted with the Oracle Application Framework Encryption Algorithm.	
WebLogic Admin System User ID	WLS_WEB_ WLSYSUSER	The user ID to log in to the Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilizes this user ID Note: The installation utility will prompt you to enter "Y" to encrypt. For an initial installation, enter Y/y and specify the required value "system". This is a security value; it will be encrypted with the Weblogic Encryption Algorithm.	
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; it will be encrypted with the Weblogic Encryption Algorithm.	
WebLogic Server Name	WEB_WLS_ SVRNAME	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".	
Deploy Using Archive Files	WEB_DEPLOY_EAR	When the value is "false" the web application will be deployed in exploded directory format (no WAR/EAR files). When the value is "true", the web application will be deployed in ear file format. Note: The expanded application folders will always exist under the application folder (<SPLEBASE>/splapp/ applications), regardless of the setting of this option. **Valid values**: true (Deploy EAR files) false (Deploy expanded application folders **Default value**: true	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Deploy Application Viewer Module	WEB_DEPLOY_ APPVIEWER	When the value is "true" the application viewer will be deployed to the web server. When the value is "false", the application viewer will not be deployed to the web Server. Note: With either value the application viewer module will still be managed by the upgrade process. Note: When the 'Install Application Viewer module' value is set to false from the installation menu, you will not be able to change this value to true to deploy the application viewer. **Valid values**: true: The application viewer module will be deployed to the web server false: The application viewer module will not be deployed to the web server **Default value**: true	
Enable The Unsecured Health Check Service	WEB_ENABLE_ HEALTHCHECK	Enables the health check feature of the application	
MDB RunAs User ID	WEB_IWS_MDB_ RUNAS_USER	The message drive Java Bean RunAs user.	
Super User Ids	WEB_IWS_SUPER_ USERS	The application super users. Enter the super users separating them by commas.	

Database Configuration

Note: The parameters below and in the worksheet are for the database configuration. Note that if changes are made to any of the database menu option items below, thus potentially connecting to a different schema, a

warning will be displayed in the screen next to the actual option that has been changed:

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
XAI Database Password	XAI_DBPASS	The database password that has been configured on the database for the XAI server connection. Note: This value will be saved in encrypted format. This is a security value; it will be encrypted with the Oracle Utilities Application Framework Encryption Algorithm.	
Batch Database User ID	BATCH_DBUSER	The database user ID that has been configured on the database for the batch connection. This is a security value.	
Batch Database Password	BATCH_DBPASS	The database password that has been configured on the database for the batch connection. Note: This value will be saved in encrypted format. This is a security value; it will be encrypted with the Oracle Utilities Application Framework Encryption Algorithm.	
Web JDBC DataSource Name	JDBC_NAME	Populate in order to activate JDBC data source for online. If this is specified, and the environment is native/clustered, make sure that the data source specified, is manually created before the application deployment. When on Weblogic, leave empty to use UCP connection pooling. Example: TPWDataSource	
JDBC Database User ID	DBUSER_WLS	The database user ID that has been configured for the JDBC connection. Set this to the proper value if the Web JDBC DataSource Name is entered. Generally this is set to be same as Application Server Database Login credentials, Username: xxxxxx	
JDBC Database Password	DBPASS_WLS	The database user password that has been configured for the JDBC connection. Set this to the proper value if the Web JDBC DataSource Name is entered. This is a security value; it will be encrypted with the WebLogic Encryption Algorithm. Generally this is set to be same as Application Server Database Login credentials, Password: xxxxxx	
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	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
ONS Server Configuration	ONSCONFIG	ONS Server Configuration is required for Oracle RAC FCF. See the Server Administration Guide for more information. This is an optional value.	
Database Override Connection String	DB_OVERRIDE_ CONNECTION	This connection string can be used to override the database information entered above for RAC installation. Set this string to override the standard database connection string, as entered above. See the Server Administration Guide for more information. This is an optional value.	
Character Based Database	CHAR_BASED_DB	Set to true if using a character based database.	
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 *Server Administration Guide* for additional details on this configuration.

```
5. General Configuration Options
      Batch RMI Port:
      RMI Port number for JMX Business:
      RMI Port number for JMX Web:
      JMX Enablement System User ID:
      JMX Enablement System Password:
      Coherence Cluster Name:
      Coherence Cluster Address:
      Coherence Cluster Port:
      Coherence Cluster Mode:                              prod
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT	Unique port used by the Batch RMI Example value: 6540	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_ PERFORMANCE	Example value: 6550 Note: This is an optional value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMANCE	Example value: 6570 Note: This is an optional value.	
JMX Enablement System User ID	BSN_JMX_SYSUSER	This is used to authenticate incoming JMX requests. Populate if RMI Port numbers are set. Note: This is an optional value.	
JMX Enablement System Password	BSN_JMX_SYSPASS	This is used to authenticate incoming JMX requests. Populate if RMI Port numbers are set. This is a security value; it will be encrypted with the Oracle Utilities Application Framework Encryption Algorithm. Note: This is an optional value.	
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	

SSL Certificate Keystore (Weblogic Only)

> **Note:** See the *Oracle Utilities Work and Asset Management Security Guide* for additional details on this configuration. By default, SSL (Secure Sockets Layer) certificates are required for authentication. The product provides demo certificates generated with 1024 byte keys. For production environments, please use your own custom certificates.

