

Oracle Utilities Meter Data Management

Installation Guide

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Oracle Utilities Meter Data Management Installation Guide

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Preface

This guide provides an overview of installing Oracle Utilities Meter Data Management and is intended for anyone interested in the installation process. This section includes:

- [Related Documents](#)
- [Updates to Documentation](#)
- [Conventions](#)
- [Acronyms](#)
- [Additional Resources](#)

To complete installation you should have:

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

Related Documents

The following documentation is included with this release.

Installation, Configuration, and Release Notes

- *Oracle Utilities Meter Data Management Release Notes*
- *Oracle Utilities Meter Data Management Quick Install Guide*
- *Oracle Utilities Meter Data Management Installation Guide*
- *Oracle Utilities Meter Data Management Database Administrator's Guide*
- *Oracle Utilities Meter Data Management Licensing Information User Manual*

User Guides

- *Oracle Utilities Meter Data Management Business User Guide*
- *Oracle Utilities Meter Data Management Administrative User Guide*

Supplemental Documents

- *Oracle Utilities Meter Data Management Security Guide*
- *Oracle Utilities Meter Data Management Server Administration Guide*

Updates to Documentation

Additional and updated information about the product is available from the **Knowledge Base** section of **My Oracle Support** (<http://support.oracle.com>). Please refer to **My Oracle Support** for more information. Documentation updates are also posted on the Oracle Technology Network documentation page as they become available (http://docs.oracle.com/cd/E72219_01/documentation.html).

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. |
| <i>italic</i> | 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 and terms are used in this document:

| Acronym | Definition |
|---------|------------------------------------------|
| ADF | Oracle Application Development Framework |
| EAR | Enterprise Archive |
| EJB | Enterprise JavaBeans |
| HTML | HyperText Markup Language |
| JAR | Java Archive |
| JDBC | Java database connectivity |
| JMX | Java Management Extensions |
| JNDI | Java Naming and Directory Interface |
| JSP | JavaServer Pages |
| JVM | Java Virtual Machine. |

| Acronym | Definition |
|----------------|------------------------------------------------------------------------------|
| MPL | Multi Purpose Listener |
| OUIAF | Oracle Utilities Application Framework |
| OAM | Oracle Access Manager |
| OIM | Oracle Identity Management |
| ONS | Oracle Notification Service |
| Oracle RAC FCF | Oracle Real Application Clusters Fast Connection Failover |
| RMI | Remote Method Invocation |
| SOAP | Simple Object Access Protocol |
| SOA | Service-oriented architecture |
| SPLEBASE | The location where the application will be installed. |
| SPLOUTPUT | This location is used for storing batch log files and output from batch jobs |
| WAR | Web application Archive |
| WLS | WebLogic |
| XAIApp | XML Application Integration |

Additional Resources

For more information and support, visit the Oracle Support Web site at:
<http://www.oracle.com/support/index.html>

Chapter 1

Introduction

This chapter provides an overview of the installation of Oracle Utilities Meter Data Management.

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

Installation Overview

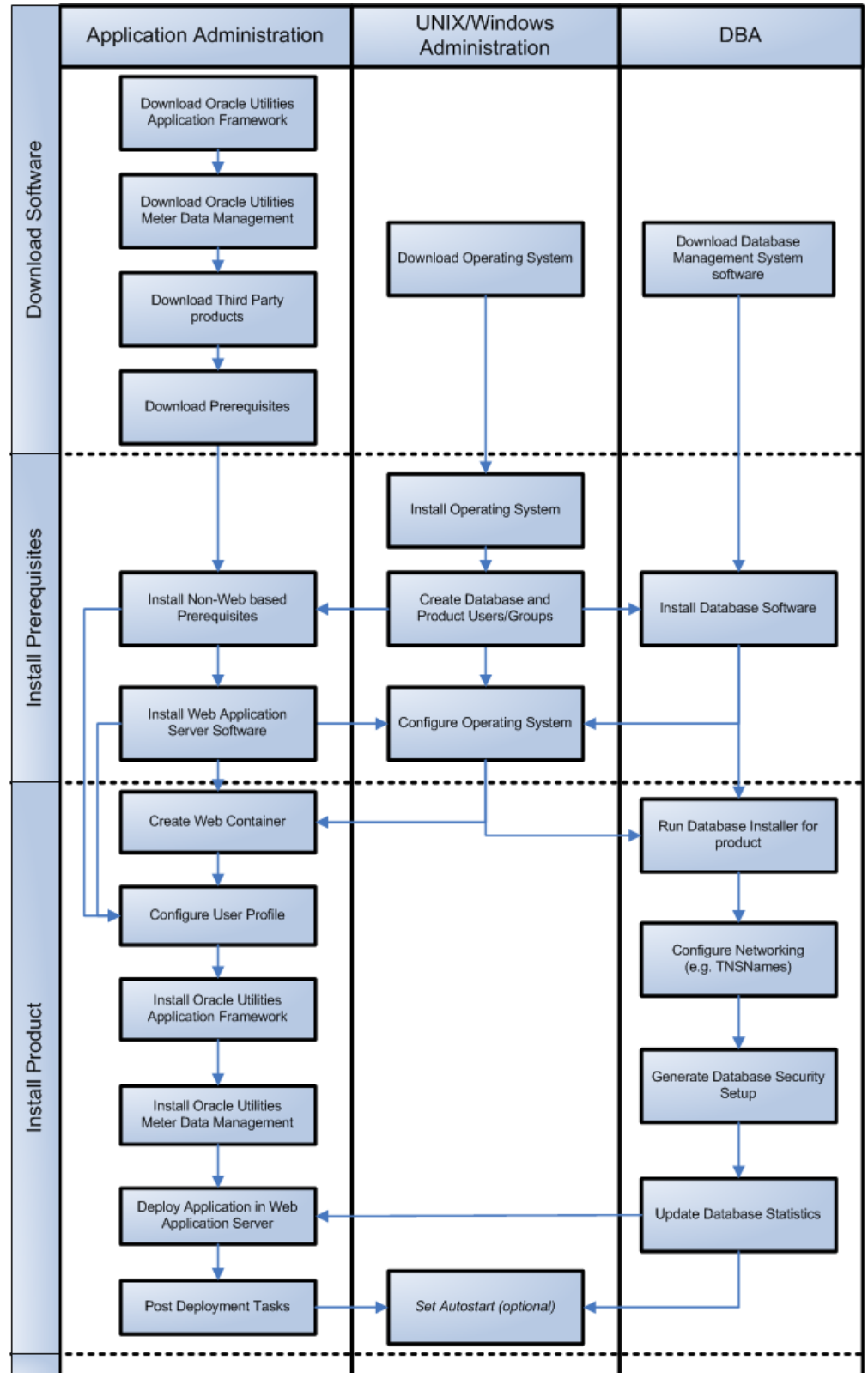
Installing Oracle Utilities Meter Data Management involves the following steps:

1. Review the different tiers of the application architecture as described in the [Application Architecture](#) section of this chapter.
2. Understand the hardware requirements for installing the application and the supported platforms for the application and database servers as described in the [Supported Platforms and Hardware Requirements](#) section.

Note: The installation and administration of the database server tier is described in detail in the document *Oracle Utilities Meter Data Management Database Administrator's Guide*.

3. Plan your installation as described in the [Planning the Installation](#) section. This chapter includes lists of the required software for each supported combination of operating system and application server.
4. Install all required third-party software as described in the [Installing Prerequisite Software](#) section.
5. Install the database as described in the *Oracle Utilities Meter Data Management Database Administrator's Guide*.
6. Install the framework for the application.
7. Install Oracle Utilities Meter Data Management.
8. Follow the installation guidelines described in the [Additional Tasks](#) section.

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



Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management installation.

Application Architecture

The Oracle Utilities Meter Data Management application is deployed on multiple tiers.

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

Tier 1: Desktop/Client, or Presentation Tier

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

Tier 2: Web Application Server, Business Application Server, Batch Server Tier

This tier is implemented in a Web application server, business application server, or the batch server. The business application component can be installed as part of the Web application server, or as a separate component. Except where explicitly noted, most of the Oracle Utilities Meter Data Management installation documentation assumes that the Web application and business application servers reside together. The batch infrastructure will also run within this tier. You can have multiple batch server instances that serve the application.

Tier 3: Database, or Persistence Tier

This tier is implemented in a database server. The database server stores data maintained by the Oracle Utilities Meter Data Management application. More specifically, the database tier contains the data server files and database executables that physically store the tables, indexes, and other database objects for your system.

Installation Components

The Oracle Utilities Meter Data Management product installation consists of the following components:

- Database Components
 - Oracle Utilities Application Framework database
 - Oracle Utilities Meter Data Management database
- Application Components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

For a successful installation, you must install ALL of the above components.

Installation Types

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

- [Initial Installation](#) - A base installation, typically used for a production environment.
- [Demo Installation](#) - A base installation with pre-populated demo data, typically used for demonstration or training purposes.
- [Upgrade Installation](#) - An upgrade installation from version 2.1.0.3.0 and 2.2.0.2.0 to version 2.2.0.3.0.

Please see [Recommendations for Creating a Production Environment](#) for information about which installation type is appropriate for a production environment.

The following sections describe these installation types in detail.

Initial Installation

This installation type is applicable when installing Oracle Utilities Meter Data Management for the first time or from scratch. For an initial install, you must install all of the following components:

- Database components

Refer to the **Initial Install** section in the Oracle Utilities Meter Data Management *Database Administrator's Guide* for more information.

- Application components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

Refer to the [Installing Oracle Utilities Meter Data Management - Initial Installation](#) chapter for steps involved in installing each of the above components.

Demo Installation

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

- Application components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

Refer to the [Installing Oracle Utilities Meter Data Management - Demo Installation](#) chapter for steps involved in installing each of the above components.

Upgrade Installation

This installation type is applicable when upgrading Oracle Utilities Meter Data Management from versions 2.1.0.3.0 or 2.2.0.2.0 to version 2.2.0.3.0.

Note: If you have a version prior to 2.1.0.3.0, you must install 2.1.0.3.0 before upgrading to 2.2.0.3.0.

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

- Database components
Refer to the **Upgrade Install** section in the Oracle Utilities Meter Data Management *Database Administrator's Guide* for more information.
- Application components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

Refer to the [Upgrading Oracle Utilities Meter Data Management](#) chapter for steps involved in upgrading each of the above components.

Recommendations for Creating a Production Environment

For a production environment, Oracle recommends that you complete the Initial Installation installation type. If there is any custom configuration that needs to be migrated from a development or “gold” environment into production, the migration can be done by using the Configuration Migration Assistant (CMA). Please refer to the appendix “Configuration Migration Assistant” in the *Oracle Utilities Meter Data Management Configuration Guide* for more details about CMA.

Oracle does not recommend creating a production environment by using the Demo Installation installation type, or by cloning an existing Demo installation.

Media Pack Components

The Oracle Utilities Meter Data Management Media Pack consists of the following packages:

Documentation Packages

- Oracle Utilities Meter Data Management V2.2.0.3 Quick Install Guide
- Oracle Utilities Meter Data Management V2.2.0.3 Release Notes
- Oracle Utilities Meter Data Management V2.2.0.3 Supplemental Documentation
- Oracle Utilities Meter Data Management V2.2.0.3 User Documentation
- Oracle Utilities Meter Data Management V2.2.0.3 Install Documentation

Installation Packages

- Oracle Utilities Meter Data Management V2.2.0.3 Reports
- Oracle Utilities Meter Data Management V2.2.0.3 Demo
- Oracle Utilities Meter Data Management V2.2.0.3 Multiplatform
- Oracle Fusion Middleware 12c (12.2.1.3) Web Logic Server and Coherence

Chapter 2

Supported Platforms and Hardware Requirements

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

- Software and Hardware Considerations
- Operating Systems and Application Servers
- Hardware and Web Browser Requirements
- Application Server Memory Requirements
- Support for Software Patches and Upgrades

Software and Hardware Considerations

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

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

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

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

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

Operating Systems and Application Servers

This section details the operating system and application server combinations on which this version of Oracle Utilities Meter Data Management is supported.

