Oracle Utilities Meter Data Management

Installation Guide

Release 2.4.0.0.0

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Oracle Utilities Meter Data Management Installation Guide, Release 2.4.0.0.0

Contents

Appendix A

Appendix B

Appendix C

Appendix D

Preface

Welcome to the Oracle Utilities Meter Data Management Installation Guide.

This guide describes the requirements and procedure to install Oracle Utilities Meter Data Management.

The preface includes:

Audience

This guide is intended for system administrators installing Oracle Utilities Meter Data Management.

To complete the 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

For more information, see these Oracle documents.

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 Solution Business User Guide*
- *Oracle Utilities Meter Solution Administrative User Guide*

Supplemental Documents

- *Security Guide*
- *Server Administration Guide*

Updates to Documentation

Additional and updated information about the product is available from the **Knowledge Base** section of My Oracle Support. Documentation updates are also posted on the Oracle Technology Network documentation page as they become available.

Conventions

The following text conventions are used in this document:

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

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

Acronyms

The following acronyms 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.
MPL	Multi Purpose Listener
OUAF	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

Acronym	Definition
XAIApp	XML Application Integration

Additional Resources

For more information and support, visit the Oracle Support website.

Chapter 1

Introduction

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

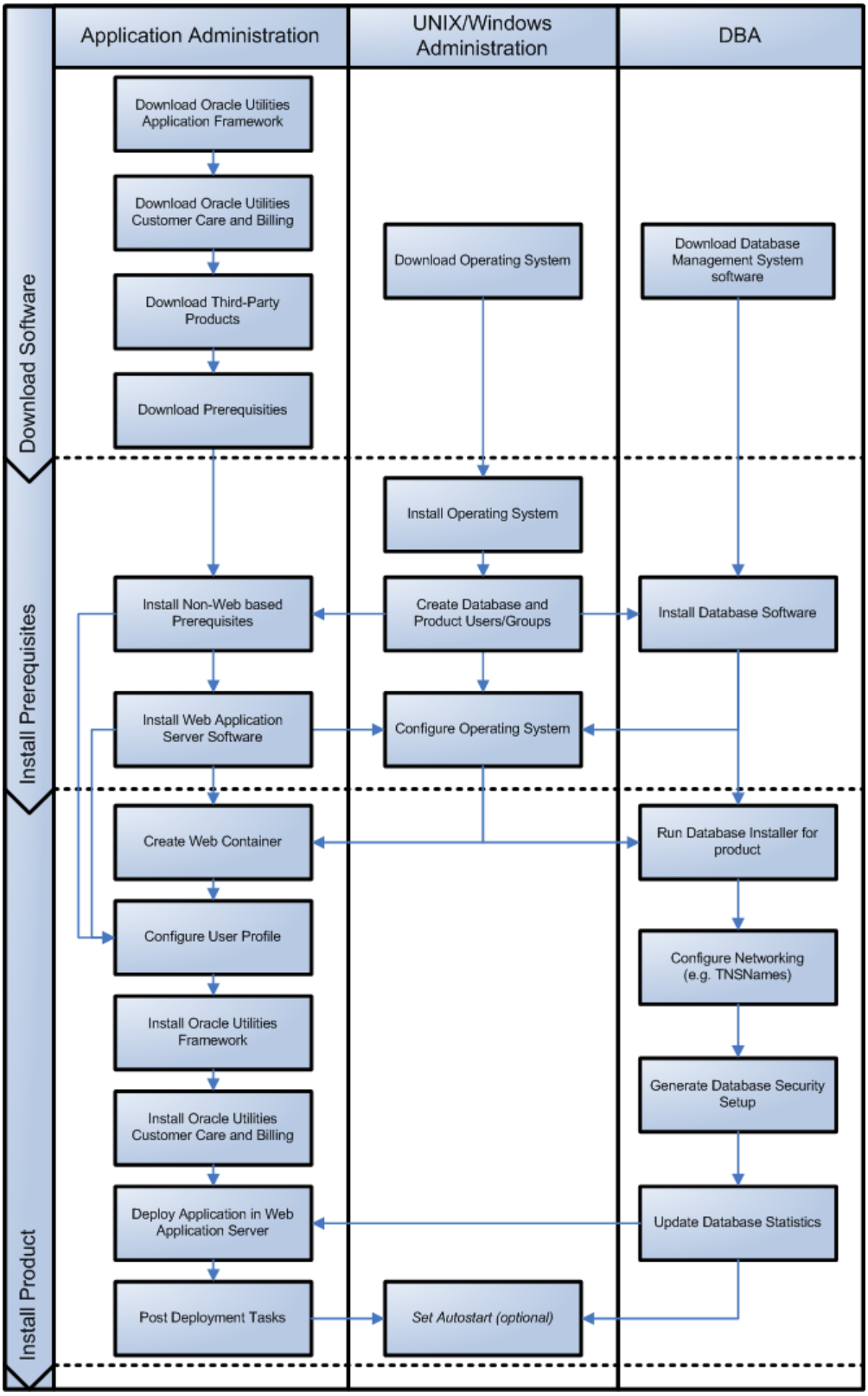
Installation Overview

For a successful Oracle Utilities Meter Data Management installation:

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 Pre-requisite 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.

Refer to 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.

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 v2.3.0.2.0 to v2.4.0.0.0.

The Recommendations for Creating a Production Environment section provides 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 v2.3.0.2.0 to v2.4.0.0.0.0.

> **Note:** If you have a version prior to 2.3.0.2.0, you must install 2.3.0.2.0 before upgrading to 2.4.0.0.0.0.

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 V2.4.0.0.0 Quick Install Guide
- Oracle Utilities Meter Data Management V2.4.0.0.0 Release Notes
- Oracle Utilities Meter Data Management V2.4.0.0.0 Supplemental Documentation
- Oracle Utilities Meter Data Management V2.4.0.0.0 User Documentation
- Oracle Utilities Meter Data Management V2.4.0.0.0 Install Documentation

Installation Packages

