Oracle Utilities Operational Device Management

Installation Guide

Release 2.0.1 Service Pack 2

E35351-05

March 2014

ORACLE®

Oracle Utilities Operational Device Management Installation Guide, Release 2.0.1 Service Pack 2

Contents

Appendix F

Preface

This guide describes how to install Oracle Utilities Operational Device Management **Service Pack 2** (also represented as v2.0.1.2).

> **Note**: Throughout this document, Oracle Utilities Operational Device Management v2.0.1.0 **Service Pack 2** is represented as v2.0.1.2. Similarly, Oracle Utilities Application Framework v4.2.0.0 **Service Pack 2** is represented as v4.2.0.2.

Audience

Oracle Utilities Operational Device Management Installation Guide is intended for anyone interested in the process of installing Oracle Utilities Operational Device 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:

- *Oracle Utilities Operational Device Management Quick Install Guide*
- *Oracle Utilities Operational Device Management Release Notes*
- *Oracle Utilities Operational Device Management Configuration Guide*
- *Oracle Utilities Operational Device Management Database Administrator's Guide*
- *Oracle Utilities Operational Device Management User's Guide*

Conventions

The following text conventions are used in this document:

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

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:

- **AMB** – **A**sset **M**anagement **B**ase (also known as Oracle Utilities Asset Management Base)

- **ODM** – **O**perational **D**evice **M**anagement (also known as Oracle Utilities Operational Device Management)

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

Chapter 1

Overview

This chapter provides an overview of the Oracle Utilities Operational Device Management (ODM) product and installation process.

This section includes the following:

- Product Overview
- Installation Overview
- Installation Types
- Package Contents

Product Overview

The following figure provides an overview of the Oracle Utilities Operational Device Management product:
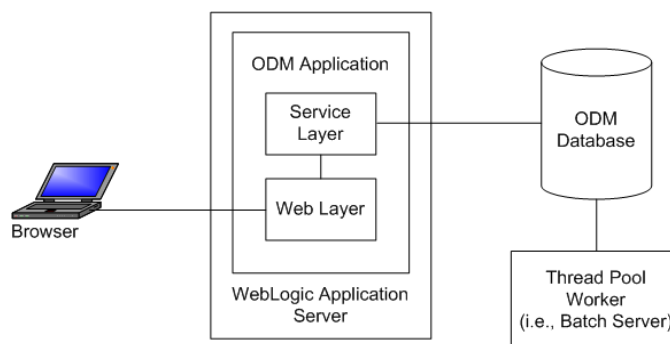
Oracle Utilities Operational Device Management is housed in the Oracle WebLogic J2EE Web Application Server. ODM has two layers: web and service. The application is accessed by using a browser to connect to the web layer.

ODM data is stored in the Oracle Database. For processing large amounts of data, ODM provides thread pool worker (batch server) that interacts with the same ODM database.

Installation Overview

Oracle Utilities Operational Device Management consists of several components, all of which need to be installed for a successful installation. Refer to Installation Types for the list of components comprising the product.

Certain prerequisite software may need to be installed before installing each of these components. Refer to Prerequisite Software List for the list of prerequisite software for each component

The following figure details the workflow for the initial and demo installation process.
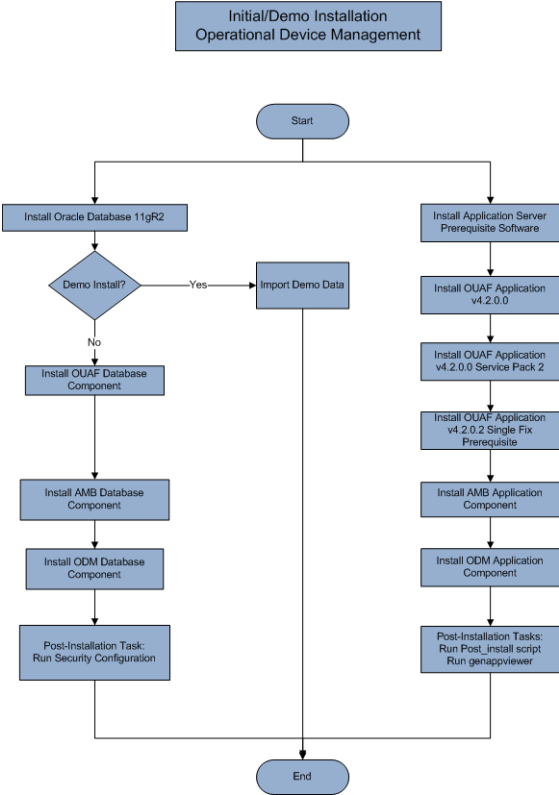
The following figure details the workflow for the upgrade installation process.
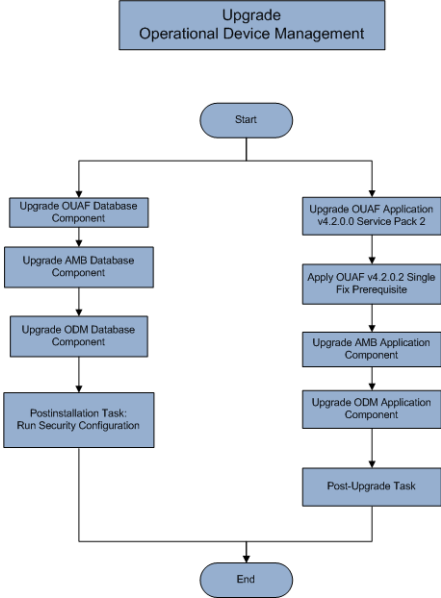
Installation Types

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 Operational Device Management v2.0.1.2 from scratch - a base installation, typically used for a production environment

- Upgrade Installation - an upgrade installation from v2.0.1.1 to v2.0.1.2

- 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 Operational Device Management v2.0.1.2 for the first time or from scratch.

For an initial install, you must follow a single step installation described below:

- Installing Oracle Utilities Operational Device Management v2.0.1.2

Installing Oracle Utilities Operational Device Management v2.0.1.2

Each of the following components should be installed during an initial installation:

- Database components:

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

- Application components:

  - Oracle Utilities Application Framework v4.2.0.0 application

  - Oracle Utilities Application Framework v4.2.0.0 Service Pack 2 (also referred to as v4.2.0.2)

  - Oracle Utilities Asset Management Base v2.0.1.2 application

  - Oracle Utilities Operational Device Management v2.0.1.2 application

For details on how to install the above components, refer to the chapter Installing Oracle Utilities Operational Device Management - Initial Installation for the steps involved in installing each of the above components.

Upgrade Installation

This installation type is applicable when upgrading Oracle Utilities Operational Device Management.

Supported Upgrade Path

The system only supports a single upgrade path.

- Upgrade from Oracle Utilities Operational Device Management v2.0.1.1 to v2.0.1.2.

Upgrade Procedure

For an upgrade install, you must upgrade all of the following components:

- Database components:

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

- Application components:

    Refer to chapter Upgrading Oracle Utilities Operational Device Management for the steps involved in upgrading.

Demo Installation

This installation type is applicable when installing a demo application of Oracle Utilities Operational Device 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 Operational Device Management Database Administrator's Guide* for more information.

- Application components:

    - Oracle Utilities Application Framework v4.2.0.0 application

    - Oracle Utilities Application Framework v4.2.0.0 Service Pack 2 (also referred to as v4.2.0.2)

    - Oracle Utilities Asset Management Base v2.0.1.2 application

    - Oracle Utilities Operational Device Management v2.0.1.2 application

Refer to chapter Installing Oracle Utilities Operational Device 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 for the Oracle Utilities Operational Device Management 2.0.1 Service Pack 2 release.