Application Server Operating Systems

- Oracle Linux 6.5+ for x86_64 Oracle Linux 7.x for x86_64
- Oracle Solaris 11.x for SPARC (64-bit)
- IBM AIX 7.1/7.2 TLx for POWER (64-bit)

Prerequisite Application Server Software

- Oracle Database Client 12.2.0.1+
- Oracle Java SE Development Kit 1.8.0_131+(Oracle platforms only)
- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)
- Hibernate ORM 4.1.0 and Hibernate 5.2.3 jars

- Oracle WebLogic Server 12c Release 2 (12.2.1.3+) 64-bit

Notes

- Oracle Linux is 100% user space-compatible with Red Hat Enterprise Linux, therefore, OUAFA is also supported on Red Hat Enterprise Linux.
- Refer to the *Oracle Utilities Application Framework Database Administrator's Guide* for the Oracle Database Server Requirements.

Refer to the *Product Support Matrix (Document ID 1454143.1)* on My Oracle Support to determine if support for newer versions of the listed products have been added.

Please note the following:

- Version numbers marked with a "+" are the MINIMUM version supported. That version and all future 4th digit updates will be supported.

Example: Oracle 12.2.0.1+ means that 12.2.0.1 and any higher 12.2.0.x versions of Oracle are supported.

* An "x" indicates that any version of the digit designed by the "x" is supported.

Example: Linux 7.x indicates that any version of Linux 7 (7.0, 7.1, 7.2 etc) will be supported.

Windows Server

- Windows Server is **not** supported for Production environments. Wherever Windows Server is referenced within this guide, it is supported for Test or Development environments **only**.

WebLogic Server

- Oracle WebLogic Server (Fusion Middleware Infrastructure) Release 2 (12.2.1.3+) and any higher versions of Oracle are supported.
- Customers must download Oracle WebLogic Server from the Oracle Software Delivery Cloud.

Oracle Database Server

Prerequisite Database Server Software (on any vendor supported platform where x is vendor supported version):

- Oracle Database Server Enterprise Edition 12.2.0.x
- Oracle Database Server Standard Edition 2 12.2.0.x

Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are strongly recommended in all situations.

Oracle VM Support

This version of Oracle Utilities Meter Data Management is supported on Oracle VM Server for x86 for supported releases of Oracle Linux and Microsoft Windows operating systems.

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

Hardware and Web Browser 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).

Web Browser Requirements

The web browsers listed below are supported when used on each of the operating systems indicated:

| Browser | Windows Operating System |
|----------------------|---------------------------------------|
| Internet Explorer 11 | Microsoft Windows 7, 8.1, 10 (64-bit) |
| Firefox ESR 52 | Microsoft Windows 7, 8.1, 10 (64-bit) |
| Google Chrome | Microsoft Windows 7, 8.1, 10 (64-bit) |

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. The approximate disk space requirements in a standard installation are as follows (the size represents the MINIMUM required):

| Location | Size | Usage |
|---------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Install Dir ("\$SPLEBASE") Location | 10 GB recommended 5 GB minimum | This is the location 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. Note: This does not include the size of the edge product. |
| Log Dir ("\$SPLOUTPUT") Location | 4 GB recommended 2 GB minimum | This location is used for storing batch log files and output from batch jobs. The size of this space should be influenced by which batches are run and how often, and the amount of debugging information that is collected. |
| Location of the application web work files on the web servers | 5 GB recommended 2 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 minimum | 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. |

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 to this is Hibernate software 4.1.0 which 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 Meter Data Management installation, including:

- [Before You Install](#)
- [Prerequisite Software List](#)
- [Installing Prerequisite Software](#)
- [Additional Prerequisite Software Information](#)
- [Readiness Checklist](#)

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management installation.

Embedded vs Native/Clustered Installation

By default, Oracle Utilities Application Framework uses Oracle WebLogic in embedded mode. This means the Oracle WebLogic installation is essentially pointed to the Oracle Utilities Application Framework product installation and the executables of Oracle WebLogic are only used to execute the code. This has the advantage of being simple and quick to implement with the Oracle Utilities Application Framework generating a simple configuration for Oracle WebLogic to use.

If you want to take advantage of more advanced WebLogic features such as high performance (multiple managed servers) and high availability (clustering) configuration, do not use the embedded install. Rather, use the native/clustered installation which allows you to deploy the Oracle Utilities Application Framework JEE components within Oracle WebLogic, as you would with other JEE applications.

WebLogic Native Installation

With Oracle Utilities Application Framework 4.3.0.6.0, a WebLogic native installation is required. Refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Framework (Doc ID 2413918.1)* whitepaper on My Oracle Support.

Application Server Clustering

If you are considering application server clustering, refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Framework (Doc ID 2413918.1)* whitepaper on My Oracle Support for additional information.

Additional information about WebLogic clustering can be found at http://docs.oracle.com/cd/E17904_01/web.1111/e13709/toc.htm.

Directory Names

Directory cannot contain whitespace characters.

Prerequisite Software List

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

Prerequisite Software for Database Server

The prerequisite software for the database component of Oracle Utilities Meter Data Management is as follows:

- **Oracle Database Server 12.1.0.1+** - This is required for installing the database component of the Oracle Utilities Meter Data Management product.

Oracle Database Enterprise Edition version of the database server is supported.

Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are strongly recommended in all situations.

Prerequisite Software for Application Server

The prerequisite software for the application component of Oracle Utilities Meter Data Management is as follows:

- Oracle Database 12c Client
- JDK 1.8.0_131+ (64-bit)
- Oracle WebLogic 12c (12.2.1.3+)
- Hibernate 4.1.0 Final

Web Browser Requirements

The web browsers listed below are supported when used on each of the operating systems indicated:

| Browser | Windows Operating System |
|----------------------|---------------------------------------|
| Internet Explorer 11 | Microsoft Windows 7, 8.1, 10 (64-bit) |
| Firefox ESR 52 | Microsoft Windows 7, 8.1, 10 (64-bit) |
| Google Chrome | Microsoft Windows 7, 8.1, 10 (64-bit) |

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+ / AIX 7.2 TL00+ Application Server](#)
- [Oracle Linux 6.5+, 7.x or Red Hat Linux 6.5+, 7.x Operating System](#)
- [Oracle Solaris 11 Application Server](#)
- [Windows Server 2012 R2 Application Server](#)

AIX 7.1 TL01+ / AIX 7.2 TL00+ 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 TL01+/ AIX 7.2 TL00+ | POWER 64-bit | Oracle WebLogic 12c (12.2.1.3+) 64-bit version |

Web/Application Server Tier

AIX 7.1 TL01 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 Meter Data Management Administrator User ID | cissys | |
| Oracle Utilities Meter Data 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 “cissys” and a primary group “cisusr”. Set the primary shell for the cissys user to Korn Shell.

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

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

```
set +o noclobber
```

Security Configuration

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be

created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

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

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

Oracle Client 12c — 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 8.0 SR15 64-bit, IBM SDK, Java Technology Edition, Version 8.0

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

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

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

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

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

Hibernate 4.1.0 FINAL

You must install Hibernate before installing the product.

To install Hibernate external jar files to the Hibernate 3rd party jars depot:

1. Create a Hibernate jar external depot:

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

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

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

4. Extract the contents of the archive file:

```
unzip hibernate-release-4.1.0.Final.zip
```

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

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

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

6. Download the hibernate-release-5.2.3.Final.zip file from the following link to get the jboss-logging-3.3.0.Final.jar.

<https://sourceforge.net/projects/hibernate/files/hibernate-orm>

7. Click the “5.2.3.Final” link to download the zip file.

8. Extract the contents of the archive file using the following command

```
unzip hibernate-release-5.2.3.Final.zip
```

9. Copy the jboss-logging-3.3.0.Final.jar file to your Hibernate jar directory (\$HIBERNATE_JAR_DIR) using the following command:

```
cp hibernate-release-5.2.3.Final/lib/required/jboss-logging-3.3.0.Final.jar to $HIBERNATE_JAR_DIR
```

Oracle WebLogic 12c (12.2.1.3+) 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 12c Infrastructure Installer (12.2.1.3+).

Oracle Linux 6.5+, 7.x or Red Hat Linux 6.5+, 7.x Operating System

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

Supported Application Servers

| Operating System | Chipset | Application Server |
|----------------------------------------------------------------------------------------|---------|----------------------------------------|
| Oracle Enterprise Linux 6.5+, 7.x (64-bit; based on Red Hat Enterprise Linux (64-bit)) | x86_64 | Oracle WebLogic 12c (12.2.1.3+) 64-bit |

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

UNIX Administrator User ID

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

| Description | Default Value | Customer Defined Value |
|--------------------------------------------------------------|---------------|------------------------|
| Oracle Utilities Meter Data Management Administrator User ID | cissys | |
| Oracle Utilities Meter Data 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 “cisusr” (user group)
2. Create a user “cissys” and a primary group “cisusr”. Set the primary shell for the cissys user to Korn Shell.

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

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

```
set +o noclobber
```

Security Configuration

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

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

Replace these users and groups for your installation defaults:

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

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

Oracle Client 12c — 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 8.0 Update 131+

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

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

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

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

Note: JDK 8.0 Update 131 or higher version is required for WebLogic12c (12.2.1.3+).

Hibernate 4.1.0 FINAL

You must install Hibernate before installing the product.

To install Hibernate external jar files to the Hibernate 3rd party jars depot:

1. Create a Hibernate jar external depot:

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

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

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

4. Extract the contents of the archive file:

```
unzip hibernate-release-4.1.0.Final.zip
```

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

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

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

6. Download the `hibernate-release-5.2.3.Final.zip` file from the following link to get the `jboss-logging-3.3.0.Final.jar`.

<https://sourceforge.net/projects/hibernate/files/hibernate-orm>

7. Click the “5.2.3.Final” link to download the zip file.
8. Extract the contents of the archive file using the following command


```
unzip hibernate-release-5.2.3.Final.zip
```
9. Copy the jboss-logging-3.3.0.Final.jar file to your Hibernate jar directory (\$HIBERNATE_JAR_DIR) using the following command:


```
cp hibernate-release-5.2.3.Final/lib/required/jboss-logging-3.3.0.Final.jar to $HIBERNATE_JAR_DIR
```

Oracle WebLogic 12c (12.2.1.3+) 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 12c Infrastructure Installer (12.2.1.3+).

Oracle Solaris 11 Application Server

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

Supported Application Servers

| Operating System | Chipset | Application Server |
|----------------------------|---------|------------------------------------------------|
| Oracle Solaris 11 (64-bit) | SPARC | Oracle WebLogic 12c (12.2.1.3+) 64-bit version |

Oracle Solaris 11 Operating System Running on SPARC-based 64-bit Architecture

UNIX Administrator User ID

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

| Description | Default Value | Customer Defined Value |
|--------------------------------------------------------------|---------------|------------------------|
| Oracle Utilities Meter Data Management Administrator User ID | cissys | |
| Oracle Utilities Meter Data 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 “cisusr” (user group).
2. Create a user “cissys” and a primary group “cisusr”. Set the primary shell for the cissys user to Korn Shell.

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

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

```
set +o noclobber
```

Security Configuration

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

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

Please replace these users and groups for your installation defaults:

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

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

Oracle Client 12c — 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 8.0 Update 131+

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:

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

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

For the user `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.