- Oracle Utilities Meter Data Management V2.4.0.0.0 Reports
- Oracle Utilities Meter Data Management V2.4.0.0.0 Demo
- Oracle Utilities Application Framework V4.4.0.3.0 Multiplatform
- Oracle Utilities Application Framework V4.4.0.3.0 Oracle Database
- Oracle Utilities Meter Data Management V2.4.0.0.0 Multiplatform

Chapter 2

Supported Platforms and Hardware Requirements

This chapter 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

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 7.x for x86_64*
- Oracle Linux 8.x for x86_64
- Oracle Solaris 11.4+ for SPARC (64-bit)
- IBM AIX 7.1 TL5 for POWER (64-bit)
- IBM AIX 7.2. TL3+ for POWER (64-bit)

* For Oracle Linux 7.x, refer to the Oracle Lifetime Support Policy: Oracle and Sun System Software and Operating Systems document for the applicable end of support dates.

Prerequisite Application Server Software

- Oracle Database Client 19c
- Oracle Java SE Development Kit 1.8.0_261 (Windows, Solaris and Linux platforms only)
- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)
- Select jars from Hibernate ORM 4.1.0
- Oracle WebLogic Server 12c (Release 12.2.1.4) 64-bit

Notes

- Oracle Linux is 100% user space-compatible with Red Hat Enterprise Linux, therefore, Oracle Utilities Application Framework 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 *Certification Matrix for Oracle Utilities Products (Document ID 1454143.1)* document 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 12.1.0.2+ means that 12.1.0.2 and any higher 12.1.0.x versions of Oracle are supported.

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

  Example: Linux 8.x indicates that any version of Linux 8 (8.0, 8.1, 8.2 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 12.2.1.4
- 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 19c
- Oracle Database Server Standard Edition 2 19c

  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
Microsoft Edge for Business 81+ (Edge Chromium)	Microsoft Windows 10 Version x 64-bit
Mozilla Firefox ESR 78.x	Microsoft Windows 10 Version x 64-bit
Google Chrome Enterprise 81+	Microsoft Windows 10 Version x 64-bit
Apple Mobile Safari	Apple iPad iOS 12.x

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	10 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	10 GB minimum	The application gets installed from this location. You need enough space to un-compress the files and install the application.
Oracle Data Area	10 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 Pre-requisite 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 4.4.0.3.0, 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)* document on My Oracle Support for more information.

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)* document on My Oracle Support.

Additional information about WebLogic clustering, refer to the Fusion Middleware Using Clusters for Oracle WebLogic Server documentation.