This section includes information about:

- Documentation Packages
- Installation Packages

Documentation Packages

- *Oracle Utilities Operational Device Management Release Notes*
- *Oracle Utilities Operational Device Management Quick Install Guide*
- *Oracle Utilities Operational Device Management Database Administrator's Guide*
- *Oracle Utilities Operational Device Management Installation Guide*
- *Oracle Utilities Operational Device Management User Guide*
- *Oracle Utilities Operational Device Management Configuration Guide*
- *Oracle Utilities Application Framework v4.2.0.2 Administration Guide*
- *Oracle Utilities Application Framework v4.2.0.2 Business Process Guide*
- *Oracle Utilities Operational Device Management Server Administration Guide*
- *Oracle Utilities Operational Device Management Batch Server Administration Guide*

Installation Packages

- Oracle Utilities Operational Device Management v2.0.1.2 Install Documentation.zip
- Oracle Utilities Operational Device Management v2.0.1.2 Quick Install Guide.zip
- Oracle Utilities Operational Device Management v2.0.1.2 User Documentation.zip
- Oracle Utilities Operational Device Management v2.0.1.2 Supplemental Documentation.zip
- Oracle Utilities Operational Device Management v2.0.1.2 Release Notes.zip
- Oracle Utilities Application Framework v4.2.0.2 Single Fix Prerequisite Rollup for ODM v2.0.1.2.zip
- Oracle Utilities Asset Management Base v2.0.1.2 Multiplatform.zip
- Oracle Utilities Operational Device Management v2.0.1.2 Multiplatform.zip
- Oracle Utilities Operational Device Management v2.0.1.2 Oracle Database Multiplatform.zip
- Oracle Utilities Application Framework v4.2.0.0 Multiplatform.zip
- Oracle Utilities Application Framework v4.2.0.0 Service Pack2.zip

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 Operational Device Management has been tested and certified.

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database
Windows 7 (32 and 64 bit) (Internet Explorer 8.x or 9.x in Compatibility Mode)	AIX 7.1 TL01 SP1	Power 64-bit	WebLogic 10.3.6	Oracle Database 11g & 12c
	Oracle Enterprise Linux 5.8, 6.2, 6.3 & 6.4 (64-bit)	x86_64	WebLogic 10.3.6	Oracle Database 11g & 12c
	Red Hat Enterprise Linux 5.8, 6.2, 6.3 & 6.4 (64-bit)			
	Oracle Solaris 10 update 9/Oracle Solaris 11 (64-bit)	SPARC 64-bit	WebLogic 10.3.6	Oracle Database 11g & 12c
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.6	Oracle Database 11g & 12c

Hardware Requirements

Client Side Hardware Requirements

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

* The Recommended configuration supports better performance of the client.

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

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.
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 Operational Device Management is certified on Oracle Database Server 11.2.0.1+ 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 Operational Device Management is supported on Oracle VM 2.2.2 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 Operational Device Management installation, including:

- Prerequisite Software List

- Installing PreRequisite Software

- Readiness Checklist

Before You Install

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

Prerequisite Software List

Before you install Oracle Utilities Operational Device 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 Database Server
- Prerequisite Software for Application Server
- Web Browser Requirements

Prerequisite Software for Database Server

The prerequisite software for the database component of Oracle Utilities Operational Device Management is as follows:

- Oracle Database Server 11.2.0.1+ - This is required for installing the database component of the Oracle Utilities Operational Device Management product. The following versions of the database server are supported:
    - Oracle Database Enterprise Edition
    - Oracle Database Standard Edition

Prerequisite Software for Application Server

The prerequisite software for the application component of Oracle Utilities Operational Device Management is as follows:

- Oracle Database 11g Release 2 Client
- JDK 1.6.0_45 (64-bit)
- Oracle Web Logic 11gR1 (10.3.6)
- Hibernate 4.1.0 FINAL

Web Browser Requirements

The following operating system / web browser software are supported:

- Windows 7 (32-bit or 64-bit) with Internet Explorer 8.x or 9.x

    Note: Internet Explorer 9.x must be in Compatibility Mode.

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 SP1 Application Server
- Oracle Linux 5.8/6.2/6.3/6.4 or Red Hat Linux 5.8/6.2/6.3/6.4 Application Server
- Oracle Solaris 10/11 Application Server

- Windows Server 2008 R2 Application Server

AIX 7.1 TL01 SP1 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 (64-bit) TL01 SP1	POWER 64-bit	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

AIX 7.1 TL01 SP1 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 Operational Device Management Administrator User ID	cissys	
Oracle Utilities Operational Device 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.

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 11g Release 2 Client — Runtime Option

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

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

IBM Java Software Development Kit version 6.0 SR8 64-bit

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

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

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

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

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

Hibernate 4.1.0 FINAL

You must install Hibernate 4.1.0 before installing Oracle Utilities Operational Device 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 11gR1 (10.3.6) 64-bit

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

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

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

Oracle Linux 5.8/6.2/6.3/6.4 or Red Hat Linux 5.8/6.2/6.3/6.4 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 5.8/6.2/6.3/6.4 (64-bit) Red Hat Enterprise Linux 5.8/6.2/6.3/6.4 (64-bit)	x86_64	Oracle WebLogic 11gR1(10.3.6) 64-bit version

Oracle Linux 5.8/6.2/6.3/6.4 or Red Hat Enterprise Linux 5.8/6.2/6.3/6.4 Operating System Running on x86_64 64-bit Architecture

UNIX Administrator User ID

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

Description	Default Value	Customer Defined Value
Oracle Utilities Operational Device Management Administrator User ID	cissys	
Oracle Utilities Operational Device 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 11g Release 2 Client — Runtime Option

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

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

Oracle Java Development Kit Version 6.0 Update 45, 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 Operational Device 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 11gR1 (10.3.6) 64-bit

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

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

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

Oracle Solaris 10/11 Application Server

This section describes the software requirements for operating the application using the Oracle Solaris 10/11 application server.

Supported Application Servers

Operating System	Chipset	Application Server
Oracle Solaris 10 Update 9/Oracle Solaris 11 (64-bit)	SPARC	Oracle WebLogic 11gR1 (10.3.6) 64-bit version

Oracle Solaris 10 Update 9/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 Operational Device Management Administrator User ID	cissys	
Oracle Utilities Operational Device 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 11g Release 2 Client — Runtime Option

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

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

Oracle Java Development Kit Version 6.0 Update 45, 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 Operational Device 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 11gR1 (10.3.6) 64-bit

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

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

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

Windows Server 2008 R2 Application Server

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

Supported Application Servers

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

Oracle Database 11g Release 2 Client — Runtime Option

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

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

Oracle Java Development Kit version 6.0 Update 45, 64-bit

This software is required for the Oracle WebLogic Installation.

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 Operational Device 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:

    ```
    copy hibernate-release-4.1.0.Final/lib/optional/
       ehcache/ehcache-core-2.4.3.jar $HIBERNATE_JAR_DIR
    copy hibernate-release-4.1.0.Final/lib/optional/
       ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR
    copy hibernate-release-4.1.0.Final/lib/required/
       hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR
    ```

```
copy hibernate-release-4.1.0.Final/lib/required/
    hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR
copy hibernate-release-4.1.0.Final/lib/required/
    hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR
copy hibernate-release-4.1.0.Final/lib/required/
    javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR
copy hibernate-release-4.1.0.Final/lib/required/
    jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR
copy hibernate-release-4.1.0.Final/lib/required/
    jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
```

Oracle WebLogic 11gR1 (10.3.6) 64-bit

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

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

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

Readiness Checklist

The following checklist will guide you through the installation process of Oracle Utilities Operational Device 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 the Prerequisite Software List for more details.

3. Ensure that you have downloaded the Oracle Utilities Operational Device Management v2.0.1 Service Pack 2 components from My Oracle Support (https://support.oracle.com/).

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 Operational Device Management - Initial Installation

    •   **Upgrade** Installation - For upgrade installation follow the instructions mentioned in Upgrading Oracle Utilities Operational Device Management.

    •   **Demo** Installation - For demo installation follow the instructions mentioned in Installing Oracle Utilities Operational Device Management - Demo Installation

6. Perform post-installation tasks.

Chapter 4

Installing Oracle Utilities Operational Device Management - Initial Installation

This chapter provides instructions for installing Oracle Utilities Operational Device 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 Operational Device 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 Operational Device Management must be complete before you can proceed with the following sections. Refer to the section "**Initial Install**" of the *Oracle Utilities Operational Device 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 v4.2.0.0
- Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 2
- Installing Oracle Utilities Asset Management Base Application Component
- Installing the Oracle Utilities Operational Device Management Application Component

Installing the Oracle Utilities Application Framework Application Component v4.2.0.0

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

- Copying and Decompressing Install Media
- Setting Permissions for the cistab file in UNIX
- Installing the Application Component

Copying and Decompressing Install Media

The Oracle Utilities Application Framework installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

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

1. Log in to the application server host with the administrator user ID.

2. Download the Oracle Utilities Application Framework V4.2.0.0 Multiplatform from Oracle Software Delivery Cloud.

3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

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

4. Copy the file FW-V4.2.0.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.0-MultiPlatform.jar
```

> **Note:** You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages: http://www.oracle.com/technetwork/java/archive-139210.html

A sub-directory named "FW.V4.2.0.0" is created. It contains the installation software for the Oracle Utilities framework application server.

Setting Permissions for the cistab file in UNIX

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

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.2.0.0 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.V4.2.0.0 directory.

3. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

UNIX:

```
export ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
export PERL_HOME=${ORACLE_CLIENT_HOME}/perl
export PATH=${PERL_HOME}/bin:$PATH
export PERL5LIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
                    Installer Decompressed location/bin/perlib>
export PERLLIB=${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.