Note: JDK 8.0 Update version 131 or higher is required for WebLogic12c (12.2.1.3+).

Hibernate 4.1.0 FINAL

You must install Hibernate before installing the product.

To install Hibernate external jar files to the Hibernate 3rd party jars depot:

1. Create a Hibernate jar external depot:

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

2. Download the `hibernate-release-4.1.0.Final.zip` file from <http://sourceforge.net/projects/hibernate/files/hibernate4/>.
3. Click the “4.1.0.Final” link to download the zip file.
4. Extract the contents of the archive file:

```
unzip hibernate-release-4.1.0.Final.zip
```

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

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

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

6. Download the hibernate-release-5.2.3.Final.zip file from the following link to get the jboss-logging-3.3.0.Final.jar.

<https://sourceforge.net/projects/hibernate/files/hibernate-orm>

7. Click the “5.2.3.Final” link to download the zip file.
8. Extract the contents of the archive file using the following command

```
unzip hibernate-release-5.2.3.Final.zip
```

9. Copy the jboss-logging-3.3.0.Final.jar file to your Hibernate jar directory (\$HIBERNATE_JAR_DIR) using the following command:

```
cp hibernate-release-5.2.3.Final/lib/required/jboss-logging-  
3.3.0.Final.jar to $HIBERNATE_JAR_DIR
```

Oracle WebLogic 12c (12.2.1.3+) 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 12c Infrastructure Installer (12.2.1.3+).

Windows Server 2012 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 2012 R2 (64-bit) | x86_64 | Oracle WebLogic 12c (12.2.1.3+) 64-bit version |

Oracle Client 12c — 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 8.0 Update 131+

This software is required for the Oracle WebLogic Installation.

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

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

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

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

Note: JDK 8.0 Update version 131 or higher is required for WebLogic 12c (12.2.1.3+).

Hibernate 4.1.0 FINAL

You must install Hibernate before installing the product.

To install Hibernate external jar files to the Hibernate 3rd party jars depot:

1. Create a Hibernate jar external depot:

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

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

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

4. Extract the contents of the archive file:

```
unzip hibernate-release-4.1.0.Final.zip
```

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

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

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

- Download the hibernate-release-5.2.3.Final.zip file from the following link to get the jboss-logging-3.3.0.Final.jar.

<https://sourceforge.net/projects/hibernate/files/hibernate-orm>

- Click the “5.2.3.Final” link to download the zip file.
- Extract the contents of the archive file using the following command

```
unzip hibernate-release-5.2.3.Final.zip
```

- Copy the jboss-logging-3.3.0.Final.jar file to your Hibernate jar directory (\$HIBERNATE_JAR_DIR) using the following command:

```
cp hibernate-release-5.2.3.Final/lib/required/jboss-logging-
3.3.0.Final.jar to $HIBERNATE_JAR_DIR
```

Oracle WebLogic 12c (12.2.1.3+) 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 12c Infrastructure Installer (12.2.1.3+).

Additional Prerequisite Software Information

This section outlines additional information related to installing the prerequisite software, including:

- [Setting Up and Using the Additional JAR Directory](#)
- [Special Note to Upgrade from a WebLogic 12.1.3.x Environment](#)

Setting Up and Using the Additional JAR Directory

The additional JAR directory must be populated if the Web Application Server Home directory is not set.

For example: The environment is for batch only and the server has no WebLogic installed. In this scenario, the Additional JAR Directory must be created prior to the installation and the following list of WebLogic JARs should be copied to that directory (full path from the actual WebLogic location which must be installed in the web server).

```
<Web Application Server Home Directory>/server/lib/
wlthint3client.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.codehaus.woodstox.stax2-api.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.core.jersey-client.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.core.jersey-common.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.bundles.repackaged.jersey-guava.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.core.jersey-server.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.media.jersey-media-jaxb.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.media.jersey-media-multipart.jar
if WebLogic 12.2.1.[0-2].0:
<Web Application Server Home Directory>/../oracle_common/modules/
org.codehaus.woodstox.woodstox-core-asl.jar
if WebLogic is not 12.2.1.[0-2].0:
<Web Application Server Home Directory>/../oracle_common/modules/
com.fasterxml.woodstox.woodstox-core.jar
```

If the Additional JAR directory is configured, the initialSetup process will pull those JARs from that directory. If it is not configured, the initialSetup process will pull those JARs from the Web Application Server Home directory.

Special Note to Upgrade from a WebLogic 12.1.3.x Environment

If you are upgrading from an environment which is using WebLogic 12.1.3.x, make sure to follow the steps below prior to the installation:

1. Install Oracle WebLogic Server (Fusion Middleware Infrastructure) 12.2.1.x.
2. Install Oracle Java SE Development Kit 1.8.0_131+ (if not installed yet).
3. Shutdown the application server environment.
4. Take a full backup of the application:

```
$SPLEBASE
```

5. Set the environment:

```
splenvron.sh -e <ENV NAME>
```

6. Reconfigure the environment to point to the new WebLogic and Java (if upgraded Java as well):

```
Execute: configureEnv.sh -i
```

```
Update: "Web Java Home Directory" and "Web Application Server Home Directory"
```

Type <P> to process (no need to rerun initialSetup.sh).

7. Set the environment again: `splenviron.sh -e <ENV NAME>`.
8. Upgrade the Oracle Utilities Application Framework to V4.3.0.6.0 using the `installSP.sh` script.

Readiness Checklist

The following checklist guides you through the installation process of Oracle Utilities Meter Data 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 [Prerequisite Software List](#) for more details.
3. Ensure that you have downloaded the Oracle Utilities Meter Data Management v2.2.0.3 components.
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 the [Installing Oracle Utilities Meter Data Management - Initial Installation](#) chapter.
 - **Demo Installation** - For demo installation follow the instructions mentioned in the [Installing Oracle Utilities Meter Data Management - Demo Installation](#) chapter.
 - **Upgrade Installation** - For upgrade installation to v2.2.0.3, follow the instructions mentioned in the [Upgrading Oracle Utilities Meter Data Management](#) chapter.
6. Perform post-installation tasks.

Chapter 4

Installing Oracle Utilities Meter Data Management - Initial Installation

This chapter provides instructions for installing Oracle Utilities Meter Data Management from scratch. This chapter includes:

- [Before You Install](#)
- [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 Meter Data 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 Meter Data Management must be complete before you can proceed with the following sections. Refer to the [Initial Install](#) section of the Oracle Utilities Meter Data 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 V4.3.0 Service Pack 6 \(4.3.0.6.0\) Application Component](#)
- [Installing the Oracle Utilities Meter Data Management V2.2.0.3 Application Component](#)

Installing the Oracle Utilities Application Framework V4.3.0 Service Pack 6 (4.3.0.6.0) Application Component

This section describes how to install the application component of Oracle Utilities Application Framework V4.3.0 Service Pack 6, 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 V4.3.0 Service Pack 6 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework V4.3.0 Service Pack 6 environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

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

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.

2. Download the Oracle Utilities Meter Data Management V2.2.0.3.0 Multiplatform.zip 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. Unzip Oracle Utilities Meter Data Management V2.2.0.3.0 Multiplatform.zip to get the file MDM_V2.2.0.3.0.zip from the delivered package and copy 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>
unzip MDM_V2.2.0.3.0.zip
cd App
```

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>/App/FW.V4.3.0.6.0 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 V4.3.0.6.0.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Change directory to <TEMPDIR>/App/FW.V4.3.0.6.0.

- 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:${PERL_HOME}/lib/site_perl:<OUAF
    Installer Decompressed location/bin/perl>
export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
    Installer Decompressed location/bin/perl>
export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:$LD_LIBRARY_PATH
```

Windows

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

- Start the application installation utility by executing the appropriate script:

UNIX

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

Windows

```
install.cmd
```

The Oracle Utilities Application Framework specific menu appears.

- Follow the messages and instructions that are produced by the application installation utility.
- Select each menu item to configure the values. For detailed description of the values, refer to [Appendix B: Installation and Configuration Worksheets](#).
- 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. Environment ID, Roles, Third Party Software Configuration

| | |
|---------------------------------------|---------------------------------|
| Environment ID | <Default> |
| Server Roles | batch, online |
| Oracle Client Home Directory | <Mandatory for Initial Install> |
| Web Java Home Directory | <Mandatory for Initial Install> |
| Hibernate JAR Directory | <Mandatory for Initial Install> |
| ONS JAR Directory | <Optional> |
| Web Application Server Home Directory | <Mandatory for Initial Install> |
| Additional JAR Directory | <Optional> |
| ADF Home Directory | <Optional> |
| OIM OAM Enabled Environment | false |

2. Keystore Options

| | |
|---------------------------|------------------|
| Import Keystore Directory | <Default> |
| Store Type | <Mandatory> |
| Alias | <Mandatory> |
| Alias Key Algorithm | AES |
| Alias Key Size | 128 |
| HMAC Alias | ouaf.system.hmac |
| Padding | PKCS5Padding |
| Mode | CBC |

50. Environment Installation Options

| | |
|-----------------------------------|-------------|
| Environment Mount Point | <Mandatory> |
| Log Files Mount Point | <Mandatory> |
| Environment Name | <Mandatory> |
| Install Application Viewer Module | true |
| Install Sample CM Source Code | true |

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

Choose option (1,2,50, <P> Process, <X> Exit):

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 |
| Business Server Application Name | SPLService |
| MPL Admin Port Number | <Mandatory> - Multipurpose Listener Port |
| MPL Automatic startup | false |

3. Web Application Server Configuration

| | |
|-------------------------------------------|-------------|
| Web Server Host | <Mandatory> |
| WebLogic SSL Port Number | <Mandatory> |
| WebLogic Console Port Number | <Mandatory> |
| Web Context Root | ouaf |
| WebLogic JNDI User ID | <Mandatory> |
| WebLogic JNDI Password | <Mandatory> |
| WebLogic Server Name | myserver |
| Web Server Application Name | SPLWeb |
| Deploy Application Viewer Module | true |
| Enable The Unsecured Health Check Service | false |
| MDB RunAs User ID | <Optional> |
| Super User IDs | <Mandatory> |

4. Database Configuration

| | |
|--------------------------------------|-------------------------------|
| Application Server Database User ID | <Mandatory> |
| Application Server Database Password | <Mandatory> |
| MPL Database User ID | <Mandatory> |
| MPL Database Password | <Mandatory> |
| XAI Database User ID | <Mandatory> |
| XAI Database Password | <Mandatory> |
| Batch Database User ID | <Mandatory> |
| Batch Database Password | <Mandatory> |
| Web JDBC DataSource Name | <Optional> |
| Database Name | <Mandatory> |
| Database Server | <Mandatory> |
| Database Port | 1521 |
| ONS Server Configuration | <Optional> |
| Database Override Connection String | <Optional> |
| Character Based Database | false |
| Oracle Client Character Set NLS_LANG | AMERICAN_AMERICA.AL32 UTF8 |

5. General Configuration Options

| | |
|----------------------------------|-------------|
| Batch RMI Port | <mandatory> |
| RMI Port number for JMX Business | <optional> |

| | |
|--------------------------------|-----------------|
| RMI Port number for JMX Web | <optional> |
| JMX Enablement System User ID | <optional> |
| JMX Enablement System Password | <optional> |
| Coherence Cluster Name | <mandatory> |
| Coherence Cluster Address | <mandatory> |
| Coherence Cluster Mode | prod<Mandatory> |
| Coherence Cluster Port | <Mandatory> |

6. OUAF TrustStore Options

| | |
|-----------------------------|----------------------|
| Import TrustStore Directory | <Mandatory> for Prod |
| Store Type | JCEKS |
| Alias | ouaf.system |
| Alias Key Algorithm | AES |
| Alias Key Size | 128 |
| HMAC Alias | ouaf.system.hmac |

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

Choose option (1,2,3,4,5,6 <P> Process, <X> Exit):

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

11. Once the install or upgrade has finished, the installation log location is displayed 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.