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 19c** - 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 Oracle Utilities Meter Data Management application component is:

- Oracle Database Client 19c
- JDK 1.8.0_261+ (Windows, Solaris and Linux platforms only) 64-bit
- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)
- Oracle WebLogic 12c (12.2.1.4)
- Select jars from Hibernate ORM 4.1.0

Web Browser Requirements

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

Browser	Windows Operating System
Microsoft Edge for Business 81+ (Edge Chromium)	Microsoft Windows 10 Version x 64-bit
Mozilla Firefox ESR 78.x	Microsoft Windows 10 Version x 64-bit
Google Chrome Enterprise 81+	Microsoft Windows 10 Version x 64-bit
Apple Mobile Safari	Apple iPad iOS 12.x

Installing Pre-requisite 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 TL5/ AIX 7.2 TL3+ Application Server
- Oracle Linux 7.x/8.x or Red Hat Linux 7.x/8.x Operating System
- Oracle Solaris 11 Application Server
- Windows Server 2012 R2 Application Server

AIX 7.1 TL5/ AIX 7.2 TL3+ 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 TL5/ AIX 7.2 TL3+	POWER 64-bit	Oracle WebLogic 12c (12.2.1.4) 64-bit version

Web/Application Server Tier

AIX 7.1 TL5 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 'cisusr' (user group) 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 19c - 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 v8.0 SR15 64-bit, IBM SDK, Java Technology Edition, v8.0

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/ ehcache-core-2.5.2.jar $HIBERNATE_JAR_DIR

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

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

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

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

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

   cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.3.0.Final.jar $HIBERNATE_JAR_DIR

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

Oracle WebLogic 12c (12.2.1.4) 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 (12.2.1.4).

Oracle Linux 7.x/8.x or Red Hat Linux 7.x/8.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 7.x/8.x (64-bit; based on Red Hat Enterprise Linux (64-bit))	x86_64	Oracle WebLogic 12c (12.2.1.4) 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 exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions

available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

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

Replace these users and groups for your installation defaults:

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

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

Oracle Client 19c - 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 v8.0 Update 261+

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

https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.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 261 or higher version is required for WebLogic12c (12.2.1.4).

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/ ehcache-core-2.5.2.jar $HIBERNATE_JAR_DIR

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

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

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

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

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

   cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.3.0.Final.jar $HIBERNATE_JAR_DIR

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

Oracle WebLogic 12c (12.2.1.4) 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 (12.2.1.4).

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

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

Please replace these users and groups for your installation defaults:

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

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

Oracle Client 19c - 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.

Installing /usr/ucb/ps

The prerequisite for Solaris platforms below version 11.4 is to install the /usr/ucp/ps command. This is needed to execute the following command successfully.

```
spl.sh -b stop (stop the Threadpool Worker)
```

Oracle Java Development Kit v8.0 Update 261

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 the Java SE Development Kit 8 Downloads portal.

The Oracle WebLogic Server requires a 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 261 or higher is required for WebLogic12c (12.2.1.4).

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/ ehcache-core-2.5.2.jar $HIBERNATE_JAR_DIR

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

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

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

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

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

   cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.3.0.Final.jar $HIBERNATE_JAR_DIR

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

Oracle WebLogic 12c (12.2.1.4) 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 (12.2.1.4).

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 (12.2.1.4) 64-bit version

Oracle Client 19c - 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 261+

This software is required for the Oracle WebLogic Installation.

At time of release, Oracle Java packages could be obtained from the Oracle Java Archive portal.

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 261 or higher is required for WebLogic 12c (12.2.1.4).

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/ ehcache-core-2.5.2.jar $HIBERNATE_JAR_DIR

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

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

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

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

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

cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.3.0.Final.jar $HIBERNATE_JAR_DIR

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

Oracle WebLogic 12c (12.2.1.4) 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 (12.2.1.4).

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 WebLocic 12.2.1.[0-2].0:
<Web Application Server Home Directory>/../oracle_common/modules/
org.codehaus.woodstox.woodstox-core-asl.jar
if WebLocic 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) 12.2.1.4.
2. Install Oracle Java SE Development Kit 1.8.0_261 (if not installed yet).
3. Shutdown the application server environment.