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

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

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

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

```
************************************************************
* Environment Configuration *
************************************************************
 1. Environment Description
```

```
            Environment Description:     <Mandatory>


2. Business Application Server Configuration
        Business Server Host:        <Mandatory> - Hostname on which
                                         application being installed
        WebLogic Server Name:        myserver
        Business Server Application Name: SPLService
        MPL Admin Port Number:       <Mandatory> - Multipurpose Listener
                                                     Port
        MPL Automatic startup:       false


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


4. Database Configuration
         Application Server Database User ID:   <Mandatory>
        Application Server Database Password:    <Mandatory>
        MPL Database User ID:                    <Mandatory>
        MPL Database Password:                   <Mandatory>
        XAI Database User ID:                    <Mandatory>
        XAI Database Password:                   <Mandatory>
        Batch Database User ID:                  <Mandatory>
        Batch Database Password:                  <Mandatory>
        Database Name:                            <Mandatory>
        Database Server:                          <Mandatory>
        Database Port:                            <Mandatory>
        ONS Server Configuration:
        Database Override Connection String:
        Oracle Client Character Set NLS_LANG:


5. General Configuration Options
        Batch RMI Port:                          <Mandatory> - RMI port
                                                                 for batch
        Batch Mode:                              <Mandatory> - CLUSTERED
                                                              or DISTRIBUTED
        Coherence Cluster Name:                  <Mandatory> - Unique
                                                             name for batch
        Coherence Cluster Address:               <Mandatory> - Unique
                                                           multicast address
        Coherence Cluster Port:                  <Mandatory> - Unique
                                                          port for batch cluster
        Coherence Cluster Mode:                  <Mandatory> - prod


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

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

10. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file.

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

Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 2

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

- Copying and Decompressing Install Media
- Preparing for the Installation
- Installing the Service Pack
- Installing Oracle Utilities Application Framework v4.2.0.2 Single Fix PreRequisite Rollup for ODM V2.0.1.2

Copying and Decompressing Install Media

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

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

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

3. Copy the file FW-V4.2.0.2.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.2.0-MultiPlatform.jar
```

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

For both Unix and Windows platforms, a sub-directory named FW.V4.2.0.2.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

Preparing for the Installation

1. Log on as the administrator (default cissys).

2. Initialize the Oracle Utilities Application Framework environment that you want to install the product into by running the appropriate command:

   UNIX:

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

   Windows:

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

3. Stop the environment, if running:

   UNIX:

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

   Windows:

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

Installing the Service Pack

Follow these steps to install the service pack:

1. Change to the <TEMPDIR>/ FW.V4.2.0.2.0 directory.

2. Execute the script:

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

UNIX:

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

Windows:

```
installSP.cmd
```

Installing Oracle Utilities Application Framework v4.2.0.2 Single Fix PreRequisite Rollup for ODM V2.0.1.2

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.

2. Copy the file 'ODM-V2.0.1.2-FW-PREREQ-MultiPlatform.zip' in the delivered package to <TEMPDIR>.

    If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Extract the 'ODM-V2.0.1.2-FW-PREREQ-MultiPlatform.zip' file.

    Upon extracting the zip file 'Application-Server-Multiplatform' sub-directory is created.

4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' to install the application related FW patch.

Installing Oracle Utilities Asset Management Base Application Component

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

- Copying and Decompressing Install Media

- Installing the Application Component

- Installing the Oracle Utilities Operational Device Management Application Component

Copying and Decompressing Install Media

The Oracle Utilities Asset Management Base 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.

1. Log in to the application server 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 Asset Management Base V2.0.1.2 Multiplatform from Oracle Software Delivery Cloud.

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

4. Copy the file AMB-V2.0.1.2.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your application 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 AMB-V2.0.1.2.0-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.V2.0.1.2.0 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 the application component of Oracle Utilities Asset Management Base:

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

2. Change directory:

```
cd <install_dir>/bin
```
where <install_dir> is the location where the Oracle Utilities Application Framework application component is installed.

3. Initialize the Oracle Utilities Application Framework 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 directory to the <TEMPDIR>/W1.V2.0.1.2.0 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
```

7. The Oracle Utilities Operational Device Management Application specific menu appears.

8. The menu prompts you to confirm that the selected environment is correct. Press **Y** to confirm.

9. When you are done with the confirmation, proceed with the option **P**.

10. Once the install has finished successfully, execute the post-installation tasks.

Installing the Oracle Utilities Operational Device Management Application Component

This section describes how to install the application component of Oracle Utilities Operational Device Management, including:

- Copying and Decompressing Install Media

- Installing the Application Component

- Performing Post-Installation Tasks

Copying and Decompressing Install Media

The Oracle Utilities Operational Device 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 Operational Device Management V2.0.1.2 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 Operational Device Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

4. Copy the file ODM-V2.0.1.2.0-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 ODM-V2.0.1.2.0-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.V2.0.1.2.0 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 Operational Device 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>/W2.V2.0.1.2.0 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 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 Operational Device Management Application Component installation directory

   b. Run the script to generate the appviewer.

      UNIX:

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

      Windows:

      ```
      genappvieweritems.cmd
      ```

After the Installation

After you complete the installation, verify the following:

1. Verify installation logs created under decompressed installer location for any errors.

2. Confirm installation logs do not contain any errors.

3. Confirm all the configurations are correct. Refer to Appendix Installation and Configuration Worksheets for details.

4. Confirm that the database is ready.

5. Generate appviewer.

6. Start the application server. For instructions, refer to Appendix Common Maintenance Activities.

7. To operate the application, refer to the following section.

Operating the Application

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

Chapter 5

Upgrading Oracle Utilities Operational Device Management

This chapter provides instructions for upgrading Oracle Utilities Operational Device Management from version 2.0.1.1 to version 2.0.1.2. Oracle Utilities Operational Device Management 2.0.1 Service Pack 2 can be downloaded from My Oracle Support (https://support.oracle.com/) or the Oracle Software Delivery Cloud.

This section includes the following:

- Upgrading the Database
- Upgrading the Application
- Operating the Application

Upgrading the Database

> **Note:** Before you can upgrade the database component to this service pack version, you must have the Oracle Utilities Operational Device Management database v2.0.1.1 installed.

For instructions on upgrading the database component, please refer to the *Oracle Utilities Operational Device Management Database Administrator's Guide.* This guide is present inside 'Oracle Utilities Operational Device Management v2.0.1.2.zip ' file delivered with the package.

Upgrading the Application

> **Note:** Before you can upgrade the application component to the service pack version, you must have the Oracle Utilities Operational Device Management version 2.0.1.1 installed.

To upgrade to this service pack, you must install the following components in the order mentioned below:

• Oracle Utilities Application Framework v4.2.0.2

• Oracle Utilities Application Framework v4.2.0.2 Single Fix Prerequisite

• Oracle Utilities Asset Management Base v2.0.1.2

• Oracle Utilities Operational Device Management v2.0.1.2

This section includes information on the following:

• Upgrading to Oracle Utilities Application Framework v4.2.0.2

• Applying Oracle Utilities Application Framework v4.2.0.2 Single Fix Prerequisite

• Upgrading Oracle Utilities Asset Management Base

• Upgrading Oracle Utilities Operational Device Management

• Post-Upgrade Steps

Upgrading to Oracle Utilities Application Framework v4.2.0.2

Ensure that the database component is successfully installed before proceeding with the steps below:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.

2. Copy the file 'Oracle Utilities Application Framework v4.2.0.0 Service Pack2.zip' in the delivered package to <TEMPDIR>.

   > **Note**: If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

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

4. Change directory:

   ```
   cd <install_dir>/bin
   ```
   where <install_dir> is the location where the Oracle Utilities Operational Device Management application component is installed.

5. Initialize the Oracle Utilities Operational Device Management environment by running the appropriate command:

   UNIX:

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

Windows:

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

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

UNIX:

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

Windows:

```
spl.cmd stop
```

7. Ensure that you have executed splenviron.sh -e <$SPLENVIRON> prior to the installation process.

> **Note**: The installation utility **DOES NOT** create backup of installed files. You must backup <$SPLEBASE> before continuing with the rest of the installation utility.

8. Change directory to the <TEMPDIR>/FW-V4.2.0.2.0 directory and run the below script.

UNIX:

```
./installSP.sh
```

Windows:

```
installSP.cmd
```

The installation utility informs that the Service Pack 2 (v4.2.0.2) is about to be installed into the environment <$SPLENVIRON>.

The utility prompts you to press Enter to continue with the rest of the installation process of Oracle Utilities Application Framework v4.2.0.0 Service Pack 2 (v4.2.0.2).

Applying Oracle Utilities Application Framework v4.2.0.2 Single Fix Prerequisite

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

2. Change directory:

```
cd <install_dir>/bin
```
where <install_dir> is the location where the Oracle Utilities Application Framework application component is installed.

3. Initialize the Oracle Utilities Application Framework 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. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.

6. Copy the file 'ODM-V2.0.1.2-FW-PREREQ-MultiPlatform.zip in the delivered package to <TEMPDIR>.

   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

7. Upon extracting the zip file 'Application-Server-Multiplatform' sub-directory will be created.

8. Refer to the Readme.txt inside 'Application-Server-Multiplatform' to install the application related FW patch.

   This installs Oracle Utilities Application Framework pre-requisite rollup for Oracle Utilities Asset Management Base v2.0.1.2.

Upgrading Oracle Utilities Asset Management Base

The Oracle Utilities Asset Management Base 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.

1. Log in to the application server 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 Asset Management Base v2.0.1.2 Multiplatform from Oracle Software Delivery Cloud.

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

4. Copy the file AMB-V2.0.1.2.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your application 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 AMB-V2.0.1.2.0-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.V2.0.1.0.0 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 the application component of Oracle Utilities Asset Management Base:

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

2. Change directory:

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

where <install_dir> is the location where the Oracle Utilities Application Framework application component is installed.

3. Initialize the Oracle Utilities Application Framework 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 directory to the <TEMPDIR>/W1.V2.0.1.2.0 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
    ```

    The Oracle Utilities Operational Device Management Application specific menu appears.

7. The menu prompts you to confirm that the selected environment is correct. Press Y to confirm.

8. When you are done with the confirmation, proceed with the option P.

9. Once the install has finished successfully, execute the post-installation tasks.

Upgrading Oracle Utilities Operational Device Management

This section describes how to install the application component of Oracle Utilities Operational Device Management, including:

- Copying and Decompressing Install Media
- Installing the Application Component

Copying and Decompressing Install Media

The Oracle Utilities Operational Device 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 Operational Device Management v2.0.1.2 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 Operational Device Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

4. Copy the file ODM-V2.0.1.2.0-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 ODM-V2.0.1.2.0-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.V2.0.1.2.0 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 Operational Device 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>/W2.V2.0.1.2.0 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
   ```

This completes the installation of Oracle Utilities Operational Device Management v2.0.1.2.

Post-Upgrade Steps

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

2. Change directory:

   ```
   cd <install_dir>/bin
   ```
   where <install_dir> is the location where the Oracle Utilities Application Framework
   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. Navigate to $SPLEBASE/bin.

5. Perform the post-installation steps as described below:

   UNIX:

   ```
   ksh ./configureEnv.sh
   ```

   Windows:

   ```
   configureEnv.cmd
   ```

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

6. Generate the appviewer by following the steps below:

   a. Change the directory.

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

   where <install_dir> is Oracle Utilities Operational Device Management Application
   Component installation directory

   b. Run the script to generate the appviewer.

   UNIX:

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

   Windows:

   ```
   genappvieweritems.cmd
   ```

3. Execute following command.

   UNIX:

   ```
   Ksh ./initialSetup.sh
   ```

   Windows:

   ```
   initialSetup.cmd
   ```

4. Start up the application server instance.

   UNIX:

   ```
   spl.sh start
   ```

Windows:

```
spl.cmd start
```

5. Verify and review the log files to ensure that there are no errors during the upgrade process.

Operating the Application

At this point your installation of this service pack is complete. Be sure to read the *Oracle Utilities Operational Device Management Server Administration Guide* for more information on further configuring and operating the system.

Chapter 6

Installing Oracle Utilities Operational Device Management - Demo Installation

This chapter provides instructions for setting up a demo application of Oracle Utilities Operational Device 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 configuration 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 Operational Device Management must be complete before you can proceed with the following sections. Refer to the *Oracle Utilities Operational Device 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 v4.2.0.0
- Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 2
- Installing Oracle Utilities Asset Management Base Application Component
- Installing the Oracle Utilities Operational Device Management Application Component

Installing the Oracle Utilities Application Framework Application Component v4.2.0.0

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

- Copying and Decompressing Install Media
- Setting Permissions for the cistab file in UNIX
- Installing the Application Component

Copying and Decompressing Install Media

The Oracle Utilities Application Framework installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

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

1. Log in to the application server host with the administrator user ID.

2. Download the Oracle Utilities Application Framework V4.2.0.0.0 Multiplatform from Oracle Software Delivery Cloud.

3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

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

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

5. Decompress the file:

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.0.0-MultiPlatform.jar
```

> **Note:** You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages: http://www.oracle.com/technetwork/java/archive-139210.html

A sub-directory named "FW.V4.2.0.0.0" is created. It contains the installation software for the Oracle Utilities framework application server.

Setting Permissions for the cistab file in UNIX

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

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.2.0.0.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

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

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

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

Installing the Application Component

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

1. Login to the Application Server host as administrator user ID (the default is cissys on UNIX) or as a user with administrator privileges (on Windows).

2. Change directory to the <TEMPDIR>/FW.V4.2.0.0.0 directory.

3. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

UNIX:

```
export ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
export PERL_HOME=${ORACLE_CLIENT_HOME}/perl
export PATH=${PERL_HOME}/bin:$PATH
export PERL5LIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
                     Installer Decompressed location/bin/perlib>
export PERLLIB=${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.

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

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

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

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

```
************************************************************
* Environment Configuration *
************************************************************
 1. Environment Description
      Environment Description:    <Mandatory>

 2. Business Application Server Configuration
      Business Server Host:        <Mandatory> - Hostname on which
                                    application being installed
      WebLogic Server Name:        myserver
      Business Server Application Name: SPLService
      MPL Admin Port Number:       <Mandatory> - Multipurpose Listener
                                                  Port
      MPL Automatic startup:       false

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

 4. Database Configuration
      Application Server Database User ID:   <Mandatory>
      Application Server Database Password:    <Mandatory>
      MPL Database User ID:                  <Mandatory>
      MPL Database Password:                 <Mandatory>
      XAI Database User ID:                  <Mandatory>
      XAI Database Password:                 <Mandatory>
      Batch Database User ID:                <Mandatory>
      Batch Database Password:                <Mandatory>
      Database Name:                          <Mandatory>
      Database Server:                        <Mandatory>
      Database Port:                          <Mandatory>
      ONS Server Configuration:
      Database Override Connection String:
      Oracle Client Character Set NLS_LANG:

 5. General Configuration Options
      Batch RMI Port:                         <Mandatory> - RMI port
                                                           for batch
      Batch Mode:                             <Mandatory> - CLUSTERED
                                                           or DISTRIBUTED
      Coherence Cluster Name:                 <Mandatory> - Unique
                                                           name for batch
      Coherence Cluster Address:              <Mandatory> - Unique
                                                           multicast address
      Coherence Cluster Port:                 <Mandatory> - Unique
                                                         port for batch cluster
      Coherence Cluster Mode:                 <Mandatory> - prod
```

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

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

10. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file.