Configuration of Oracle Fusion Middleware Components on a Separate Server from Oracle Utilities Meter Data Management

This section applies to an Oracle Utilities Smart Grid Gateway configuration in which Oracle Service Bus (OSB) or Oracle SOA Suite is installed on a separate host from the Oracle Utilities Application Framework's host. In this configuration, the Oracle Utilities installation scripts must have access to the libraries in the OSB and SOA servers' directories to deploy OSB projects and SOA composites successfully.

Follow these procedures to configure access to a remote OSB server:

- Create a network share to the osb folder within the Middleware Home on the remote OSB server.
- Provide the following values for Menu Item 8 (OSB Configuration) during the installation for Oracle Utilities Meter Data Management:

Note: Use the completed OSB configuration worksheet to assist you in this step. See the [Installation and Configuration Worksheets](#).

- **OSB Home** is the location of the osb folder, accessed by way of network share.

- **OSB Host Server** is the host name of the OSB server.
- **OSB Port Number** is the port of the OSB admin server.
- **OSB SSL Port Number** is the port of the OSB SSL admin server.
- **OSB Managed Server Port Number** is the port of the OSB managed server.
- **OSB Managed Server SSL Port Number** is the port of the OSB SSL managed server

Follow these procedures to configure access to a remote SOA Suite server:

- Create a network share to the soa folder within the Middleware Home on the remote SOA Suite server.
- Provide the following values for Menu Item 9 (SOA Configuration) during the installation for Oracle Utilities Service and Measurement Data Foundation.

Note: Use the completed SOA configuration worksheet to assist you in this step. See the [Installation and Configuration Worksheets](#).

- **SOA Home** is the location of the soa folder, accessed by way of network share.
- **SOA Host Server** is the host name of the SOA managed server.
- **SOA Port Number** is the port of the SOA managed server.
- **SOA SSL Port Number** is the port of the SOA SSL managed server.

Installing the Oracle Utilities Meter Data Management V2.2.0.3 Application Component

This section describes how to install the Oracle Utilities Meter Data Management application component, including:

- [Installation Prerequisite](#)
- [Copying and Decompressing Install Media](#)
- [Installing the Application Component](#)

To proceed with the Oracle Utilities Meter Data Management installation you need to be connected to the target Oracle Utilities Framework application environment. See the detailed installation instructions in the following section.

You must initialize the Framework environment. For detailed instructions see the [Preparing for the Installation](#) section.

Installation Prerequisite

Oracle Utilities Framework 4.3.0.6.0 must be installed prior to installing Oracle Utilities Meter Data Management 2.2.0.3.

Copying and Decompressing Install Media

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

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

1. Log in to the application server host as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the MDM-V2.2.0.3-MultiPlatform.jar file 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 MDM-V2.2.0.3-MultiPlatform.jar
```

For Unix and Windows platforms, a sub-directory named MDM.V2.2.0.3 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 Meter Data Management application component:

1. Log in to the application server host as Oracle Utilities Application Framework Administrator (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 <TEMPDIR>/MDM.V2.2.0.3 directory.
5. 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
```

6. Select menu item 8 to configure OSB.

Use the completed OSB configuration worksheet to assist you in this step. See the Meter Data Management Installation and Configuration Worksheets.

7. Select menu item 9 to configure SOA.

Use the completed SOA configuration worksheet to assist you in this step. See the Meter Data Management Installation and Configuration Worksheets.

8. Select menu item 10 to configure the SOA Configuration Plan.

Use the completed SOA Configuration Plan (MDM) worksheet to assist you in this step. See the Installation and Configuration Worksheets.

9. When you are done with the parameter setup, choose option P to proceed with the installation.

Note: The rest of the menu items can be ignored if you are installing only MDM.

Installation of Oracle Utilities Service Meter Data Management Application Server is complete if no errors occurred during installation.

10. Generate the appviewer by following these steps.

- a. Change the directory.

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

where <install_dir> is the Oracle Utilities Meter Data Management application component installation directory.

- b. Run the script to generate the appviewer.

UNIX

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

Windows

```
genappvieweritems.cmd
```

Configuration of Oracle Fusion Middleware Components on a Separate Server from Oracle Utilities Service and Meter Data Management

This section applies to an Oracle Utilities Smart Grid Gateway configuration in which Oracle Service Bus (OSB) or Oracle SOA Suite is installed on a separate host from the Oracle Utilities Application Framework's host. In this configuration, the Oracle Utilities installation scripts must have access to the libraries in the OSB and SOA servers' directories to deploy OSB projects and SOA composites successfully.

Follow these procedures to configure access to a remote OSB server:

- Create a network share to the osb folder within the Middleware Home on the remote OSB server.
- Provide the following values for Menu Item 8 (OSB Configuration) during the installation for Oracle Utilities Service and Measurement Data Foundation:

Note: Use the completed OSB configuration worksheet to assist you in this step. See the [Installation and Configuration Worksheets](#).

- **OSB Home** is the location of the osb folder, accessed by way of network share.
- **OSB Host Server** is the host name of the OSB server.
- **OSB Port Number** is the port of the OSB admin server.
- **OSB SSL Port Number** is the port of the OSB SSL admin server.
- **OSB Managed Server Port Number** is the port of the OSB managed server.
- **OSB Managed Server SSL Port Number** is the port of the OSB SSL managed server.

Follow these procedures to configure access to a remote SOA Suite server:

- Create a network share to the soa folder within the Middleware Home on the remote SOA Suite server.
- Provide the following values for Menu Item 9 (SOA Configuration) during the installation for Oracle Utilities Meter Data Management.

Note: Use the completed SOA configuration worksheet to assist you in this step. See the [Installation and Configuration Worksheets](#).

- **SOA Home** is the location of the soa folder, accessed by way of network share.
- **SOA Host Server** is the host name of the SOA managed server.
- **SOA Port Number** is the port of the SOA managed server.
- **SOA SSL Port Number** is the port of the SOA SSL managed server.

Creating WebLogic Domain

Create the WebLogic native domain and deploy the application. For instructions refer to the Native Installation Oracle Utilities Application Framework (Doc ID: 1544969.1) white paper on My Oracle Support.

Note: When starting Oracle Utilities Meter Data Management for the first time, log into the WebLogic console and provide system access to the cisusers role. Use the

After the Installation

After completing 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 B: Installation and Configuration Worksheets](#) for details.
4. Confirm that the database is ready.
5. Start the application server. For instructions, refer to [Appendix C: Common Maintenance Activities](#).
6. 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 Meter Data Management *Server Administration Guide* for more information on further configuring and operating the system.

Chapter 5

Installing Oracle Utilities Meter Data Management - Demo Installation

This chapter provides instructions for setting up a demo application of Oracle Utilities Meter Data Management useful for demonstration or training purposes. It includes:

- [Before You Install](#)
- [Demo Installation Procedure](#)

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management.

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 Meter Data Management must be complete before you can proceed with the following sections. Refer to the section “**Demo Install**” of the *Oracle Utilities Meter Data 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 V4.3.0 Service Pack 6 \(4.3.0.6.0\) Application Component](#)
- [Installing the Oracle Utilities Meter Data Management V2.2.0.3 Application Component](#)

Installing the Oracle Utilities Application Framework V4.3.0 Service Pack 6 (4.3.0.6.0) Application Component

This section describes how to install the application component of Oracle Utilities Application Framework V4.3.0 Service Pack 6, 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 V4.3.0 Service Pack 6 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework V4.3.0 Service Pack 6 environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

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

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Meter Data Management V2.2.0.3.0 Multiplatform.zip 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. Unzip Oracle Utilities Meter Data Management V2.2.0.3.0 Multiplatform.zip to get the file MDM_V2.2.0.3.0.zip from the delivered package and copy 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>
unzip MDM_V2.2.0.3.0.zip
cd App
```

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>/App/FW.V4.3.0.6.0 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 V4.3.0.6.0.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Change directory to the <TEMPDIR>/App/FW.V4.3.0.6.0 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
```

The Oracle Utilities Application Framework specific menu appears.

5. Follow the messages and instructions that are produced by the application installation utility.
6. Select each menu item to configure the values. For detailed description of the values, refer to [Appendix B: Installation and Configuration Worksheets](#).
7. Below is 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. Environment ID, Roles, Third Party Software Configuration

```
Environment ID                                <Default>
Server Roles                                  batch, online
Oracle Client Home Directory                 <Mandatory for Initial Install>
Web Java Home Directory                     <Mandatory for Initial Install>
Hibernate JAR Directory                    <Mandatory for Initial Install>
ONS JAR Directory                           <Optional>
Web Application Server Home Directory       <Mandatory for Initial Install>
Additional JAR Directory                    <Optional>
ADF Home Directory                          <Optional>
OIM OAM Enabled Environment                 false
```

2. Keystore Options

```
Import Keystore Directory                    <Default>
Store Type                                  <Mandatory>
Alias                                        <Mandatory>
Alias Key Algorithm                         AES
Alias Key Size                              128
HMAC Alias                                  ouaf.system.hmac
Padding                                     PKCS5Padding
Mode                                         CBC
```

50. Environment Installation Options

```
Environment Mount Point                     <Mandatory>
Log Files Mount Point                      <Mandatory>
```

```

Environment Name                                <Mandatory>
Install Application Viewer Module                true
Install Sample CM Source Code                  true

```

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

Choose option (1,2,50, <P> Process, <X> Exit):

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
Business Server Application Name                SPLService
MPL Admin Port Number                          <Mandatory> - Multipurpose
                                                Listener Port
MPL Automatic startup                           false

```

3. Web Application Server Configuration

```

Web Server Host                                <Mandatory>
WebLogic SSL Port Number                       <Mandatory>
WebLogic Console Port Number                  <Mandatory>
Web Context Root                              ouaf
WebLogic JNDI User ID                         <Mandatory>
WebLogic JNDI Password                       <Mandatory>
WebLogic Server Name                          myserver
Web Server Application Name                    SPLWeb
Deploy Application Viewer Module               true
Enable The Unsecured Health Check Service     false
MDB RunAs User ID                             <Optional>
Super User IDs                                <Mandatory>

```

4. Database Configuration

| | |
|--------------------------------------|-------------------------------|
| Application Server Database User ID | <Mandatory> |
| Application Server Database Password | <Mandatory> |
| MPL Database User ID | <Mandatory> |
| MPL Database Password | <Mandatory> |
| XAI Database User ID | <Mandatory> |
| XAI Database Password | <Mandatory> |
| Batch Database User ID | <Mandatory> |
| Batch Database Password | <Mandatory> |
| Web JDBC DataSource Name | <Optional> |
| Database Name | <Mandatory> |
| Database Server | <Mandatory> |
| Database Port | 1521 |
| ONS Server Configuration | <Optional> |
| Database Override Connection String | <Optional> |
| Character Based Database | false |
| Oracle Client Character Set NLS_LANG | AMERICAN_AMERICA.AL32 UTF8 |

5. General Configuration Options

| | |
|----------------------------------|-----------------|
| Batch RMI Port | <mandatory> |
| RMI Port number for JMX Business | <optional> |
| RMI Port number for JMX Web | <optional> |
| JMX Enablement System User ID | <optional> |
| JMX Enablement System Password | <optional> |
| Coherence Cluster Name | <mandatory> |
| Coherence Cluster Address | <mandatory> |
| Coherence Cluster Mode | prod<Mandatory> |
| Coherence Cluster Port | <Mandatory> |

6. OUAF TrustStore Options

| | |
|-----------------------------|----------------------|
| Import TrustStore Directory | <Mandatory> for Prod |
| Store Type | JCEKS |
| Alias | ouaf.system |
| Alias Key Algorithm | AES |
| Alias Key Size | 128 |
| HMAC Alias | ouaf.system.hmac |

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

Choose option (1,2,3,4,5,6 <P> Process, <X> Exit):

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

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

Installing the Oracle Utilities Meter Data Management V2.2.0.3 Application Component

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

- [Copying and Decompressing Install Media](#)
- [Installing the Application Component](#)
- [Creating WebLogic Domain](#)

Copying and Decompressing Install Media

The Oracle Utilities Meter Data Management 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 application server host as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Navigate to <TEMPDIR>/App/MDM.V2.2.0.3.0.

Preparing for the Installation

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

UNIX

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

Windows

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

3. Stop the environment if running.

Installing the Application Component

1. 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
```

2. Select menu item 8 to configure OSB.
Use the completed OSB configuration worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.
3. Select menu item 9 to configure SOA.
Use the completed SOA configuration worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.
4. Select menu item 10 to configure the SOA Configuration Plan.
Use the completed SOA Configuration Plan worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.
5. When you are done with the parameter setup, choose option P to proceed with the installation.