4. Take a full backup of the application:

   ```
   $SPLEBASE
   ```

5. Set the environment:

   ```
   splenviron.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 V4.4.0.3.0.

   ```
   install.sh -u
   ```

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 v2.4.0.0.0 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 v2.4.0.0.0, 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, including:

- Before You Install
- Initial Installation Procedure
- After the Installation
- Operating the Application

Before You Install

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

Initial Installation Procedure

The initial installation procedure consists of:

- Installing the Database Component
- Installing Application Components

Installing the Database Component

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 in the *Oracle Utilities Meter Data Management Database Administrator's Guide*, which provides instructions on installing the database component.

Installing Application Components

A successful installation consists of:

- Installing the Oracle Utilities Application Framework V4.4.0.3.0 Application Component
- Installing the Oracle Utilities Meter Data Management V2.4.0.0.0 Application Component

Installing the Oracle Utilities Application Framework V4.4.0.3.0 Application Component

This section describes how to install the application component of Oracle Utilities Application Framework V4.4.0.3.0, 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 V4.4.0.3.0 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework V4.4.0.3.0 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:

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

2. Download the Oracle Utilities Application Framework V4.4.0.3.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

   Note: This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
4. Copy the file FW-V4.4.0.3.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. Make sure to use the BINARY option to use FTP to transfer this file.
5. Decompress the file.

   ```
   cd <TEMPDIR>
   jar -xvf FW-V4.4.0.3.0-MultiPlatform.jar
   ```

   Note: In order to be able to execute the "jar" command you need to have the Java JDK installed.

A sub-directory named FW-V4.4.0.3.0 is created. It contains the installation software for the Oracle Utilities Framework Application server.

Setting Permissions for the cistab file in UNIX

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

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/App/FW.V4.4.0.3.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

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

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

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

Installing the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework V4.4.0.3.0.

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 <TEMPDIR>/FW.V4.4.0.3.0.
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 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     <Mandatory for Initial Install>
       Directory

       Additional JAR Directory                             <Optional>
   ```

```
2. Keystore Options
     Import Keystore Directory                              <Default>


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


 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                                  <Mandatory>

    Super User IDs                                     <Mandatory>

 4. Database Configuration

    Application Server Database User ID                <Mandatory>

    Application Server 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                                      <Mandatory>

    ONS Server Configuration                            <Optional>

    Database Override Connection String                 <Optional>

    Character Based Database                                 false

    Oracle Client Character                  AMERICAN_AMERICA.AL32
    Set NLS_LANG                                            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 Port                             <Mandatory>

    Coherence Cluster Mode                          prod<Mandatory>

 6. OUAF TrustStore Options

    Import TrustStore Directory              <Mandatory> for Prod

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. Refer to Appendix B: Installation and Configuration Worksheets for more information.

  - **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. Refer to Appendix B: 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 V2.4.0.0.0 Application Component

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

- Copying and Decompressing the Install Media
- Installing the Oracle Utilities Meter Data Management Application Component

To proceed with the Oracle Utilities Meter Data Management installation you need to be connected to the target Oracle Utilities Application Framework environment.

You must initialize the Oracle Utilities Application Framework environment. For detailed instructions, refer to the Installing the Oracle Utilities Application Framework V4.4.0.3.0 Application Component section.

Copying and Decompressing the 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:

1. Login to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Meter Data Management V2.4.0.0.0 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 V2.4.0.0.0 Multiplatform.zip to get the file MDM_V2.4.0.0.0.zip from the delivered package and copy to the <TEMPDIR>. To use FTP to transfer this file, use the BINARY option.
5. Decompress the file:

```
cd <TEMPDIR>
unzip MDM_V2.4.0.0.0.zip
cd App
```

For UNIX and Windows platforms, a sub-directory named MDM.V2.4.0.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing the Oracle Utilities Meter Data Management Application Component

To install the 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.V2.4.0.0.0 directory.

5. Run 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. 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 Oracle Utilities Meter Data Management installation is complete if no errors occurred during the installation.

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. Refer to Appendix B: Installation and Configuration Worksheets for information.

  - **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. Refer to Appendix B: Installation and Configuration Worksheets for more information.

- **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.

The MDB user configured in Menu 3 during the Oracle Utilities Application Framework installation has to be created in the Oracle Utilities Application Framework application and WebLogic console, and should be part of the "cisusers" group.

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.

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 Operating the Application section.

Operating the Application

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

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

Demo Installation Procedure

The demo installation procedure consists of:

- Installing the Database Component
- Installing Application Components

Installing the Database Component

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 **Demo Install** section in the *Oracle Utilities Meter Data Management Database Administrator's Guide* for instructions to install the database component with pre-populated demo data.

Installing Application Components

A successful installation consists of the following steps:

- Installing the Oracle Utilities Application Framework V4.4.0.3.0 Application Component
- Installing the Oracle Utilities Meter Data Management V2.4.0.0.0 Application Component

Installing the Oracle Utilities Application Framework V4.4.0.3.0 Application Component

This section describes how to install the application component of Oracle Utilities Application Framework V4.4.0.3.0, 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 V4.4.0.3.0 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework V4.4.0.3.0 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:

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

2. Download the Oracle Utilities Application Framework V4.4.0.3.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

   Note: This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
4. Copy the file FW-V4.4.0.3.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file.

   ```
   cd <TEMPDIR>
   jar -xvf FW-V4.4.0.3.0-MultiPlatform.jar
   ```

   Note: In order to be able to execute the "jar" command you need to have the Java JDK installed.

A sub-directory named FW-V4.4.0.3.0 is created. It contains the installation software for the Oracle Utilities Framework Application server.

Setting Permissions for the cistab file in UNIX

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

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/App/FW.V4.4.0.3.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

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

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

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

Installing the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework V4.4.0.3.0.

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 <TEMPDIR>/App/FW.V4.4.0.3.0 directory.
3. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

   UNIX:

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

   Windows:

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

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

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   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     <Mandatory for Initial Install>
    Directory

    Additional JAR Directory


2. Keystore Options

     Import Keystore Directory                           <Default>


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


 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                                    <Mandatory>

    Super User IDs                                       <Mandatory>

 4. Database Configuration

    Application Server Database User ID                  <Mandatory>

    Application Server 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                                        <Mandatory>

    ONS Server Configuration                              <Optional>

    Database Override Connection String                   <Optional>

    Character Based Database                                  false

    Oracle Client Character                  AMERICAN_AMERICA.AL32
    Set NLS_LANG                                             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 Port                               <Mandatory>

    Coherence Cluster Mode                          prod<Mandatory>

 6. OUAF TrustStore Options

    Import TrustStore Directory              <Mandatory> for Prod
```

```
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 V2.4.0.0.0 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. Login to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Meter Data Management V2.4.0.0.0 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 V2.4.0.0.0 Multiplatform.zip to get the file MDM_V2.4.0.0.0.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_V2.4.0.0.0.zip
cd App
```

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/splenviron.sh  -e $SPLENVIRON
```

Windows

```
%SPLEBASE%\bin\splenviron.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.

   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 *Native Installation Oracle Utilities Application Framework (Doc ID: 1544969.1)* on My Oracle Support.

The MDB user configured in Menu 3 during the Oracle Utilities Application Framework installation has to be created in the Oracle Utilities Application Framework application and WebLogic console, and should be part of the "cisusers" group.

> **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

Oracle Utilities Meter Data Management v2.4.0.0.0 supports the upgrade from v2.3.0.2.0 to v2.4.0.0.0.

> **Note:** If you have a version prior to 2.3.0.2.0, you must install 2.3.0.2.0 before upgrading to 2.4.0.0.0.

This chapter includes:

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 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 V4.4.0.3.0 Application Component
- Upgrading the Oracle Utilities Meter Data Management Application Component to V2.4.0.0.0

Upgrading the Oracle Utilities Application Framework V4.4.0.3.0 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 V4.4.0.3.0 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:

1. Login to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.4.0.3.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

   Note: This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
4. Copy the file FW-V4.4.0.3.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. Make sure to use the BINARY option to use FTP to transfer this file.
5. Decompress the file.

   ```
   cd <TEMPDIR>
   jar -xvf FW-V4.4.0.3.0-MultiPlatform.jar
   ```

   Note: In order to be able to execute the "jar" command you need to have the Java JDK installed.

A sub-directory named FW-V4.4.0.3.0 is created. It contains the installation software for the Oracle Utilities Framework Application server.

Setting Permissions for the cistab file in UNIX

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

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/App/FW.V4.4.0.3.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

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

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

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

Upgrading the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework V4.4.0.3.0.

> **Note:** Customers who have a version prior to 2.3.0.2.0 must install 2.3.0.2.0 before upgrading to 2.4.0.0.0.