```
6. SSL Certificate Keystore
      Certificate Keystore Type:                      CUSTOM
      Identify Keystore File:
      Identify Keystore File Type:                    jks
      Identify Keystore Password:
      Identity Private Key Alias:                     ouaf_demo_cert
      Trust Keystore File:
      Trust Keystore File Type:                       jks
      Trust Keystore Password:
      Trust Private Key Alias:                        ouaf_demo_cert
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Certificate Keystore Type	CERT_KS	If you choose DEMO you need to execute the following script at least once perl [SPLEBASE]/bin/demo_gen_cert.plx If you change DEFAULT/CUSTOM to DEMO you need to have installed the demo_gen_cert.plx script, it is part of the demo source in the installation package. **Default value**: CUSTOM **Valid values**: DEFAULT,DEMO,CUSTOM The demo_gen_cert.plx script is available if you select the '**Install Demo Generation Cert Script**' option during installation. It automates the creation of the Weblogic provided demo certificate using 1024 byte keys.	
Identify Keystore Type	CERT_IDENT_KS_FILE	Mandatory if the type is CUSTOM. No need to populate if type is DEMO, it will use: [SPLEBASE]/splapp/certs/ouaf_demo_ident.jks	
Identify Keystore File Type	CERT_IDENT_KS_TYPE	**Default value**: jks	
Identify Keystore Password	CERT_IDENT_KS_PWD	This is a security value; it will be encrypted with the WebLogic Encryption Algorithm.	
Identity Private Key Alias	CERT_IDENT_KS_ALIAS	**Default value**: ouaf_demo_cert	
Trust Keystore File	CERT_TRUST_KS_FILE	Mandatory if the type is CUSTOM. No need to populate if type is DEMO, it will use: [SPLEBASE]/splapp/certs/ouaf_demo_trust.jks	
Trust Keystore File Type	CERT_TRUST_KS_TYPE	**Default value**: jks	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Trust Keystore Password	CERT_TRUST_KS_PWD	This is a security value; it will be encrypted with the WebLogic Encryption Algorithm.	
Trust Private Key Alias	CERT_TRUST_KS_ALIAS	**Default value**: ouaf_demo_cert	

OUAF TrustStore Options

Note: See the *Server Administration Guide* for additional details on this configuration.

The OUAF truststore configuration is required for IWS.

```
7. OUAF TrustStore Options
     Import TrustStore Directory:
     Store Type:                           JCEKS
     Alias:                                ouaf.system
     Alias Key Algorithm:                  AES
     Alias Key Size:                       128
     HMAC Alias:                           ouaf.system.hmac
     Padding:                              PKCS5Padding
     Mode:                                 CBC
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Import TrustStore Directory	TS_IMPORT_KEYSTORE_FOLDER	Populate this option if you want to import the TrustStore files from an external location. The import will happen only in case of initial install or initialSetup.sh|cmd -S	
Store Type	TS_STORETYPE	Mandatory if setting the ouaf truststore. Value used for keytool option –storetype when creating/using the truststore.	
Alias	TS_ALIAS	Mandatory if setting the ouaf truststore. Value used for keytool option –alias when creating/using the truststore.	
Alias Key Algorithm	TS_ALIAS_KEYALG	Mandatory if setting the ouaf truststore. Value used for keytool option -keyalg when creating/using the truststore.	
Alias Key Size	TS_ALIAS_KEYSIZE	Mandatory if setting the ouaf truststore. Value used for keytool option -keysize when creating/using the truststore.	
HMAC Alias	TS_HMAC_ALIAS	Mandatory if setting the ouaf truststore. Value used for keytool option -alias For the HMAC alias, the following values are fixed: - HMAC Alias Key Algorithm: HmacSHA256 - HMAC Alias Key Size: 256	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Padding	TS_PADDING	Mandatory if setting the ouaf truststore. Value used for encryption/decryption	
Mode	TS_MODE	Mandatory if setting the ouaf truststore. Value used for encryption/decryption	

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
```