Note: The rest of the menu items can be ignored if you are installing only MDM.

The installation of Oracle Utilities Meter Data Management server is complete if no errors occurred during installation.

6. Generate the appviewer by following these steps.
 - a. Change the directory.

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

where <install_dir> is the Oracle Utilities Meter Data Management application component installation directory.
 - b. Run the script to generate the appviewer.

UNIX

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

Windows

```
genappvieweritems.cmd
```

Creating WebLogic Domain

Create the WebLogic native domain and deploy the application. For instructions refer to the Native Installation Oracle Utilities Application Framework (Doc ID: 1544969.1) white paper on My Oracle Support.

Note: When starting Oracle Utilities Meter Data Management for the first time, log into the WebLogic console and provide system access to the *cisusers* role. Use the following URL to access the WebLogic console application: `http://<hostname>:<portname>/console`.

Chapter 6

Upgrading Oracle Utilities Meter Data Management

This release supports the following upgrade paths:

- Oracle Utilities Meter Data Management version 2.1.0.3.0 or 2.2.0.2.0 to version 2.2.0.3.0.

Note: If you have a version prior to 2.1.0.3.0, you must install 2.1.0.3.0 before upgrading to 2.2.0.3.0.

This chapter includes:

- [Before You Upgrade](#)
- [Upgrade Procedure](#)
- [Operating the Application](#)

Before You Upgrade

Review the list of operating system, application server and database server combinations that this version of Oracle Utilities Meter Data Management is certified to operate on, in the [Chapter 2: Supported Platforms and Hardware Requirements](#).

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

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

Upgrade Procedure

The upgrade installation procedure consists of:

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

Database Component Upgrade

Upgrade of the database component of Oracle Utilities Meter Data Management must be complete before you can proceed with the following sections. Refer to the **Upgrade Install** section in the Oracle Utilities Meter Data Management *Database Administrator's Guide* for instructions to upgrade the database component.

Application Components Upgrade

A successful upgrade consists of the following steps:

- [Upgrading the Oracle Utilities Application Framework V4.3.0 Service Pack 6 \(4.3.0.6.0\) Application Component](#)
- [Upgrading the Oracle Utilities Meter Data Management Application Component to V2.2.0.3](#)

Upgrading the Oracle Utilities Application Framework V4.3.0 Service Pack 6 (4.3.0.6.0) Application Component

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

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

Copying and Decompressing Install Media

The Oracle Utilities Application Framework V4.3.0 Service Pack 6 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework environments operated by

different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

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

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Meter Data Management V2.2.0.3.0 Multiplatform.zip 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. Unzip the file Oracle Utilities Meter Data Management V2.2.0.3.0Multiplatform.zip to get the MDM_V2.2.0.3.0.zip 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>
unzip MDM_V2.2.0.3.0.zip
cd App
```

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>/App/FW.V4.3.0.6.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

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

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

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

Upgrading the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework V4.3.0.6.0.

Note: Customers who have a version prior to 2.1.0.3.0 must install 2.1.0.3.0 before upgrading to 2.2.0.3.0.

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

2. Change directory to the bin folder.

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

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

3. Initialize the environment by running the appropriate command:

UNIX

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

Windows

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

4. Change directory to <TEMPDIR>/App/FW.V4.3.0.6.0.

NOTE: While installing the FW V4.3.0.6.0 from the previous environment to V2.2.0.3, the install utility removes the existing environment and re-creates the environment. Take a backup before you proceed with installing FW V4.3.0.6.0 to retain any configurations for future reference.

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

UNIX:

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

Windows:

```
install.cmd
```

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 B: Installation and Configuration Worksheets](#).
8. The following is the mandatory list of configurable items 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. Environment ID, Roles, Third Party Software Configuration
   Environment ID                               <Default>
```

| | |
|---------------------------------------|---------------------------------|
| Server Roles | batch, online |
| Oracle Client Home Directory | <Mandatory for Initial Install> |
| Web Java Home Directory | <Mandatory for Initial Install> |
| Hibernate JAR Directory | <Mandatory for Initial Install> |
| ONS JAR Directory | <Optional> |
| Web Application Server Home Directory | <Mandatory for Initial Install> |
| Additional JAR Directory | <Optional> |
| ADF Home Directory | <Optional> |
| OIM OAM Enabled Environment | false |

2. Keystore Options

| | |
|---------------------------|------------------|
| Import Keystore Directory | <Default> |
| Store Type | <Mandatory> |
| Alias | <Mandatory> |
| Alias Key Algorithm | AES |
| Alias Key Size | 128 |
| HMAC Alias | ouaf.system.hmac |
| Padding | PKCS5Padding |
| Mode | CBC |

50. Environment Installation Options

| | |
|-----------------------------------|-------------|
| Environment Mount Point | <Mandatory> |
| Log Files Mount Point | <Mandatory> |
| Environment Name | <Mandatory> |
| Install Application Viewer Module | true |
| Install Sample CM Source Code | true |

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

Choose option (1,2,50, <P> Process, <X> Exit):

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 |
| Business Server Application Name | | SPLService |
| MPL Admin Port Number | <Mandatory> | - Multipurpose Listener Port |
| MPL Automatic startup | | false |

 3. Web Application Server Configuration

| | |
|-------------------------------------------|-------------|
| Web Server Host | <Mandatory> |
| WebLogic SSL Port Number | <Mandatory> |
| WebLogic Console Port Number | <Mandatory> |
| Web Context Root | ouaf |
| WebLogic JNDI User ID | <Mandatory> |
| WebLogic JNDI Password | <Mandatory> |
| WebLogic Server Name | myserver |
| Web Server Application Name | SPLWeb |
| Deploy Application Viewer Module | true |
| Enable The Unsecured Health Check Service | false |
| MDB RunAs User ID | <Optional> |
| Super User IDs | <Mandatory> |

 4. Database Configuration

| | |
|--------------------------------------|-------------|
| Application Server Database User ID | <Mandatory> |
| Application Server Database Password | <Mandatory> |
| MPL Database User ID | <Mandatory> |
| MPL Database Password | <Mandatory> |
| XAI Database User ID | <Mandatory> |
| XAI Database Password | <Mandatory> |
| Batch Database User ID | <Mandatory> |
| Batch Database Password | <Mandatory> |
| Web JDBC DataSource Name | <Optional> |

| | |
|--------------------------------------|----------------------------|
| Database Name | <Mandatory> |
| Database Server | <Mandatory> |
| Database Port | 1521 |
| ONS Server Configuration | <Optional> |
| Database Override Connection String | <Optional> |
| Character Based Database | false |
| Oracle Client Character Set NLS_LANG | AMERICAN_AMERICA.AL32 UTF8 |

5. General Configuration Options

| | |
|----------------------------------|-----------------|
| Batch RMI Port | <mandatory> |
| RMI Port number for JMX Business | <optional> |
| RMI Port number for JMX Web | <optional> |
| JMX Enablement System User ID | <optional> |
| JMX Enablement System Password | <optional> |
| Coherence Cluster Name | <mandatory> |
| Coherence Cluster Address | <mandatory> |
| Coherence Cluster Mode | prod<Mandatory> |
| Coherence Cluster Port | <Mandatory> |

6. OUAF TrustStore Options

| | |
|-----------------------------|----------------------|
| Import TrustStore Directory | <Mandatory> for Prod |
| Store Type | JCEKS |
| Alias | ouaf.system |
| Alias Key Algorithm | AES |
| Alias Key Size | 128 |
| HMAC Alias | ouaf.system.hmac |

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

Choose option (1,2,3,4,5,6 <P> Process, <X> Exit):

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

11. Once the install or upgrade has finished, the installation log location is displayed 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 Meter Data Management as described in the following section.

Upgrading the Oracle Utilities Meter Data Management Application Component to V2.2.0.3

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

- [Copying and Decompressing Install Media](#)
- [Upgrading the Application Component](#)
- [Creating WebLogic Domain](#)
- [After the Upgrade](#)

Copying and Decompressing Install Media

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

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

1. Log in to the application server host as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Navigate to <TEMPDIR>/App/MDM.V2.2.0.3.0 directory.

Upgrading the Application Component

Follow the steps below to install Oracle Utilities Meter Data Management application component:

1. Log in to the application server host as Oracle Utilities Meter Data Management Administrator (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. 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
```

5. Select menu item 8 to configure OSB.
Use the completed OSB configuration worksheet to assist you in this step. See Appendix B: Installation and Configuration Worksheets.
6. Select menu item 9 to configure SOA.
Use the completed SOA configuration worksheet to assist you in this step. See Appendix B: Installation and Configuration Worksheets.
7. Select menu item 10 to configure the SOA Configuration Plan.
Use the completed SOA Configuration Plan worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

When you are done with the parameter setup, choose option P to proceed with the installation.

Note: Rest of the menu items can be ignored if you are installing only MDM.

Installation of Oracle Utilities Meter Data Management Application Server is complete if no errors occurred during installation.

8. Generate the appviewer by following these steps.
 - a. Change the directory.

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

where <install_dir> is the Oracle Utilities Meter Data Management application component installation directory.

- b. Run the script to generate the appviewer.

UNIX

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

Windows