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

Installing Oracle Utilities Application Framework v4.2.0.0 Service Pack 2

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

- Copying and Decompressing Install Media

- Preparing for the Installation

- Installing the Service Pack

- Installing Oracle Utilities Application Framework v4.2.0.2 Single Fix PreRequisite Rollup for ODM V2.0.1.2

Copying and Decompressing Install Media

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

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

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

3. Copy the file FW-V4.2.0.2.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

```
cd <TEMPDIR>
jar -xvf FW-V4.2.0.2.0-MultiPlatform.jar
```

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

For both Unix and Windows platforms, a sub-directory named FW.V4.2.0.2.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

Preparing for the Installation

1. Log on as the administrator (default cissys).

2. Initialize the Oracle Utilities Application Framework environment that you want to install the product into by running the appropriate command:

UNIX:

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

Windows:

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

3. Stop the environment, if running:

   UNIX:

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

   Windows:

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

Installing the Service Pack

Follow these steps to install the service pack:

1. Change to the <TEMPDIR>/ FW.V4.2.0.2.0 directory.

2. Execute the script:

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

   UNIX:

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

   Windows:

   ```
   installSP.cmd
   ```

Installing Oracle Utilities Application Framework v4.2.0.2 Single Fix PreRequisite Rollup for ODM V2.0.1.2

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.

2. Copy the file 'ODM-V2.0.1.2-FW-PREREQ-MultiPlatform.zip' in the delivered package to <TEMPDIR>.

   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Extract the 'ODM-V2.0.1.2-FW-PREREQ-MultiPlatform.zip' file.

   Upon extracting the zip file 'Application-Server-Multiplatform' sub-directory is created.

4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' to install the application related FW patch.

Installing Oracle Utilities Asset Management Base Application Component

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

- Copying and Decompressing Install Media
- Installing the Application Component
- Installing the Oracle Utilities Operational Device Management Application Component

Copying and Decompressing Install Media

The Oracle Utilities Asset Management Base 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.

1. Log in to the application server 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 Asset Management Base V2.0.1.2 Multiplatform from Oracle Software Delivery Cloud.

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

4. Copy the file AMB-V2.0.1.0.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your application 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 AMB-V2.0.1.0.0-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.V2.0.1.0.0 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 the application component of Oracle Utilities Asset Management Base:

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

2. Change directory:

```
cd <install_dir>/bin
```
where <install_dir> is the location where the Oracle Utilities Application Framework application component is installed.

3. Initialize the Oracle Utilities Application Framework 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 directory to the <TEMPDIR>/W1.V2.0.1.0.0 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
```

7. The Oracle Utilities Operational Device Management Application specific menu appears.

8. The menu prompts you to confirm that the selected environment is correct. Press **Y** to confirm.

9. When you are done with the confirmation, proceed with the option **P**.

10. Once the install has finished successfully, execute the post-installation tasks.

Installing the Oracle Utilities Operational Device Management Application Component

This section describes how to install the application component of Oracle Utilities Operational Device Management, including:

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

Copying and Decompressing Install Media

The Oracle Utilities Operational Device 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 Operational Device Management V2.0.1.2 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 Operational Device Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

4. Copy the file ODM-V2.0.1.0.0-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 ODM-V2.0.1.0.0-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.V2.0.1.0.0 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 Operational Device 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>/W2.V2.0.1.0.0 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 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 Operational Device Management Application Component installation directory

   b. Run the script to generate the appviewer.

      UNIX:

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

      Windows:

      ```
      genappvieweritems.cmd
      ```

After the Installation

After you complete the installation, verify the following:

1. Verify installation logs created under decompressed installer location for any errors.

2. Confirm installation logs do not contain any errors.

3. Confirm all the configurations are correct. Refer to Appendix Installation and Configuration Worksheets for details.

4. Confirm that the database is ready.

5. Generate appviewer.

6. Start the application server. For instructions, refer to Appendix Common Maintenance Activities.

7. To operate the application, refer to the following section.

Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the *Oracle Utilities Operational Device 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 Operational Device Management, including:

- WebLogic Production Server Considerations

- Building Javadoc Indexes

- Configuring the Environment for Batch Processing

- Customizing the Logo

- Installing Service Packs and Patches

WebLogic Production Server Considerations

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

Configuring Identity and Trust

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

To configure identity and trust for a server:

1. Obtain digital certificates, private keys, and trusted CA certificates from the CertGen utility, Sun Microsystem's keytool utility, or a reputable vendor such as Entrust or Verisign. You can also use the digital certificates, private keys, and trusted CA certificates provided by the WebLogic Server kit. The demonstration digital certificates, private keys, and trusted CA certificates should be used in a development environment only.

2. Store the private keys, digital certificates, and trusted CA certificates. Private keys and trusted CA certificates are stored in a keystore.

3. Configure the identity and trust keystores for a WebLogic Server instance on the Configuration: Keystores page.

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

• DemoIdentity.jks: Contains a demonstration private key for WebLogic Server. This keystore establishes an identity for WebLogic Server.

• DemoTrust.jks: Contains a list of certificate authorities trusted by WebLogic Server. This keystore establishes trust for WebLogic Server.

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

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

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

Building Javadoc Indexes

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

Windows:

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

UNIX:

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

Configuring the Environment for Batch Processing

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

Windows:

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

UNIX:

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

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

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/).

Appendix A

Installation Menu Functionality Overview

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

Third Party Software Configuration

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

Table 1: Installation Menu 1, Third Party Software Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client. Example Location: /oracle/client/product/11.2.0.1/	
Web Java Home Directory	JAVA_HOME	Java home that will be used by the web application server. Example Location: /ouaf/java/jdk1.6.0_20	

Table 1: Installation Menu 1, Third Party Software Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
* Child JVM Home Directory	CHILD_JVM_JAVA_HOME	Java home that will be used by the child Java process that handles COBOL related requests. Example Location: /ouaf/java/jdk1.6.0_20 Note: This menu option is optional. Press Enter to skip this value.	
COBOL Home Directory	COBDIR	COBOL installation location directory. Example Location: /opt/SPLcobAS51WP6 Note: This menu option is not applicable to Oracle Utilities Operational Device Management. Note: This value is optional. Press Enter to skip this value.	
Hibernate JAR Directory	HIBERNATE_JAR_DIR	Location of the Hibernate jar directory on the disk.	
* * ONS JAR Directory	ONS_JAR_DIR	Location on the disk where the ons-11.2.0.1.jar file is installed. **Required for Oracle RAC installation. Refer to 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_10.3 To validate the home directory, check if the following jar files exist in the appropriate path: $WEB_SERVER_HOME/server/lib/ weblogic.jar %WEB_SERVER_HOME%\server\lib\ weblogic.jar	
* ADF Home Directory	ADF_HOME	Note: This menu option is not applicable to Oracle Utilities Operational Device Management.	Press **Enter** to skip this value.

Table 1: Installation Menu 1, Third Party Software Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value

OIM OAM Enabled Environment	OPEN_SPML_ENABLED_ENV	Denotes if an environment will be integrating with Oracle Identity Manager for user propagation.
		
		Valid values:
		  true
		  false
		
		Defaulted value: false	

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

  **   In order to activate the RAC FCF, the application needs the external ons.jar file, version 11.2.0.1. This ons.jar is located under the Oracle Database Software 11.2.0.1, at the following path:

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

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

Environment Installation Options

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

Table 2: Installation Menu 50, Environment Installation Options

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 ODM administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (ODM) 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.	

Table 2: Installation Menu 50, Environment Installation Options

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

Table 2: Installation Menu 50, Environment Installation Options

Menu Option	Name Used in Documentation	Usage	Customer Install Value
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 and Hardware Requirements** on page 2-1 for details.	

Installation Application Viewer Module	<WEB_ISAPPVIEWER>	Denotes if the Application Viewer Web Module will be installed in the environment. When this value is set to false the application viewer will not be accessible in the environment.
		
		Valid values:
		   true: Application Viewer module will be installed.
		   false: Application Viewer module will not be installed.
		
		Defaulted value: true
		
		Note: When the value of false is selected, the Application Viewer will only be installed at a later date by a complete reinstall of the application.	

Environment Description

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

Table 3: Installation Menu 1, 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
```

Table 4: Installation Menu 2, Business Application Server Configuration

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

WebLogic Web Application Server Configuration

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

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

Table 5: Installation Menu 3, WebLogic Web Application Server Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Server Host	WEB_WLHOST	The host name on which the web application server resides. Default value: <current server name>	
Web Server Port Number	WEB_WLPORT	A unique port number within the system that will be assigned to the HTTP port. This is the port number that is used as a part of the client URL request to connect to the host. Example value: 6500	
Web Context Root	WEB_CONTEXT_RO OT	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: If there is no previously created WebLogic user, specify the value as "system". This is a security value.	