WebLogic 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
      Enable Batch Edit Funtionality:false
      Batch Online Log Directory:
      Enable Web Services Functionality:  false
      IWS deployment target:
      Web Admin Server Host:
      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:
      Max Queries To Hold In Cache Across All Threads:
      Seconds Timeout Flush Cache Completely:
      Cloud Restriction URLs Enable:
      Cloud White List Full Path:
      Cloud Custom White List Full Path:
```

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

Menu Option	Name Used in Documentation	Usage	Customer Value Install
Online JVM Batch Number of Threads	BATCHTHREADS	The maximum number of batch processing threads to be executed within a worker JVM when no explicit Distributed Thread Pool is specified. The "DEFAULT" distributed thread pool is used by the batch-scheduling daemon when it initiates processing on batch jobs (typically added via the online system) where no thread pool is specified). **Default value**: 5 Note: This will be only used and activated when BATCHENABLED is set to true.	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	In a distributed batch environment, this property can be set to "true" to allow a worker JVM to host the batch scheduling daemon. The daemon accepts online batch submissions requests and automatically submits the work for them. **Valid values**: true, false **Default value**: false Note: This will be only used and activated when BATCHENABLED is set to true.	
Enable Batch Edit Funtionality	BATCHEDIT_ ENABLED	Enable Batch Edit Functionality If enabled, use the bedit.sh|cmd script in order to configure the batch **Valid values**: true, false **Default value**: false	
Batch Online Log Directory	BATCH_ONLINE_LOG _DIR	This is required for the online batch retrieval feature.	
Enable Web Services Functionality	WEBSERVICES_ ENABLED	If enabled, execute the following commands in oder to allow the application to re-deploy the Webservices without prompting for the user and password: - Add weblogic.jar to the CLASSPATH - Execute: java weblogic.Admin -username [USER NAME] -password [PASSWORD] STOREUSERCONFIG -userconfigfile [SPLEBASE]/etc/.wlsuserconfig -userkeyfile [SPLEBASE]/etc/.wlsuserkey **Valid values**: true, false **Default value**: false	
IWS deployment target	WLS_CLUSTER_NAME	This is needed for Web Services deployment and is typically the Weblogic Cluster name. It is mandatory only if Web Services is enabled and the application is running in Weblogic Native mode.	
Web Admin Server Host	WEB_ADMIN_SERVER	It is used for the Web Services deployment. It is also used for importing the certificate from the Web Admin Server (initialSetup.sh|cmd -i). If populated, it will override the Web Server Host.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
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. This value will only appear for WebLogic.	
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. This value will only appear for WebLogic.	
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. This value will only appear for WebLogic.	
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 is a security value; it will be encrypted with the Oracle Utilities Application Framework Encryption Algorithm. This value will only appear for WebLogic.	
Online Display Software Home	ONLINE_DISPLAY_HOME	The location of the Online Display Software installation directory. This value is optional.	
Max Queries To Hold In Cache Across All Threads	XQUERIES_TO_CACHE	Max number of queries to hold in the cache across all threads 0 = no cache -1 or [empty] = unlimited	
Seconds Timeout Flush Cache Completely	XQUERY_CACHE_FLUSH_TIMEOUT	Number of seconds before cache is flushed Completely 0 or [empty] = never auto-flush	
Cloud Restriction URLs Enable	CLOUD_RESTRICTION_URLS_ENABLE	Enables restriction of urls that the application can communicate with based on a whitelist file. Default is false.	
Cloud White List Full Path	CLOUD_WHITE_LIST_PATH	Fully qualified filename to whitelist.xml	
Cloud Custom White List Full Path	CLOUD_CUSTOM_WHITE_LIST_PATH	Fully qualified filename to custom cm_whitelist.xml	

WebSphere ND Advanced Environment Miscellaneous Configuration