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.V4.4.0.3.0.

   > **NOTE**: While installing the FW V4.4.0.3.0 from the previous environment to V2.4.0.0.0, the install utility removes the existing environment and re-creates the environment. Take a backup before you proceed with installing FW V4.4.0.3.0 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     <Mandatory for Initial Install>
   Directory

   Additional JAR Directory                             <Optional>


2. Keystore Options

    Import Keystore Directory                            <Default>


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


 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                                    <Mandatory>
    Super User IDs                                       <Mandatory>

 4. Database Configuration
    Application Server Database User ID                  <Mandatory>
    Application Server 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                                        <Mandatory>
    ONS Server Configuration                              <Optional>
    Database Override Connection String                   <Optional>
    Character Based Database                                   false
    Oracle Client Character                    AMERICAN_AMERICA.AL32
    Set NLS_LANG                                               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 Port                               <Mandatory>
    Coherence Cluster Mode                             prod<Mandatory>
```

```
 6. OUAF TrustStore Options

    Import TrustStore Directory                <Mandatory> for Prod


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 V2.4.0.0.0

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:

1. Login to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Meter Data Management V2.4.0.0.0 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 V2.4.0.0.0 Multiplatform.zip to get the file MDM_V2.4.0.0.0.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_V2.4.0.0.0.zip
cd App
```

Upgrading the Application Component

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

1. Login 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. Run 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. Refer to 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. Refer to 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. Refer to 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.
   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 *Native Installation Oracle Utilities Application Framework (Doc ID: 1544969.1)* on My Oracle Support.

The MDB user configured in Menu 3 during the Oracle Utilities Application Framework installation has to be created in the Oracle Utilities Application Framework application and WebLogic console, and should be part of the "cisusers" group.

> **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 *Server Administration Guide* (included in this release) for more information on further configuring and operating the system.

Chapter 7

Additional Tasks

This chapter describes tasks that should be completed after installing Oracle Utilities Meter Data Management, including:

- Importing WebLogic SSL Certificates
- Customizing Configuration Files
- Customizing Centralized Properties
- 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 WebLogic SSL Certificates

If you have integrations that are using SSL, 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/splenviron.sh -e $SPLENVIRON

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

   Windows

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

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

3. Run the following script to generate all information:

   UNIX

   ```
   $SPLEBASE/bin/initialSetup.sh -i [<server>:<port>]
   ```

   Windows

   ```
   %SPLEBASE%\bin\ initialSetup.cmd –i [<server>:<port>]
   ```

   If [<server>:<port>] are not specified, they will be retrieved from ENVIRON.INI.

   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:

Example: To customize hibernate properties of the SPLWeb web application:

1. Locate the hibernate.properties.template in the $SPLEBASE/templates directory.
2. Copy the file to cm.hibernate.properties.template.
3. Apply your changes to cm.hibernate.properties.template.
4. Update application war file with the latest changes.

   UNIX

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

Windows

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

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

Customizing Centralized Properties

This feature gives the ability to add, modify, and remove properties in one file. The properties are propagated to the specified property files. The template process (which is part of the initialSetup step) will look at the file etc/cm_properties.ini (this can be created as a Customer Customization). If the file exists the content is processed for the relevant properties.

> **Note**: Use the file format: etc/<PROD>_properties.ini (where <PROD> is the product included in etc/PRODUCT.txt).

cm_properties.ini examples

The type of entries included into cm_properties.ini and relevant type of action:

```
<PROPERTIES_FILE>:<PROPERTY_NAME>=<VALUE>
```

- Override <PROPERTY_NAME> in <PROPERTIES_FILE> with <VALUE> if exists.
- Insert <PROPERTY_NAME> in <PROPERTIES_FILE> with <VALUE> it doesn't exists.

```
<PROPERTY_NAME>=<VALUE>
```

- Override <PROPERTY_NAME> in all property files with <VALUE>, if <PROPERTY_NAME> exists

```
<PROPERTIES_FILE>:<PROPERTY_NAME>=[DELETE]
```

- Remove <PROPERTY_NAME> from <PROPERTIES_FILE> if exists.