Table 5: Installation Menu 3, WebLogic Web Application Server Configuration

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: If WebLogic JDNI User ID was set to "system", specify the value of "ouafadmin" for password. This value will be saved in encrypted format. This is a security value.	
WebLogic Admin System User ID	WLS_WEB_WLSYSUSER	The user ID to log in to the Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilizes this user ID Note: The installation utility will prompt to enter "Y" to encrypt. Enter Y/y when there is a not a WebLogic user previously created, and specify value of "system". This is a security value.	
WebLogic Admin System Password	WLS_WEB_WLSYSPASS	The password to login to Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilize this password. Note: The installation utility will prompt to enter "Y" to encrypt. Enter Y/y when there is a not a WebLogic user previously created, and specify value of "ouafadmin". This is a security value.	
WebLogic Server Name	WEB_WLS_SVRNAME	The name of the WebLogic server where the web application resides. Default value: myserver Note: If there is not a previously created WebLogic server, take default value of "myserver".	
Web Server Application Name	WEB_APP	The name of the web application server. Default value: SPLWeb Note: For an initial installation, use the default value of "SPLWeb".	

Table 5: Installation Menu 3, WebLogic Web Application Server Configuration

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

Table 5: Installation Menu 3, WebLogic Web Application Server Configuration

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

Database Configuration

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

Table 6: Installation Menu 4, Database Configuration

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

Table 6: Installation Menu 4, Database Configuration

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

Table 6: Installation Menu 4, Database Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Character Set NLS_LANG	NLS_LANG	The Oracle Database Character Set. Select the Language and Territory that are in use in your country. Default value: AMERICAN_AMERICA.AL32UTF8	

General Configuration Options

> **Note:** Refer to the *Oracle Utilities Operational Device Management Batch Server Administration Guide* for additional details on this configuration.

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

Table 7: Installation Menu 5, General Configuration Options

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT	Unique port used by the Batch RMI	
Batch Mode	BATCH_MODE	Valid values: CLUSTERED or DISTRIBUTED Default value: CLUSTERED Note: CLUSTERED is currently the only supported mode for production environments.	
Coherence Cluster Name	COHERENCE_CLUSTER_NAME	Unique name for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Address	COHERENCE_CLUSTER_ADDRESS	Unique multicast address. Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Port	COHERENCE_CLUSTER_PORT	Unique port for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Mode	COHERENCE_CLUSTER_MODE	Valid values: dev (Development) prod (Production) Default value: prod	

Advanced Menu Options

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

Unix:

```
<Install_dir>/bin/configureEnv.sh -a
```

Windows

```
<Install_dir>\bin\configureEnv.cmd -a
```

Advanced Environment Miscellaneous Configuration

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

Table 8: Installation Menu 50, Advanced Environment Miscellaneous Configuration

Menu Option	Name Used in Documentation	Usage	Customer Value Install
WebSphere Deployment Manager Host Name	WASND_DMGR_HOST	WebSphere Deployment Manager Host name, this value is used for WebSphere ND, when connecting to the WebSphere Deployment Manager.	
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.	

Table 8: Installation Menu 50, Advanced Environment Miscellaneous Configuration

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

Table 8: Installation Menu 50, Advanced Environment Miscellaneous Configuration

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

Application Framework Installation and Configuration Worksheets

Advanced Environment Memory Configuration

```
51. Advanced Environment Memory Configuration
        JVM Child Memory Allocation:                        512
        JVM Child Additional Options:
        Web Application Java Initial Heap Size:             1024
        Web Application Java Max Heap Size:                 1024
        Web Application Java Max Perm Size:                 500
        Web Application Additional Options:
        Ant Min Heap Size:                                 200
        Ant Max Heap Size:                                 800
        Ant Additional Options:
        Thread Pool Worker Java Min Heap Size:             512
        Thread Pool Worker Java Max Heap Size:             1024
        Thread Pool Worker Java Max Perm Size:             768
        Thread Pool Worker Additional Options:
        Additional Runtime Classpath:
```

Table 9: Installation Menu 51, Advanced Environment Memory Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
JVM Child Memory Allocation	JVMMEMORYARG	Heap size for the JVM Child. Default value: 512 This option is not applicable to ODM.	
JVM Child Additional Options	JVM_ADDITIONAL_ OPT	Additional JVM options that are passed to the Child JVM. Note: For WebLogic installation only. This option is not applicable to ODM.	
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. Recommended value is 2048.	
Web Application Java Max Perm Size	WEB_MEMORY_OPT _MAXPERMSIZE	Maximum Perm Size for the application server. Default value: 700MB (Linux, Solaris) Note: For WebLogic installation only.	

Installation and Configuration Worksheets B-20
Oracle Utilities Operational Device Management Installation Guide

Table 9: Installation Menu 51, Advanced Environment Memory Configuration

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. Note: For WebLogic installation only.	
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 Recommended value is 1024.	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	Maximum heap size passed to the Thread Pool Worker. Default value: 1024 Recommended value is 2048.	
Thread Pool Worker Java Max Perm Size	BATCH_MEMORY_OPT_MAXPERMSIZE	Maximum perm size passed to the Thread Pool Worker Default value: 768	
Thread Pool Worker Additional Options	BATCH_MEMORY_ADDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. This is an optional free form field.	
Additional Runtime Classpath	ADDITIONAL_RUNTIME_CLASSPATH	Additional Classpath Options passed in when starting the WebLogic JVM Note: For WebLogic installation only. This is an optional value.	
Release Cobol Thread Memory Options	REL_CBL_THREAD_MEM	Allow for child JVMs to be optionally configured to release thread-bound memory when each thread is returned to its thread pool. This will increase the number of memory allocations and memory free calls performed by the Microfocus runtime. It will also lower the amount of C-heap memory consumed by child JVMs. Valid values: true, false Default value: false	

Advanced Web Application Configuration

```
52. Advanced Web Application Configuration
      WebLogic SSL Port Number:
      WebLogic Console Port Number:
      WebLogic Additional Stop Arguments:
      Batch Cluster URL:
      Strip HTML Comments:                            false
      Authentication Login Page Type:                 FORM
      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
```

Table 10: Installation Menu 52, Advanced Web Application Configuration

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

Table 10: Installation Menu 52, Advanced Web Application Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic Console Port Number	WLS_ADMIN_PORT	The port number assigned to WebLogic Console connection. This is the port number that is used for Secure Sockets connecting to the WebLogic Console server. Note: For WebLogic installation only. This value is optional.	
WebLogic Additional Stop Arguments	ADDITIONAL_STOP _WEBLOGIC	WebLogic Additional Stop Arguments This value is required when running the WebLogic Console Port Number and the Application using SSL. Example values: -Dweblogic.security.TrustKeyStore= DemoTrust -Dweblogic.security.TrustKeystoreType= CustomTrust Note: For Production additional actions are required. Do NOT run Production with Demo certificates Refer to the WLS installation guide - Configuring Identity and Trust Note: For WebLogic installation only. This is an optional value. If you enable the WebLogic console port number using the Advanced Web Application Configuration menu, then you should specify the WebLogic additional stop argument.	
Batch Cluster URL	WEB_BATCH_CLUST ER_URL	This address denotes the URL which specifies the status of the batch jobs executing in the environment. Example: service:jmx:rmi:///jndi/rmi:// [host]:[TPW JMX port]/oracle/ouaf/ batchConnector	
StripHTMLComments: false	STRIP_HTML_COMM ENTS	Stripping HTML (and JavaScript) comments will increase the security of the system. Default value: false Valid values: true, false	

Table 10: Installation Menu 52, Advanced Web Application Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Authentication Login Page Type	WEB_WLAUTHMET HOD	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	
Application Viewer Form Login Page	WEB_APPVIEWER_F ORM_LOGIN_PAGE	Specify the jsp file used to login into the application. Default value: /loginPage.jsp	
Application Viewer 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	
Help Form Login Page	WEB_HELP_FORM_L OGIN_PAGE	Specify the jsp file used to login into the application. Default value: /loginPage.jsp	
Help Form Login Error Page	WEB_HELP_FORM_L OGIN_ERROR_PAGE	Specify the jsp file used when there is an error when logging into the application. Default value: /formLoginError.jsp	
Web Form Login Error Page	WEB_FORM_LOGIN _ERROR_PAGE	Specify the jsp file used when there is an error when logging into the application. Default value: /formLoginError.jsp	
Web Security Role	WEB_PRINCIPAL_N AME	Specify the name of the security role. Default value: cisusers	
Web Principal Name	WEB_PRINCIPAL_N AME	Specify the name of a principal that is defined in the security realm. Default value: cisusers	
Application Viewer Security Role	WEB_APPVIEWER_R OLE_NAME	Specify the name of the security role. Default value: cisusers	
Application Viewer Principal Name	WEB_APPVIEWER_P RINCIPAL_NAME	Specify the name of a principal that is defined in the security realm. Default value: cisusers	