```
50. Advanced Environment Miscellaneous Configuration
        WebSphere Web Server SOAP Port Number:
        WebSphere Business Server SOAP Port Number:
        WebSphere Profile Name Home Directory:
        WebSphere Deployment Manager Host Name:
        Online JVM Batch Server Enabled:              false
        Online JVM Batch Number of Threads:               5
        Online JVM Batch Scheduler Daemon Enabled:    false
        Enable Batch Edit Functionality:              false
        Batch Online Log Directory:
        Enable Web Services Functionality:            false
        Weblogic Cluster Name:
        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:
        Max Queries To Hold In Cache Across All Threads:
        Seconds Timeout Flush Cache Completely:
        Cloud Restriction URLs Enable:
        Cloud White List Full Path:
        Cloud Custom White List Full Path:
```

Menu Option	Name Used in Documentation	Usage	Customer Value Install
WebSphere Web Server SOAP Port Number	WAS_WEB_SOAP_PORT	WebSphere Web Server SOAP Port Number This is the SOAP port used for WebSphere when executing wsadmin.sh commands. **Note**: This value will only appear for WebSphere Basic and WebSphere ND	
WebSphere Business Server SOAP Port Number	WAS_BSN_SOAP_PORT	WebSphere Business Server SOAP Port Number. This is the SOAP port used for WebSphere when executing wsadmin.sh commands. **Note**: This value will only appear for WebSphere Basic and WebSphere ND	
Enter the location of the Application Server Profile Home	WAS_PROFILE_NAME_HOME	The profile home will be used when tracking log files, under websphere home. **Note**: This value will only appear for WebSphere Basic and WebSphere ND	
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.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
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.	
Online JVM Batch Number of Threads	BATCHTHREADS	The maximum number of batch processing threads to be executed within a worker JVM when no explicit Distributed Thread Pool is specified. The "DEFAULT" distributed thread pool is used by the batch-scheduling daemon when it initiates processing on batch jobs (typically added via the online system) where no thread pool is specified). **Default value**: 5 Note: This will be only used and activated when BATCHENABLED is set to true.	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	In a distributed batch environment, this property can be set to "true" to allow a worker JVM to host the batch scheduling daemon. The daemon accepts online batch submissions requests and automatically submits the work for them. **Valid values**: true, false **Default value**: false Note: This will be only used and activated when BATCHENABLED is set to true.	
Enable Batch Edit Funtionality	BATCHEDIT_ ENABLED	Enable Batch Edit Functionality If enabled, use the bedit.sh|cmd script in order to configure the batch **Valid values**: true, false **Default value**: false	
Batch Online Log Directory	BATCH_ONLINE_LOG _DIR	This is required for the online batch retrieval feature.	
Enable Web Services Functionality	WEBSERVICES_ ENABLED	If enabled, execute the following commands in oder to allow the application to re-deploy the Webservices without prompting for the user and password: - Add weblogic.jar to the CLASSPATH - Execute: java weblogic.Admin -username [USER NAME] -password [PASSWORD] STOREUSERCONFIG -userconfigfile [SPLEBASE]/etc/.wlsuserconfig -userkeyfile [SPLEBASE]/etc/.wlsuserkey **Valid values**: true, false **Default value**: false	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
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. This value will only appear for WebLogic.	
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. This value will only appear for WebLogic.	
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. This value will only appear for WebLogic.	
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 is a security value; it will be encrypted with the Oracle Utilities Application Framework Encryption Algorithm. This value will only appear for WebLogic.	
Online Display Software Home	ONLINE_DISPLAY_HOME	The location of the Online Display Software installation directory. This value is optional.	
Max Queries To Hold In Cache Across All Threads	XQUERIES_TO_CACHE	Max number of queries to hold in the cache across all threads 0 = no cache -1 or [empty] = unlimited	
Seconds Timeout Flush Cache Completely	XQUERY_CACHE_FLUSH_TIMEOUT	Number of seconds before cache is flushed Completely 0 or [empty] = never auto-flush	
Cloud Restriction URLs Enable	CLOUD_RESTRICTION_URLS_ENABLE	Enables restriction of urls that the application can communicate with based on a whitelist file. Default is false.	
Cloud White List Full Path	CLOUD_WHITE_LIST_PATH	Fully qualified filename to whitelist.xml	
Cloud Custom White List Full Path	CLOUD_CUSTOM_WHITE_LIST_PATH	Fully qualified filename to cuistom cm_whitelist.xml	

WebLogic Advanced Environment Memory Configuration