```
genappvieweritems.cmd
```

Creating WebLogic Domain

Create the WebLogic native domain and deploy the application. For instructions refer to the Native Installation Oracle Utilities Application Framework (Doc ID: 1544969.1) white paper on My Oracle Support.

Note: When starting Oracle Utilities Meter Data Management for the first time, log into the WebLogic console and provide system access to the *cisusers* role. Use the following URL to access the WebLogic console application: `http://<hostname>:<portname>/console`.

After the Upgrade

After you complete the upgrade installation, verify the following:

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

2. Confirm installation logs do not contain any errors.
3. Confirm all the configurations are correct. Refer to [Appendix B: Installation and Configuration Worksheets](#) for details.
4. Confirm that the database is ready.
5. Start the application server. For instructions, refer to [Appendix C: Common Maintenance Activities](#).
6. To operate the application, refer to the [Operating the Application](#) section.

Operating the Application

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

- [Importing Self-Signed Certificates](#)
- [Customizing Configuration Files](#)
- [Integrating Existing Customer Modifications](#)
- [Generating the Application Viewer](#)
- [Building Javadocs Indexes](#)
- [Configuring the Environment for Batch Processing](#)
- [Customizing the Logo](#)
- [Deploying Inbound WebServices \(IWS\)](#)
- [Database Patching](#)
- [BI Publisher Report Configuration](#)

Importing Self-Signed Certificates

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

Perform the following commands:

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

UNIX

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

For example:

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

Windows

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

For example:

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

- Execute the following script to generate all information:

UNIX

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

Windows

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

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

Customizing Configuration Files

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

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

- Locate the hibernate.properties.template in the \$\$SPLEBASE/templates directory
- Copy the file to cm.hibernate.properties.template.
- Apply your changes to cm.hibernate.properties.template.
- Update application war file with the latest changes by executing the following command:

UNIX

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

Windows

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

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

Integrating Existing Customer Modifications

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

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

Generating the Application Viewer

You may extend application viewer capabilities within an environment by generating additional items. These include information about algorithm types, algorithms,

maintenance objects and data dictionary information. The Javadoc indexes are also rebuilt.

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

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

UNIX

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

For example:

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

Windows

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

For example:

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

3. Execute the following script to generate all information.

UNIX

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

Windows:

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

4. Restart your application.

Building Javadocs Indexes

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

Perform the following to rebuild the Javadoc indexes.

Windows

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

UNIX

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

Configuring the Environment for Batch Processing

See the Oracle Utilities Meter Data Management *Server Administration Guide* for information on configuring the environment for batch processing.

Customizing the Logo

To replace the Oracle Utilities logo on the main menu with another image, put the new image `<customer_logo_file>.png` file into the directory `$$PLEBASE/etc/conf/root/cm` and create a new “External” Navigation Key called `CM_logoImage`. To do that, run the Oracle Utilities application from the browser with the parameters: `http://<hostname>:<port>/cis.jsp?utilities=true&tools=true`.

From the Admin menu, select Navigation Key.

Add the above Navigation Key with its corresponding URL Override path.

The syntax for the URL path is:

Windows:

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

UNIX:

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

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

Deploying Inbound WebServices (IWS)

All existing XAI Inbound Services have been duplicated as Inbound Web Services as the application moves toward deprecation of XAI and full transition to IWS in the next release. The duplicated services are designed to work seamlessly in this release, and customers providing custom services are encouraged to migrate to IWS to take full advantage of the new, more efficient Web service technology.

For more information on migrating from XAI to IWS, please refer to [Migrating from XAI to IWS Oracle Utilities Application Framework \(Doc ID 1644914.1\)](#) on My Oracle Support.

Note: This is an optional step for customers using IWS instead of XAI services.

For deploying IWS, please follow the steps below:

For UNIX

1. Enable the Web Services Functionality as shown below:

- a. `cd $$PLEBASE/bin`
- b. Execute `configureEnv.sh -a`

Select option 50 and set the option “Enable Web Services Functionality” to true. Enter “P” to process.

2. Execute `initialSetup.sh` as shown below:

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

3. Set the classpath as shown below:

```
$ CLASSPATH=$WL_HOME/server/lib/weblogic.jar:$CLASSPATH
```



```
$ export CLASSPATH
$ cd $SPLEBASE/bin
```

- Execute the following command:

```
$ java weblogic.Admin -username <username> -password <password>
STOREUSERCONFIG -userconfigfile $SPLEBASE/etc/.wlsuserconfig -
userkeyfile $SPLEBASE/etc/.wlsuserkey
```

Select y.

- Execute the below step in \$SPLEBASE/bin. Please note that the application server should be up before running the below command.

```
ksh ./iwsdeploy.sh
```

For WINDOWS

- Enable the Web Services Functionality as shown below:

```
cd %SPLEBASE%\bin
```

- Execute configureEnv.cmd -a

Select option 50 and set the option “Enable Web Services Functionality” to true. Enter “P” to process.

- Execute initialSetup.cmd as shown below:

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

- Set the classpath as shown below:

```
set CLASSPATH=%WL_HOME%\server\lib\weblogic.jar;%CLASSPATH%
```

- Execute the following command:

```
java weblogic.Admin -username system -password ouafadmin
STOREUSERCONFIG -userconfigfile %SPLEBASE%\etc\.wlsuserconfig -
userkeyfile %SPLEBASE%\etc\.wlsuserkey
```

- Select y.

- Execute the below step in %SPLEBASE%\bin.

Please note that the application server should be up before running the below command.

```
iwsdeploy.cmd
```

Database Patching

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

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

To generate the jar file:

1. Initialize a command shell:

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

UNIX

- a. Log on to your UNIX box as the Oracle Utilities Administrator (default cissys) and open a shell prompt.
- b. In the following example, replace the variables:
 - \$SPLEBASE with the Full directory name that you installed the application into
 - \$SPLENVIRON with the name you gave to the environment at installation time
- c. To initialize the environment, enter the below command:

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

For example:

```
/ouaf/DEMO/bin/splenvron.sh -e DEMO
```

Windows

- a. The command window should be opened on the Windows server that you installed the application on.
- b. In the below example you should replace the following variables:
 - %SPLEBASE%: The Full directory name that you installed the application into
 - %SPLENVIRON%: The name you gave to the environment at installation time
- c. To initialize the environment, type the following in your command prompt:

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

For example:

```
D:\ouaf\DEMO\bin\splenvron.cmd -e DEMO
```

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

UNIX

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

Windows

```
%SPLEBASE%\bin\createDBStandalone.cmd
```

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

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

4. Extract the contents of the archive file:

```
jar xvf db_patch_standalone.jar
```

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

Overview of Database Patching Application

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

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

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

- Checks to see if the environment variable `$SPLEBASE` is set.
If the `$SPLEBASE` variable is set, the utility uses the libraries under `$SPLEBASE` to apply the patch.
- When the `$SPLEBASE` is not set, the utility checks to see if the `TOOLSBIN` environment variable is set.
If the `TOOLSBIN` is set, the utility uses the libraries under the `TOOLSBIN` location.
- When both `SPLEBASE` and `TOOLSBIN` environment are not set, the utility prompts for the location of the `TOOLSBIN`.
The `TOOLSBIN` is the location of the of the application scripts `ouafDatabasePatch.sh[cmd]`.

Unix Example:

The `TOOLSBIN` location would be set to `/ouaf/dbpatch/bin`

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

Unix Sample - Database Patch Application (`ouafDatabasePatch.sh`)

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

- Sample Execution – Passing a Password

```
./ouafDatabasePatch.sh -x ouafadm -p "-t O -d  
CISADM_Z1_12C_43020_BLD001,s1c04lds:1522:Z143Q12C"
```

- Sample Execution – Prompting for a Password