Table 10: Installation Menu 52, Advanced Web Application Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
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	

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
```

Table 11: Installation Menu 53, OIM Configuration Settings

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

Keystore Options

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

Table 12: Installation Menu 54, Keystore Options

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Store Type	KS_STORETYPE	Value used for keytool option -storetype	
Alias	KS_ALIAS	Value used for keytool option -alias	
Alias Key Algorithm	KS_HMAC_ALIAS	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	
Padding	KS_PADDING	Value used for encryption/decryption	
Mode	KS_MODE	Value used for encryption/decryption	

Appendix C

Application Framework Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Operational Device Management. The patches listed below are available as a convenience rollup inside the Oracle Utilities Application Framework V4.2.0.2 Single Fix Prerequisite Rollup for ODM V2.0.1.2 and Oracle Utilities Application Framework V4.2.0.0 Service Pack2 folders.

11067376	12617593	12659026	14192814	14240578
14319206	14521962	14524888	14527006	14527400
14539076	14544366	14544452	14545944	14559104
14560564	14565634	14565651	14579412	14581708
14592799	14594616	14600735	14602866	14609627
14614586	14621732	14626695	14631396	14644644
14664647	14671706	14676277	14698961	14700423
14708140	14708436	14729592	14730885	14736454
14736785	14744330	14745556	14770392	14772030
14775075	14789571	14797345	14840823	15841356
15858191	15873943	15877611	15880329	15905379
15992222	16167603	16186722	16190087	16212989
16215864	16219683	16303599	16316995	16318143
16343977	16374017	16385299	16396059	16396573
16398499	16398679	16418659	16425774	16437301
16440688	16440733	16448289	16449617	16461061
16472132	16476077	16480050	16480191	16482296
16487106	16487403	16490438	16495223	16497621
16504198	16504293	16520616	16530304	16538157
16545152	16546995	16547650	16552932	16554947
16568048	16579180	16580225	16581770	16586472
16592440	16603628	16616715	16617700	16635023

16659790	16664523	16668983	16670760	16671538
16672791	16675764	16675844	16675996	16676399
16677131	16679063	16679656	16689329	16689704
16694153	16702800	16708885	16717970	16726511
16727925	16736533	16743893	16758539	16759653
16762892	16768046	16777821	16787349	16787374
16802088	16806989	16816282	16838338	16844187
16850247	16850309	16850688	16858291	16864647
16874883	16881183	16904379	16908277	16908713
16914402	16917344	16923725	16925436	16925841
16928582	16931039	16931822	16935190	16937425
16939783	16950639	16951883	16956686	16956950
16985929	16986814	16989121	16999320	16999381
17010423	17022658	17029908	17042684	17049686
17055049	17061689	17067655	17076211	17154339
17160605	17165578	17165623	17171626	17174332
17179383	17180889	17204179	17211890	17214853
17221519	17232848	17242602	17244396	17244868
17252644	17258929	17273482	17273787	17278843
17279812	17285833	17287164	17290592	17294881
17296906	17302337	17305257	17314586	17316663
17331193	17335666	17336166	17336286	17338595
17341218	17342450	17344235	17348986	17355244
17365200	17369164	17369474	17376564	17377813
17384099	17404820	17408028	17414002	17418262
17420015	17432034	17432895	17433997	17434604
17438161	17441910	17445631	17450267	17450419
17458194	17464596	17465183	17468220	17470117
17471956	17472596	17478243	17478927	17488821
17489370	17505391	17510169	17516857	17517777
17517869	17533662	17534392	17535672	17538095
17555647	17560947	17562179	17562184	17570794
17570797	17572833	17575909	17583089	17584157
17584161	17589610	17592316	17596015	17600131

17609265	17611099	17616051	17618354	17649461
17651139	17694507	17736967	17743032	17750844
17750857	17754375	17787461	17794062	17797353
17801211	17821535	17821540	17827765	17830939
17844287	17891219	17899486	17952946	17992633
18055168				

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:

```
./spl.sh -b start
```

Windows:

```
spl.cmd -b start
```

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
```

Appendix E

Installing User Documentation as a Standalone Application

This section provides instructions for installing the Oracle Utilities Operational Device Management user documentation that is supplied with the system.

This section includes the following:

- User Documentation Formats and File Location
- Installing Stand-Alone Online Help

User Documentation Formats and File Location

The user documentation is provided in PDF format for printing.

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

- W1: Oracle Utilities Operational Device Management User Guide
- F1: Oracle Utilities Application Framework Administration and Business Process Guides

Installing Stand-Alone Online Help

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

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

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

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

Customizing Help for Stand-Alone Operation

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

Installing Stand-Alone Help Under Web Server

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

For example,

"For WebLogic, configure config.xml file for deployed application Name="help"with

URI="help.war" and set WebServer DefaultWebApp="help" Access the documentation from the browser by the following URL : http://<host name>:<port name>/<WebContext>/<Lang>/SPLHelp.html

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

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

Appendix F

License and Copyright Notices

This section provides license and copyright information for the associated products. This includes the following:

- Notice Concerning Usage of ANTLR

- Notice Concerning Usage of Apache Software

- Notice Concerning Usage of ASM

- Notice Concerning Usage of Concurrent

- Notice Concerning Usage of DOM4J

- Notice Concerning Usage of International Components for Unicode (ICU4J)

- Notice Concerning Usage of Jaxen

- Notice Concerning Usage of JCIP Annotations

- Notice Concerning Usage of SLF4J

- Notice Concerning Usage of Staxmate

- Notice Concerning Usage of XMLPULL

- Notice Concerning Usage of XMLUnit

- Notice Concerning Usage of XStream

- Notice Concerning Usage of YUI

Third-Party Products

The following sections provide notices and information about the third party products indicated.

Notice Concerning Usage of ANTLR

[The BSD License]

Copyright (c) 2010 Terence Parr

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

\THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of Apache Software

The following files are covered under the Apache 2.0 license:

- bsf-2.4.0.jar
- castor-1.3.2-core.jar
- castor-1.3.2-xml-schema.jar
- castor-1.3.2-xml.jar
- cglib-2.2.jar
- commonj-3.7.1.jar
- commons-beanutils-core-1.8.3.jar
- commons-cli-1.1.jar
- commons-codec-1.6.jar
- commons-collections-3.2.1.jar
- commons-fileupload-1.2.2.jar
- commons-httpclient-3.0.1.jar

- commons-io-1.3.2.jar

- commons-lang-2.2.jar

- log4j-1.2.17.jar

- serializer-2.7.1.jar

- stax2-2.1.jar

- stax2-api-3.0.4.jar

- wstx-asl-3.2.7.jar

- xalan-mod-2.7.1.jar

- xmlparserv2-11.1.1.3.0.jar

Apache License

Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic

mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

You must give any other recipients of the Work or Derivative Works a copy of this License; and

You must cause any modified files to carry prominent notices stating that You changed the files; and

You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License. You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

Notice Concerning Usage of ASM

Copyright (c) 2000-2005 INRIA, France Telecom

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holders nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)

ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of Concurrent

All classes are released to the public domain and may be used for any purpose whatsoever without permission or acknowledgment. http://g.oswego.edu/dl/classes/EDU/oswego/cs/dl/util/concurrent/intro.html

Notice Concerning Usage of DOM4J

Copyright 2001-2010 (C) MetaStuff, Ltd. All Rights Reserved.

Redistribution and use of this software and associated documentation ("Software"), with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain copyright statements and notices. Redistributions must also contain a copy of this document.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. The name "DOM4J" must not be used to endorse or promote products derived from this Software without prior written permission of MetaStuff, Ltd. For written permission, please contact dom4j-info@metastuff.com.