```
51. Advanced Environment Memory Configuration
        Web Application Java Initial Heap Size:         2048
        Web Application Java Max Heap Size:             2048
        Web Application Java Max Perm Size:             1024
        Web Application Additional Options:
        Global JVM Arguments:
        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:         512
        Thread Pool Worker Additional Options:
        Additional Runtime Classpath:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
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.	
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.	
Web Application Java Max Perm Size	WEB_MEMORY_OPT_ MAXPERMSIZE	Maximum Perm Size for the application server. **Default value**: MB (Linux, Solaris) MB (Windows) Note: For WebLogic installation only.	
Web Application Additional Options	WEB_ADDITIONAL_O PT	Additional options that will be passed in to the web application server JVM. -Djavax.xml.soap.MessageFactory=com.sun.xml.internal.messaging.saaj.soap.ver1_1.SOAPMessageFactory1_1Impl Note: This parameter is required if Enable Webservices is set to true.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Global JVM Arguments	GLOBAL_JVMARGS	JVM arguments that are passed to all Java server processes such as Weblogic Server, Threadpoolworkers and jobs. Arguments added to all jvms Defaults to -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=<TEMPDIR>	
Ant Min Heap Size	ANT_OPT_MIN	Minimum Heap Size passed to ANT JVM. **Default value**: 200	
Ant Max Heap Size	ANT_OPT_MAX	Maximum Heap Size passed to ANT JVM. **Default value**: 800	
Ant Additional Options	ANT_ADDITIONAL_OPT	Additional options that are passed into the ANT JVM.	
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	Minimum heap size passed to the Thread Pool Worker. **Default value**: 512	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	Maximum heap size passed to the Thread Pool Worker. **Default value**: 1024	
Thread Pool Worker Java Max Perm Size	BATCH_MEMORY_OPT_MAXPERMSIZE	Maximum perm size passed to the Thread Pool Worker **Default value**: 768	
Thread Pool Worker Additional Options	BATCH_MEMORY_ADDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. For non-AIX only.	
Additional Runtime Classpath	ADDITIONAL_RUNTIME_CLASSPATH	Additional Classpath Options passed in when starting the WebLogic JVM Note: For WebLogic installation only. $WL_HOME/../oracle_common/modules/com.sun.xml.messaging.saaj.saaj-impl_1.3.jar Note: This parameter is required if Enable Webservices is set to true.	

WebSphere ND Advanced Environment Memory Configuration

```
51. Advanced Environment Memory Configuration
      Web Application Additional Options:
      Global JVM Arguments:
      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:          512
      Thread Pool Worker Additional Options:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Additional Options	WEB_ADDITIONAL_OPT	Additional options that will be passed in to the web application server JVM. -Djavax.xml.soap.MessageFactory=com.sun.xml.internal.messaging.saaj.soap.ver1_1.SOAPMessageFactory1_1Impl Note: This parameter is required if Enable Webservices is set to true.	
Global JVM Arguments	GLOBAL_JVMARGS	JVM arguments that are passed to all Java server processes such as Weblogic Server, Threadpoolworkers and jobs. Arguments added to all jvms Defaults to -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=<TEMPDIR>	
Ant Min Heap Size	ANT_OPT_MIN	Minimum Heap Size passed to ANT JVM. **Default value**: 200	
Ant Max Heap Size	ANT_OPT_MAX	Maximum Heap Size passed to ANT JVM. **Default value**: 800	
Ant Additional Options	ANT_ADDITIONAL_OPT	Additional options that are passed into the ANT JVM.	
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	Minimum heap size passed to the Thread Pool Worker. **Default value**: 512	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	Maximum heap size passed to the Thread Pool Worker. **Default value**: 1024	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Thread Pool Worker Additional Options	BATCH_MEMORY_ ADDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. For non-AIX only.	
Additional Runtime Classpath	ADDITIONAL_ RUNTIME_ CLASSPATH	Additional Classpath Options passed in when starting the WebLogic JVM Note: For WebLogic installation only. $WL_HOME/../oracle_common/modules/ com.sun.xml.messaging.saaj.saaj-impl_1.3.jar Note: This parameter is required if Enable Webservices is set to true.	

Advanced Web Application Configuration