```
./ouafDatabasePatch.sh -p "-t O -d
CISADM_Z1_12C_43020_BLD001,s1c041ds:1522:Z143Q12C"
```

- Sample Execution - passing in the tools bin location

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

WINDOWS Example:

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

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

Windows Sample - Database Patch Application (ouafDatabasePatch.cmd)

- Sample Execution – Passing a Password

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

- Sample Execution – Prompting for a Password

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

- Sample Execution - passing in the tools bin location

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

Windows Sample Usage

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

BI Publisher Report Configuration

This section describes the steps required to configure Oracle Utilities Meter Data Management and Oracle BI Publisher to support a reporting solution that uses Oracle BI Publisher.

This release of Oracle Utilities Meter Data Management has a separate bundle with a sample BI Publisher 11g report.

Unzip Oracle Utilities Meter Data Management Report Files

1. Unzip the MDM-V2.2.0.3.0-Reports.zip file from the installation media into an <TEMPDIR> directory. We'll refer to this directory as the reports extract folder.
2. For both UNIX and Windows platforms, a sub-directory named BIPublisher11g is created. The contents of the installation directory are identical for both platforms.

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

Publish the Sample Reports in Oracle BI Publisher Enterprise

The installation media contains sample reports provided with the system. The report files are in the reports extract folder under <TEMPDIR>\BIPublisher11g\reportFiles

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

To configure the BI Publisher reports, follow these steps:

1. Create a folder named D2_VEEEME in the <BI_Repository_Path>\Reports folder
2. Copy D2_VEEEME.xdo and D2_VEEEME.xdm folders to <BI_Repository_Path>\Reports\D2_VEEEME folder

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

3. Login as Administrator to BI Publisher server.
4. Go to the **Administration** tab.
 - a. In the **JDBC Connection** section under **Data Sources**, add a new data source using **Add Data Source**.
 - b. Create a new Data Source named **D2 201 Dev** with connection details pointing to the D2 201 Dev database.
 - c. Test Connection to make sure the Database connection is successful and save changes using **Apply**.

Note: Make sure the Data Source Name (D2 201 Dev) is created with the same name else the reports won't show up.

5. Go to the **Catalog** Tab
 - a. Click **New->Report** from dropdown list and select "Use Existing Data Model" option to create new reports using existing data model and then select Data Model from the Shared folders Catalog.

For example: ../Shared Folders/D2_VEEEME/D2_VEEEME.xdm).

- b. Click **Next** and select “Use Report Editor” option. Click **Finish**.
 - c. Select **My Folder** and save report name as D2_VEEEME.
6. Go to the **Catalog** tab, select D2_VEEEME Report under My folders and click **Open**.

Once the report is open, click **Actions** and Export Data as XML. Save it.

7. Go to the **Catalog** tab, select **My Folders** and click on **Edit Report** (D2_VEEEME) and then click on Data Model D2_VEEEME. Under **Attachment** click on “Upload Sample data” and browse the xml file saved from above and then upload it. Click on **Save** and return.
8. Click **Add New Layout**. Under **Upload or Generate Layout**, click **Upload** and give Layout Name as D2_VEEEME.rtf.

Browse Template File to

<BI_Repository_Path>\Reports\D2_VEEEME\D2_VEEEME.xdo folder and select D2_VEEEME.rtf file. Select type as RTF template and Locale as **English** and click on **Upload**.

9. Click **View Report** to see reports.

Note: Please follow the same steps for configuring other reports except for step 4.

Appendix A

Installation Menu Functionality Overview

This chapter provides an overview of the Installation Menu Functionality and also the respective menu details.

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 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. The menu includes 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 a numeric value in the prompt.

Please also note the following:

- 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 press '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. Refer to the *Oracle Utilities Application Framework Server Administration Guide* for details about configuring these values.

Install the Oracle Client software specified in the [Operating Systems and Application Servers](#) section in [Supported Platforms and Hardware Requirements](#) 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

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.

When these passwords are entered in the command line, the input values are not reflected on the screen when performing the installation.

Appendix B

Installation and Configuration Worksheets

This section includes the installation and configuration worksheets for Oracle Utilities Application Framework and Oracle Utilities Meter Data Management components.

- [Application Framework Installation and Configuration Worksheets](#)
- [Oracle Utilities Meter Data Management Installation and Configuration Worksheets](#)

Application Framework Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework. No Customer Install Value fields should be left blank.

Note: Some web application server information will not be available until the software installation steps have been completed as described in the [Installing Prerequisite Software](#) section in the [Chapter 3: Planning the Installation](#) for prerequisite third-party software installation instructions.

Refer to the *Server Administration Guide* for additional details (default, valid values, usage, etc.), as applicable.

Menu Block 1: Environment ID, Roles, Third Party Software Configuration

The Environment ID, Roles, Third Party Software Configuration options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|---------------------------------------|----------------------------|------------------------|
| Environment ID | ENVIRONMENT_ID | |
| Server Roles | SERVER_ROLES | |
| Oracle Client Home Directory | ORACLE_CLIENT_HOME | |
| Web Java Home Directory | JAVA_HOME | |
| Hibernate JAR Directory | HIBERNATE_JAR_DIR | |
| **ONS JAR Directory | ONS_JAR_DIR | |
| Web Application Server Home Directory | WEB_SERVER_HOME | |
| ***Additional JAR Directory | WLTHINT3CLIENT_JAR_DIR | |
| * ADF Home Directory | ADF_HOME | |
| OIM OAM Enabled Environment | OPEN_SPML_ENABLED_ENV | |

* Denotes optional menu items that may be required for the product installation and variables.

** In order to activate the RAC FCF, the application needs the external ons.jar file, from the ORACLE_HOME path:

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

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

*** Refer to the [Setting Up and Using the Additional JAR Directory](#) section in [Installing Application Server Prerequisite Software](#) for more information.

Menu Block 2: Keystore Options

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

<SPLEBASE>/ks/.ouaf_keystore

<SPLEBASE>/ks/.ouaf_storepass

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

Note: Review the section on configuring the OUAF Keystore in the *Security Guide* for information on setting up the keystore properly.

Keystore options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|---------------------------|----------------------------|------------------------|
| Import Keystore Directory | KS_IMPORT_KEYSTORE_FOLDER | |
| Store Type | KS_STORETYPE | |
| Alias | KS_ALIAS | |
| Alias Key Algorithm | KS_ALIAS_KEYALG | |
| Alias Key Size | KS_ALIAS_KEYSIZE | |
| HMAC Alias | KS_HMAC_ALIAS | |
| Padding | KS_PADDING | |
| Mode | KS_MODE | |

Menu Block 50: Environment Installation Options

Environment installation options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|----------------------------------------|----------------------------|------------------------|
| Environment Mount Point | SPLDIR | |
| Log File Mount Point | SPLDIROUT | |
| Environment Name | SPLENVIRON | |
| Installation Application Viewer Module | WEB_ISAPPVIEWER | |
| Install Demo Generation Cert Script | CERT_INSTALL_SCRIPT | |
| Install Sample CM Source Code | CM_INSTALL_SAMPLE | |

Menu Block 1: Environment Description

The environment description menu option includes:

| Menu Option | Name Used in Documentation | Customer Install Value |
|-------------------------|----------------------------|------------------------|
| Environment Description | DESC | |

Menu Block 2: [WebLogic] Business Application Server Configuration

WebLogic Business Application Server configuration options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|----------------------------------|----------------------------|------------------------|
| Business Server Host | BSN_WLHOST | |
| Business Server Application Name | BSN_APP | |
| MPL Admin Port number | MPLADMINPORT | |
| MPL Automatic Startup | MPLSTART | |

Menu Block 3: [WebLogic] Web Application Server Configuration

WebLogic Web Application Server configuration options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|-------------------------------------------|----------------------------|------------------------|
| Web Server Host | WEB_WLHOST | |
| Weblogic SSL Port Number | WEB_WLSSLPORT | |
| Weblogic Console Port Number | WLS_ADMIN_PORT | |
| Web Context Root | WEB_CONTEXT_ROOT | |
| WebLogic JNDI User ID | WEB_WLSYSUSER | |
| WebLogic JNDI Password | WEB_WLSYSPASS | |
| WebLogic Server Name | WEB_WLS_SVRNAME | |
| Web Server Application Name | WEB_APP | |
| Deploy Application Viewer Module | WEB_DEPLOY_APPVIEWER | |
| Enable The Unsecured Health Check Service | WEB_ENABLE_HEALTHCHECK | |
| MDB RunAs User ID | WEB_IWS_MDB_RUNAS_USER | |

| Menu Option | Name Used in Documentation | Customer Install Value |
|----------------|----------------------------|------------------------|
| Super User Ids | WEB_IWS_SUPER_USERS | |

Menu Block 4 - Database Configuration

The parameters below and in the worksheet are for the database configuration. Note that if changes are made to any of the database menu option items below, thus potentially connecting to a different schema, a warning will be displayed in the screen next to the actual option that has been changed.

| Menu Option | Name Used in Documentation | Customer Install Value |
|--------------------------------------|----------------------------|------------------------|
| Application Server Database User ID | DBUSER | |
| Application Server Database Password | DBPASS | |
| MPL Database User ID | MPL_DBUSER | |
| MPL Database Password | MPL_DBPASS | |
| XAI Database User ID | XAI_DBUSER | |
| XAI Database Password | XAI_DBPASS | |
| Batch Database User ID | BATCH_DBUSER | |
| Batch Database Password | BATCH_DBPASS | |
| Web JDBC DataSource Name | JDBC_NAME | |
| JDBC Database User ID | DBUSER_WLS | |
| JDBC Database Password | DBPASS_WLS | |
| Database Name | DBNAME | |
| Database Server | DBSERVER | |
| Database Port | DBPORT | |
| ONS Server Configuration | ONSCONFIG | |
| Database Override Connection String | DB_OVERRIDE_CONNECTION | |
| Character Based Database | CHAR_BASED_DB | |
| Oracle Client Character Set NLS_LANG | NLS_LANG | |

Menu Block 5 - General Configuration Options

The general configuration options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|----------------------------------|------------------------------|------------------------|
| Batch RMI Port | BATCH_RMI_PORT | |
| RMI Port number for JMX Business | BSN_JMX_RMI_PORT_PERFORMANCE | |
| RMI Port number for JMX Web | WEB_JMX_RMI_PORT_PERFORMANCE | |
| JMX Enablement System User ID | BSN_JMX_SYSUSER | |
| JMX Enablement System Password | BSN_JMX_SYSPASS | |
| Coherence Cluster Name | COHERENCE_CLUSTER_NAME | |
| Coherence Cluster Address | COHERENCE_CLUSTER_ADDRESS | |
| Coherence Cluster Port | COHERENCE_CLUSTER_PORT | |
| Coherence Cluster Mode | COHERENCE_CLUSTER_MODE | |

Menu Block 6 - OUAF TrustStore Options

The OUAF truststore configuration is required for IWS.

| Menu Option | Name Used in Documentation | Customer Install Value |
|-----------------------------|----------------------------|------------------------|
| Import TrustStore Directory | TS_IMPORT_KEYSTORE_FOLDER | |
| Store Type | TS_STORETYPE | |
| Alias | TS_ALIAS | |
| Alias Key Algorithm | TS_ALIAS_KEYALG | |
| Alias Key Size | TS_ALIAS_KEYSIZE | |
| HMAC Alias | TS_HMAC_ALIAS | |
| Padding | TS_PADDING | |
| Mode | TS_MODE | |

Advanced Menu Options

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

Unix:

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

Windows

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

Menu Block 50 - WebLogic Advanced Environment Miscellaneous Configuration

WebLogic advanced environment miscellaneous configurations include:

| Menu Option | Name Used in Documentation | Customer Value Install |
|-----------------------------------------------------------|----------------------------|------------------------|
| OUAF DBMS Scheduler User | OUAF_DBMS_SCHEDULER_USER | |
| Enter the location of the Application Server Profile Home | WAS_PROFILE_NAME_HOME | |
| Online JVM Batch Server Enabled | BATCHENABLED | |
| Online JVM Batch Number of Threads | BATCHTHREADS | |
| Online JVM Batch Scheduler Daemon Enabled | BATCHDAEMON | |
| Enable Batch Edit Functionality | BATCHEDIT_ENABLED | |
| Batch Online Log Directory | BATCH_ONLINE_LOG_DIR | |
| JDBC Read Timeout | JDBC_TIMEOUT | |
| Enable JMS Global Flush for Batch | ENABLE_JMS_GLOBAL_FLUSH | |
| Enable Web Services Functionality | WEBSERVICES_ENABLED | |
| IWS deployment target | WLS_CLUSTER_NAME | |
| Web Admin Server Host | WEB_ADMIN_SERVER | |
| Split File Size in MB | TEMPSTORAGE_SPLITFILESIZE | |
| GIS Service Running on the same Web Server | GIS | |
| GIS Service URL | GIS_URL | |
| GIS WebLogic System User ID | GIS_WLSYSUSER | |

| Menu Option | Name Used in Documentation | Customer Value Install |
|-------------------------------------------------|-------------------------------|------------------------|
| GIS WebLogic System Password | GIS_WLSYSPASS | |
| Online Display Software Home | ONLINE_DISPLAY_HOME | |
| Max Queries To Hold In Cache Across All Threads | XQUERIES_TO_CACHE | |
| Seconds Timeout Flush Cache Completely | XQUERY_CACHE_FLUSH_TIMEOUT | |
| Cloud Restriction URLs Enable | CLOUD_RESTRICTION_URLS_ENABLE | |