4. Products derived from this Software may not be called "DOM4J" nor may "DOM4J" appear in their names without prior written permission of MetaStuff, Ltd. DOM4J is a registered trademark of MetaStuff, Ltd.

5. Due credit should be given to the DOM4J Project - http://dom4j.sourceforge.net

THIS SOFTWARE IS PROVIDED BY METASTUFF, LTD. AND CONTRIBUTORS

``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT

NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND

FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL METASTUFF, LTD. OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of International Components for Unicode (ICU4J)

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2010 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF

MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

Notice Concerning Usage of Jaxen

Copyright 2003-2006 The Werken Company. All Rights Reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

 * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

 * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

 * Neither the name of the Jaxen Project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of JCIP Annotations

Attribution 2.5

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS LICENSE DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE INFORMATION PROVIDED, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM ITS USE.

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF

THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

1. Definitions

1. "Collective Work" means a work, such as a periodical issue, anthology or encyclopedia, in which the Work in its entirety in unmodified form, along with a number of other contributions, constituting separate and independent works in themselves, are assembled into a collective whole. A work that constitutes a Collective Work will not be considered a Derivative Work (as defined below) for the purposes of this License.

2. "Derivative Work" means a work based upon the Work or upon the Work and other pre-existing works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which the Work may be recast, transformed, or adapted, except that a work that constitutes a Collective Work will not be considered a Derivative Work for the purpose of this License. For the avoidance of doubt, where the Work is a musical composition or sound recording, the synchronization of the Work in timed-relation with a moving image ("synching") will be considered a Derivative Work for the purpose of this License.

3. "Licensor" means the individual or entity that offers the Work under the terms of this License.

4. "Original Author" means the individual or entity who created the Work.

5. "Work" means the copyrightable work of authorship offered under the terms of this License.

6. "You" means an individual or entity exercising rights under this License who has not previously violated the terms of this License with respect to the Work, or who has received express permission from the Licensor to exercise rights under this License despite a previous violation.

2. Fair Use Rights. Nothing in this license is intended to reduce, limit, or restrict any rights arising from fair use, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.

3. License Grant. Subject to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

1. to reproduce the Work, to incorporate the Work into one or more Collective Works, and to reproduce the Work as incorporated in the Collective Works;

2. to create and reproduce Derivative Works;

3. to distribute copies or phonorecords of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission the Work including as incorporated in Collective Works;

4. to distribute copies or phonorecords of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission Derivative Works.

5.

For the avoidance of doubt, where the work is a musical composition:

1. Performance Royalties Under Blanket Licenses. Licensor waives the exclusive right to collect, whether individually or via a performance rights society (e.g. ASCAP,

BMI, SESAC), royalties for the public performance or public digital performance (e.g. webcast) of the Work.

   2. Mechanical Rights and Statutory Royalties. Licensor waives the exclusive right to collect, whether individually or via a music rights agency or designated agent (e.g. Harry Fox Agency), royalties for any phonorecord You create from the Work ("cover version") and distribute, subject to the compulsory license created by 17 USC Section 115 of the US Copyright Act (or the equivalent in other jurisdictions).

6. Webcasting Rights and Statutory Royalties. For the avoidance of doubt, where the Work is a sound recording, Licensor waives the exclusive right to collect, whether individually or via a performance-rights society (e.g. SoundExchange), royalties for the public digital performance (e.g. webcast) of the Work, subject to the compulsory license created by 17 USC Section 114 of the US Copyright Act (or the equivalent in other jurisdictions).

The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. All rights not expressly granted by Licensor are hereby reserved.

4. Restrictions.The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

   1. You may distribute, publicly display, publicly perform, or publicly digitally perform the Work only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy or phonorecord of the Work You distribute, publicly display, publicly perform, or publicly digitally perform. You may not offer or impose any terms on the Work that alter or restrict the terms of this License or the recipients' exercise of the rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not distribute, publicly display, publicly perform, or publicly digitally perform the Work with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License Agreement. The above applies to the Work as incorporated in a Collective Work, but this does not require the Collective Work apart from the Work itself to be made subject to the terms of this License. If You create a Collective Work, upon notice from any Licensor You must, to the extent practicable, remove from the Collective Work any credit as required by clause 4(b), as requested. If You create a Derivative Work, upon notice from any Licensor You must, to the extent practicable, remove from the Derivative Work any credit as required by clause 4(b), as requested.

   2. If you distribute, publicly display, publicly perform, or publicly digitally perform the Work or any Derivative Works or Collective Works, You must keep intact all copyright notices for the Work and provide, reasonable to the medium or means You are utilizing: (i) the name of the Original Author (or pseudonym, if applicable) if supplied, and/or (ii) if the Original Author and/or Licensor designate another party or parties (e.g. a sponsor institute, publishing entity, journal) for attribution in Licensor's copyright notice, terms of service or by other reasonable means, the name of such party or parties; the title of the Work if supplied; to the extent reasonably practicable, the Uniform Resource Identifier, if any, that Licensor specifies to be associated with the Work, unless such URI does not refer to the copyright notice or licensing information for the Work; and in the case of a Derivative Work, a credit identifying the use of the Work in the Derivative Work (e.g., "French translation of the Work by Original Author," or "Screenplay based on original Work by Original Author"). Such credit may be implemented in any reasonable manner; provided, however, that in the case of a Derivative Work or Collective Work, at a minimum such credit will appear where any other comparable authorship credit appears and in a manner at least as prominent as such other comparable authorship credit.

5. Representations, Warranties and Disclaimer

UNLESS OTHERWISE MUTUALLY AGREED TO BY THE PARTIES IN WRITING, LICENSOR OFFERS THE WORK AS-IS AND MAKES NO REPRESENTATIONS OR

WARRANTIES OF ANY KIND CONCERNING THE WORK, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCH EXCLUSION MAY NOT APPLY TO YOU.

6. Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

1. This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Derivative Works or Collective Works from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License.

2. Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

8. Miscellaneous

1. Each time You distribute or publicly digitally perform the Work or a Collective Work, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License.

2. Each time You distribute or publicly digitally perform a Derivative Work, Licensor offers to the recipient a license to the original Work on the same terms and conditions as the license granted to You under this License.

3. If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

4. No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

5. This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Licensor and You.

Creative Commons is not a party to this License, and makes no warranty whatsoever in connection with the Work. Creative Commons will not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. Notwithstanding the foregoing two (2) sentences, if Creative Commons has expressly identified itself as the Licensor hereunder, it shall have all rights and obligations of Licensor.

Except for the limited purpose of indicating to the public that the Work is licensed under the CCPL, neither party will use the trademark "Creative Commons" or any related trademark or logo of Creative Commons without the prior written consent of Creative Commons. Any permitted use will be in compliance with Creative Commons' then-current trademark usage guidelines, as may be published on its website or otherwise made available upon request from time to time.

Creative Commons may be contacted at http://creativecommons.org/.

Notice Concerning Usage of SLF4J

SLF4J source code and binaries are distributed under the MIT license.

Copyright (c) 2004-2008 QOS.ch

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

 The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDE "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,   FITNESS   FOR   A   PARTICULAR   PURPOSE   AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Notice Concerning Usage of Staxmate

Copyright (c) 2007, Tatu Saloranta

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

 * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of the <organization> nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY <copyright holder> ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL <copyright holder> BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT

(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of XMLPULL

XMLPULL API IS FREE

All of the XMLPULL API source code, compiled code, and documentation contained in this distribution *except* for tests (see separate LICENSE_TESTS.txt) are in the Public Domain.

XMLPULL API comes with NO WARRANTY or guarantee of fitness for any purpose.

Initial authors: Stefan Haustein and Aleksander Slominski

2001-12-12

Notice Concerning Usage of XMLUnit

Copyright (c) 2001-2007, Jeff Martin, Tim Bacon

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of the xmlunit.sourceforge.net nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of XStream

Copyright (c) 2003-2006, Joe Walnes

Copyright (c) 2006-2007, XStream Committers

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of

conditions and the following disclaimer. Redistributions in binary form must reproduce

the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of XStream nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRE CT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Notice Concerning Usage of YUI

Copyright © 2012 Yahoo! Inc. All rights reserved.

Redistribution and use of this software in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

* Neither the name of Yahoo! Inc. nor the names of YUI's contributors may be used to endorse or promote products derived from this software without specific prior written permission of Yahoo! Inc.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.