```
52. Advanced Web Application Configuration
       Web Application Cache Settings:                    off
       Web Server Port Number:
       WebLogic Overload Protection:                      system-exit
       Domain Home Location:
       Batch Cluster URL:
       Strip HTML Comments:                               false
       Authentication Login Page Type:                    FORM
       Web Form Login Page:                               /loginPage.jsp
       Web Form Login Error Page:                         /formLoginError.jsp
       Application Viewer Form Login Page:                /loginPage.jsp
       Application Viewer Form Login Error Page:          /formLoginError.jsp
       Help Form Login Page:                              /loginPage.jsp
       Help 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
Web Application Cache Settings	WEB_L2_CACHE_MODE	**Default value**: off **Valid values**: off read_write read_only	
Web Server Port Number	WEB_WLPORT	The port number assigned to WebLogic connection. Set this port if the environment is not configured as SSL. Note: For WebLogic installation only. This value is optional. Example Value: 6500	
WebLogic Overload Protection	WLS_OVERRIDE_PROTECT	The overload protection allows for a Weblogic server to be "stopped / exited" when there is an out of memory exception **Valid values**: system-exit (Exit the server process) no-action (Ignore take no action) **Default value**: system-exit Note: For WebLogic installation only.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Domain Home Location	WLS_DOMAIN_ HOME	The Weblogic Domain Home location, when this parameter is populated you will need to use the native Weblogic tools for maintenance (starting, stopping, deployment, and undeployment). Note: For WebLogic installation only This value is optional	
Batch Cluster URL	WEB_BATCH_ CLUSTER_URL	Example: service:jmx:rmi:///jndi/rmi://[host]:[JMX port]/oracle/ouaf/batchConnector	
StripHTMLComments: false	STRIP_HTML_ COMMENTS	Stripping HTML (and JavaScript) comments will increase the security of the system. **Default value**: false **Valid values**: true, false	
Authentication Login Page Type	WEB_WLAUTHMETHOD	Specifies which authentication mode should be used. To switch off OUAF Login Page enter: BASIC **Valid values**: FORM, BASIC **Default value**: FORM	
Web Form Login Page	WEB_FORM_ LOGIN_PAGE	Specify the jsp file used to login into the application. **Default value**: /loginPage.jsp	
Web Form Login Error Page	WEB_FORM_LOGIN _ERROR_PAGE	Specify the jsp file used when there is an error when logging into the application. **Default value**: /formLoginError.jsp	
Application Viewer Form Login Page	WEB_APPVIEWER_ FORM_LOGIN_ PAGE	Specify the jsp file used to login into the application viewer application. **Default value**: /loginPage.jsp	
Application Viewer Form Login Error Page	WEB_APPVIEWER_ FORM_LOGIN_ ERROR_PAGE	Specify the jsp file used when there is an error when logging into the application viwer application.	
Help Form Login Page	WEB_HELP_FORM_ LOGIN_PAGE	Specify the jsp file used to login into the help application. **Default value**: /loginPage.jsp	
Help Form Login Error Page	WEB_HELP_FORM_ LOGIN_ERROR_ PAGE	Specify the jsp file used when there is an error when logging into the help application. **Default value**: /formLoginError.jsp	
Web Security Role	WEB_PRINCIPAL_ NAME	Specify the name of the security role. **Default value**: cisusers	