| Cloud White List Full Path | CLOUD_WHITE_LIST_PATH | |
| Cloud Custom White List Full Path | CLOUD_CUSTOM_WHITE_LIST_PATH | |

Menu Block 51 - WebLogic Advanced Environment Memory Configuration

WebLogic advanced environment memory configurations include:

| Menu Option | Name Used in Documentation | Customer Value Install |
|---------------------------------------|------------------------------|------------------------|
| Global JVM Arguments | GLOBAL_JVMARGS | |
| Ant Min Heap Size | ANT_OPT_MIN | |
| Ant Max Heap Size | ANT_OPT_MAX | |
| Ant Additional Options | ANT_ADDITIONAL_OPT | |
| Thread Pool Worker Java Min Heap Size | BATCH_MEMORY_OPT_MIN | |
| Thread Pool Worker Java Max Heap Size | BATCH_MEMORY_OPT_MAX | |
| Thread Pool Worker Java Max Perm Size | BATCH_MEMORY_OPT_MAXPERMSIZE | |
| Thread Pool Worker Additional Options | BATCH_MEMORY_ADDITIONAL_OPT | |
| Additional Runtime Classpath | ADDITIONAL_RUNTIME_CLASSPATH | |

Menu Block 52 - Advanced Web Application Configuration

Advanced web application configurations include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|------------------------------------------|-------------------------------------|------------------------|
| Web Application Cache Settings | WEB_I2_CACHE_MODE | |
| Web Server Port Number | WEB_WLPORT | |
| CSRF Protection For REST Services | CSRF_PROTECTION | |
| OWSM Protection For REST Services | OWSM_PROTECTION_FOR_REST_SERVICES | |
| Domain Home Location | WLS_DOMAIN_HOME | |
| Batch Cluster URL | WEB_BATCH_CLUSTER_URL | |
| Strip HTML Comments | STRIP_HTML_COMMENTS | |
| Authentication Login Page Type | WEB_WLAUTHMETHOD | |
| Web Form Login Page | WEB_FORM_LOGIN_PAGE | |
| Web Form Login Error Page | WEB_FORM_LOGIN_ERROR_PAGE | |
| Application Viewer Form Login Page | WEB_APPVIEWER_FORM_LOGIN_PAGE | |
| Application Viewer Form Login Error Page | WEB_APPVIEWER_FORM_LOGIN_ERROR_PAGE | |
| Help Form Login Page | WEB_HELP_FORM_LOGIN_PAGE | |
| Help Form Login Error Page | WEB_HELP_FORM_LOGIN_ERROR_PAGE | |
| Web Security Role | WEB_SECURITY_NAME | |
| Web Principal Name | WEB_PRINCIPAL_NAME | |
| Application Viewer Security Role | WEB_APPVIEWER_ROLE_NAME | |
| Application Viewer Principal Name | WEB_APPVIEWER_PRINCIPAL_NAME | |
| This is a development environment | WEB_ISDEVELOPMENT | |
| Preload All Pages on Startup | WEB_PRELOADALL | |
| Maximum Age of a Cache Entry for Text | WEB_MAXAGE | |
| Maximum Age of a Cache Entry for Images | WEB_MAXAGEI | |
| JSP Recompile Interval (s) | WEB_wlpageCheckSeconds | |

Menu Block 53 - OIM Configuration Settings

OIM configurations include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|----------------------------|-----------------------------|------------------------|
| SPML SOAP Trace Setting | OIM_SPML_SOAP_DEBUG_SETTING | |
| SPML IDM Schema Name | OIM_SPML_UBER_SCHEMA_NAME | |
| SPML OIM Name Space | OIM_SPML_NAME_SPACE | |
| SPML OIM Enclosing Element | OIM_SPML_SOAP_ELEMENT | |

Menu Block 54 - WebLogic Diagnostics

WebLogic diagnostic options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|----------------------------|--------------------------------|------------------------|
| Diagnostic Context Enabled | WLS_DIAGNOSTIC_CONTEXT_ENABLED | |
| Diagnostic Volume | WLS_DIAGNOSTIC_VOLUME | |
| Built-in Module | WLS_DIAGNOSTIC_BUILT_IN_MODULE | |

Menu Block 55 - URI, File and URL Related Options

URI, File and URL Related Options include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|------------------------------------------|------------------------------------------------|------------------------|
| Restriction URLs Enable | CLOUD_RESTRICTION_URLS_ENABLED | |
| Custom SQL Security | CUSTOM_SQL_SECURITY | |
| White List Full Path | CLOUD_WHITE_LIST_PATH | |
| Custom White List Full Path | CLOUD_CUSTOM_WHITE_LIST_PATH | |
| Substitution Variable List File Location | CLOUD_SUBSTITUTION_VARIABLE_LIST_FILE_LOCATION | |
| Directory For Variable F1_CMA_FILES | CLOUD_LOCATION_F1_MIGR_ASSISTANT_FILES | |

| Menu Option | Name Used in Documentation | Customer Install Value |
|-----------------------------------|-----------------------------------|-------------------------------|
| URI For Variable F1_OAUTH2_URI | CLOUD_LOCATION_F1_OAUTH2_URI | |
| URI for Variable F1_BASE_REST_URL | CLOUD_LOCATION_F1_BASE_REST_URL | |
| Consolidated Logfile Full Path | CONSOLIDATED_LOG_FILE_PATH | |
| Temporary File Location | TMP_FILE_LOCATION | |

Menu Block 56 - Mobile Security Configuration

Mobile Security configurations include:

| Menu Option | Name Used in Documentation | Customer Install Value |
|------------------------------------|-----------------------------------|-------------------------------|
| Enable Mobile Application | MOBILE_ENABLED | |
| Deploy Only Mobile Web Application | MOBILE_APP_ONLY | |
| Mobile Application Directory | MOBILE_APPDIR | |
| Allow Self Signed SSL Certificates | ALLOW_SELFSIGNED_SSL | |
| Force Http Connection | FORCE_HTTP | |
| Web Mobile Form Login Page | WEB_MOBILE_FORM_LOGIN_PAGE | |
| Web Mobile Form Login Error Page | WEB_MOBILE_FORM_LOGIN_ERROR_PAGE | |

Oracle Utilities Meter Data Management Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework. No Customer Install Value fields should be left blank.

Note: The OSB configuration and SOA configuration menus are optional for Oracle Utilities Meter Data Management and Oracle Utilities Customer to Meter, and can be skipped. These configurations are required in case another product such as Oracle Utilities Smart Grid Gateway will also be installed on top of Oracle Utilities Meter Data Management.

WebLogic OSB Configuration

The WebLogic OSB configuration includes:

| Menu Option | Name Used In Documentation | Customer Install Value |
|------------------------------------|----------------------------|------------------------|
| OSB Home | OSB_HOME | |
| OSB Host Server | OSB_HOST | |
| OSB Port Number: | OSB_PORT_NUMBER | |
| OSB SSL Port Number | OSB_SSL_PORT | |
| OSB Managed Server Port Number | OSB_MS_PORT_NUMBER | |
| OSB Managed Server SSL Port Number | OSB_MS_SSL_PORT_NUMBER | |
| JDBC URL for database | DBURL_OSB | |
| OSB Service Table Schema Name | RCUSTBSHEMA_OSB | |
| OSB Service Table Schema Password | RCUSTBSHEMAPWD_OSB | |
| OSB WebLogic User Name | WEBLOGIC_USERNAME_OSB | |
| OSB WebLogic User Password | WEBLOGIC_PASSWORD_OSB | |
| OSB WebLogic User Password | OSB_PASS_WLS | |
| Mount point for OSB files | OSB_LOG_DIR | |

WebLogic SOA Configuration

The WebLogic SOA Configuration includes:

| Menu Option | Name Used in this Documentation | Customer Install Value |
|---------------------|---------------------------------|------------------------|
| SOA Home | SOA_HOME | |
| SOA Host Server | SOA_HOST | |
| SOA Port Number: | SOA_PORT_NUMBER | |
| SOA SSL Port Number | SOA_SSL_PORT_NUMBER | |
| SOA Internal URL | SOA_INTERNAL_URL | |
| SOA External URL | SOA_EXTERNAL_URL | |

| Menu Option | Name Used in this Documentation | Customer Install Value |
|--------------------------------------|---------------------------------|------------------------|
| JDBC URL for database | DBURL_SOA | |
| SOA Service table schema Name | RCUSTBSHEMA_SOA | |
| SOA Service table schema Password | RCUSTBSCHEMAPWD_SOA | |
| SOA WebLogic User Name | WEBLOGIC_USERNAME_SOA | |
| SOA WebLogic User Password | WEBLOGIC_PASSWORD_SOA | |
| Specify the path for XAI/IWS Service | WEB_SERVICE_PATH | |

WebLogic SOA Configuration Plan

The WebLogic SOA Configuration Plan includes:

| Menu Option | Name Used In Documentation | Customer Install Value |
|-------------------------------------|------------------------------------|------------------------|
| MDF Bulk Request Callback URL | D1_BULK_REQUEST_CALLBACK_URL | |
| MDF Headend http connection timeout | D1_HEADEND_HTTP_CONNECTION_TIMEOUT | |
| MDF Headend http read timeout | D1_HEADEND_HTTP_READ_TIMEOUT | |
| MDF SOA Request Queue JNDI Name | SOA_REQUEST_QUEUE_D1 | |
| MDF SOA Notify Queue JNDI Name | SOA_NOTIFY_QUEUE_D1 | |
| MDF SOA Command Queue JNDI Name | SOA_COMMAND_QUEUE_D1 | |
| SGG-NMS TestHarness Partition Name | SOA_PARTITION_D1 | |

Configuration for DataRaker Integration

The Configuration for DataRaker Integration includes:

| Menu Option | Name Used In Documentation | Customer Install Value |
|------------------------------------------------------------------------------------------|----------------------------|------------------------|
| Destination Queue to publish SGG payloads for DataRaker Integration Tool | SGG_DR_INT_QUEUE | |
| Number of records (SGG Payloads) to accumulate | SOA_DR_PUBLISH_SIZE | |
| Max file size for the accumulated (SGG Payloads) file in Kilobytes | SOA_DR_FILE_SIZE | |
| Specify a time which, when exceeded, causes a new outgoing file to be created in seconds | SOA_DR_ELAPSED_TIME | |
| Polling frequency of Staging directory for new files in seconds | SOA_DR_POLLING_FREQ | |
| Mount point/directory for the accumulated SGG payload file | SOA_DR_STAGING_DIR | |
| Mount Point/directory for the converted XML file to place for DataRaker | SOA_DR_INTEGRATION_DIR | |

Advanced Menu Options

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

Unix

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

Windows

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

Advanced Menu Option for OSB SSL Deployment

The Advanced Menu Option for OSB SSL deployment includes:

| Menu Option | Name Used In Documentation | Customer Install Value |
|------------------------------|----------------------------|------------------------|
| Enable OSB SSL Port | OSB_SSL | |
| OSB Trust Keystore Type | OSB_TRUST_KS | |
| OSB Trust Keystore File Type | OSB_TRUST_KS_TYPE | |

| Menu Option | Name Used In Documentation | Customer Install Value |
|-------------------------|----------------------------|------------------------|
| OSB Trust Keystore File | OSB_TRUST_KS_FILE | |

Advanced Environment Memory Configurations

The Advanced Environment Memory configurations include:

| Menu Option | Name Used In Documentation | Customer Install Value |
|------------------------------------------------------------------------------|-----------------------------|------------------------|
| SOA Initial Heap Size | SOA_MEMORY_OPT_MIN | |
| SOA Maximum Heap Size | SOA_MEMORY_OPT_MAX | |
| SOA Minimum Perm Size | SOA_MEMORY_OPT_MINPERM SIZE | |
| SOA Maximum Perm Size | SOA_JVM_ADDITIONAL_OPT | |
| The name of the OWSM policy to use when SOA calls another SOA service | SOA_SOA_CLIENT_POLICY | |
| The name of the OWSM policy to use when SOA is called by another SOA service | SOA_SOA_SERVICE_POLICY | |
| The name of the OWSM policy to use when SOA calls an OUAF service | SOA_SOA_SERVICE_POLICY | |

The Advanced Memory Configurations for OSB includes:

| Menu Option | Name Used In Documentation | Customer Install Value |
|------------------------------------|-----------------------------|------------------------|
| OSB Initial Heap Size | OSB_MEMORY_OPT_MIN | |
| OSB Maximum Heap Size | OSB_MEMORY_OPT_MAX | |
| OSB Minimum Perm Size | OSB_MEMORY_OPT_MINPERM SIZE | |
| OSB Maximum Perm Size | OSB_MEMORY_OPT_MAXPERMSIZE | |
| OSB Application Additional Options | OSB_JVM_ADDITIONAL_OPT | |

The Data Migration options include:

| Menu Option | Name Used In Documentation | Customer Install Value |
|----------------------------------|-----------------------------------|-------------------------------|
| Enable Data Migration | DATA_MIGRATION | |
| Data Migration Database User | DATA_MIGRATION_DB_USER | |
| Data Migration Database Password | DATA_MIGRATION_DB_PASS | |

The Advanced Configurations for SOA include:

| Menu Option | Name Used In Documentation | Customer Install Value |
|------------------------------|-----------------------------------|-------------------------------|
| Enable SOA SSL Port | SOA_SSL | |
| SOA Trust Keystore Type | SOA_TRUST_KS | |
| SOA Trust Keystore File Type | SOA_TRUST_KS_ TYPE | |
| SOA Trust Keystore File | SOA_TRUST_KS_ FILE | |

Appendix C

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. Navigate to the <install_dir>/bin directory.
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. Navigate to the respective domain's bin folder.
3. Execute the WebLogic Domain Startup command.

To Stop the WebLogic Server

1. Initialize the environment.
2. Navigate to the respective domain's bin folder.
3. Execute the WebLogic Domain Stop command.

To Start the Thread Pool Worker

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

UNIX

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

Windows

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

To Stop the Thread Pool Worker

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

UNIX

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

Windows

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

To Modify the Configuration Values

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

UNIX

```
configureEnv.sh
```

Windows

```
configureEnv.cmd
```

The configuration utility launches menu items. Select any Menu option.

3. Change the menu values.
4. After you change the menu values, press P to write the changes to the configuration file.
5. To apply the changes to the environment, run the initial setup script:

UNIX

```
./initialSetup.sh
```

Windows

```
initialSetup.cmd
```

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:

UNIX

```
./initialSetup.sh
```

Windows

```
initialSetup.cmd
```

Appendix D

Installing User Documentation as a Standalone Application

Installing User Documentation

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

The documentation is also provided in HTML format located inside the Oracle Utilities Meter Data 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:

- D1: *Oracle Utilities Meter Data 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 Meter Data Management online help in stand-alone mode (that is, you do not have to launch it from the Oracle Utilities Meter Data Management application or access it on the application server).

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

Unzip the help.war file to any directory on your machine. To launch the Oracle Utilities Meter Data 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 Meter Data Management online help as a stand-alone web application. You can use any Web Application server like WebLogic. Configure the configuration file for your web application server to use web application help.

For example:

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

Access the documentation from the browser by the following URL:

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

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