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

WebLogic Diagnostics

```
54. WebLogic Diagnostics
        Diagnostic Context Enabled:                     false
        Diagnostic Volume:                              Off
        Built-in Module:                                None
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Diagnostic Context Enabled	WLS_DIAGNOSTIC_CONTEXT_ENABLED	Enable or disable diagnostic context for the WebLogic Server (WLDF or the weblogic diagnostic framework) Default value: false Valid values: true, false	
Diagnostic Volume	WLS_DIAGNOSTIC_VOLUME	Specifies the volume of diagnostic data that is automatically produced by WebLogic Server at run time Default value: Off Valid values: Off,Low,Medium,High	
Built-in Module	WLS_DIAGNOSTIC_BUILT_IN_MODULE	Specifies the WLDF built-in system resource type to use. If not specified will use the weblogic default.	

OIM Configuration Settings

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
SPML OIM Enclosing Element	OIM_SPML_SOAP_ ELEMENT	Default top level SOAP Element name for Oracle Identity Manager integration **Default value**: sOAPElement	

Cloud Related Options

```
55. Cloud Related Options
        Restriction URLs Enable:
        White List Full Path:
        Custom White List Full Path:
        File Parameter Validation:
        Substitution Variable List File Location:
        Directory For Variable F1_MIGR_ASSISTANT_FILES:
        Directory For Variable F1_BI_EXTRACT:
        Directory For Variable F1_PROD_INTER_FILES:
        Directory For Variable F1_CUST_APP_BASE:
        Directory For Variable F1_PROCESS_DIR:
        Directory For Variable F1_SVC_CATALOG_WSDL_DIR:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Restriction URLs Enable	CLOUD_RESTRICTION _URLS_ENABLE	Default value: false	
White List Full Path	CLOUD_WHITE_LIST_ PATH	Full path name of whiteList.xml	
Custom White List Full Path	CLOUD_CUSTOM_ WHITE_LIST_PATH	Full path name of CM_whiteList.xml	
File Parameter Validation	CLOUD_FILE_ PARAMETER_ VALIDATION	For cloud installations it must be set to true. Default value: false	
Substitution Variable List File Location	CLOUD_SUBSTITUTIO N_VARIABLE_LIST_ FILE_LOCATION	Full path to the xml file that contains the list of allowed directories and their corresponding substitution variables. Default value: <SPLEBASE>/etc/ substitutionVariableList.xml	
Directory For Variable F1_MIGR_ASSISTANT_ FILES	CLOUD_LOCATION_ F1_MIGR_ASSISTANT_ FILES	Default value: <SPLOUTPUT>/ F1_MIGR_ASSISTANT_FILES	
Directory For Variable F1_BI_EXTRACT	CLOUD_LOCATION_ F1_BI_EXTRACT	Default value: <SPLOUTPUT>/F1_BI_EXTRACT	
Directory For Variable F1_PROD_INTER_ FILES	CLOUD_LOCATION_ F1_PROD_INTER_ FILES	Default value: <SPLOUTPUT>/ F1_PROD_INTER_FILES	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Directory For Variable F1_CUST_APP_BASE	CLOUD_LOCATION_ F1_CUST_APP_BASE	Default value: <SPLOUTPUT>/F1_CUST_APP_BASE	
Directory For Variable F1_PROCESS_DIR	CLOUD_LOCATION_ F1_PROCESS_DIR	Default value: <SPLOUTPUT>/F1_PROCESS_DIR	
Directory For Variable F1_SVC_CATALOG_ WSDL_DIR	CLOUD_LOCATION_ F1_SVC_CATALOG_ WSDL_DIR	Default value: <SPLOUTPUT>/ F1_SVC_CATALOG_WSDL_DIR	

Appendix C

Application Framework Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Work and Asset Management. The patches listed below are available as a convenience rollup inside the 'Oracle Utilities Application Framework v4.3.0.3.0 Single Fix Prerequisite Rollup for Oracle Utilities Work and Asset Management v2.1.1.1.0.zip' folders.

- 24575579

- 20047505

Appendix D

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 WebLogic Server

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

   UNIX:

   ```
   ./spl.sh stop
   ```

   Windows:

   ```
   spl.cmd stop
   ```

To Start the Thread Pool Worker

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

   UNIX:

```
    $SPLEBASE/bin/threadpoolworker.sh -d Y -p DEFAULT=20 L2OFF=1 -l2
OFF
```

Windows:

```
    %SPLEBASE%\bin\threadpoolworker.cmd -d Y -p DEFAULT=20 L2OFF=1 -l2
OFF
```

To Stop the Thread Pool Worker

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

   UNIX:

   ```
   ./spl.sh -b stop
   ```

   Windows:

   ```
   spl.cmd -b stop
   ```

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
   ```