```
<PROPERTY_NAME>=[DELETE]
```

- Remove <PROPERTY_NAME> from all property files, if <PROPERTY_NAME> exists.

Template example: hibernate.service.properties.template

```
hibernate.user = @DBUSER@
hibernate.pass = @DBPASS@
hibernate.ucp.validate_connection = true
```

ENVIRON.INI example:

```
DBUSER=cisadm
```

cm_properties.ini example:

```
hibernate.service.properties.template:hibernate.user=clouduser
hibernate.password=cloudpwd
hibernate.iws.properties.template:hibernate.user=clouduser
hibernate.service.properties.template:hibernate.ucp.validate_conne
ction=[DELETE]
hibernate.service.properties.template:new.property=test
```

hibernate.service.properties generated properties file result:

```
### The following line was overridden because <PROD>_properties.ini
file setting:
hibernate.user=clouduser
### The following line was overridden because <PROD>_properties.ini
file setting:
hibernate.password=cloudpwd
### The following line was deleted because <PROD>_properties.ini
file setting:
# hibernate.ucp.validate_connection = true
### The following line was appended because <PROD>_properties.ini
file setting:
new.property = test
```

hibernate.iws.properties generated properties file result:

```
### The following line was overridden because <PROD>_properties.ini
file setting:
hibernate.user=clouduser
### The following line was overridden because <PROD>_properties.ini
file setting:
hibernate.password=cloudpwd
```

Integrating Existing Customer Modifications

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

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

Generating the Application Viewer

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

To generate the additional items in the application viewer:

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

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

For example:

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

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

For example:

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

3. Run the following script to generate all information.

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

Windows

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

4. Restart the 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

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

Customizing the Logo

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

From the Admin menu, select Navigation Key.

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

The syntax for the URL path is:

Windows:

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

UNIX:

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

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

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.

To deploy IWS:

For UNIX

1. Enable the Web Services Functionality.
   a. cd $SPLEBASE/bin
   b. Execute configureEnv.sh –a

      Select option 50 and set the option "Enable Web Services Functionality" to true. Enter "P" to process.
2. Run initialSetup.sh.

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

3. Set the classpath.

```
$ CLASSPATH=$WL_HOME/server/lib/weblogic.jar:$CLASSPATH
$ export CLASSPATH
$ cd $SPLEBASE/bin
```

4. Run the following command:

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

   Select y.

5. Run the below step in $SPLEBASE/bin. Note that the application server should be up before running the below command.

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

For WINDOWS

1. Enable the Web Services Functionality.

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

2. Run configureEnv.cmd –a.

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

3. Run initialSetup.cmd.

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

4. Set the classpath.

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

5. Run the following command.

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

6. Select y.
7. Run the below step in %SPLEBASE%\bin.

   Note that the application server should be up before running the following 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 splenviron script provided with the system.

UNIX

a. Login 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/splenviron.sh -e $SPLENVIRON
```

For example:

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

Windows

a. The command window should be opened on the Windows server where the application is installed.

b. In the below example, 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\splenviron.cmd -e %SPLENVIRON%
```

For example:

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

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

UNIX

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

Windows

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

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

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

4. Extract the contents of the archive file:

```
jar xvf db_patch_standalone.jar
```

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

Overview of Database Patching Application

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

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

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

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

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

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

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

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

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

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

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

Unix Sample - Database Patch Application (ouafDatabasePatch.sh)

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

- Sample Execution – Passing a Password

```
./ouafDatabasePatch.sh -x ouafadm -p "-t O -d
CISADM_Z1_12C_44030_BLD001,slc04lds:1522:Z143Q12C"
```

- Sample Execution – Prompting for a Password

```
./ouafDatabasePatch.sh  -p "-t O -d
CISADM_Z1_12C_44030_BLD001,slc04lds:1522:Z143Q12C"
```

- Sample Execution - passing in the tools bin location

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

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

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

Windows Sample - Database Patch Application (ouafDatabasePatch.cmd)

- Sample Execution – Passing a Password

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

- Sample Execution – Prompting for a Password

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

- Sample Execution - passing in the tools bin location

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

Windows Sample Usage

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

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-V2.4.0.0.0-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:

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 the report as "D2_VEEEME".
6. Navigate to **Catalog > My folders** and select D2_VEEEME. Click **Open.**

   Once the report is open, click **Actions** and export the data as XML. Save it.
7. On the **Catalog** tab, select **My Folders** and click **Edit Report** (D2_VEEEME) and click Data Model D2_VEEEME.
5. Under **Attachment**, click **Upload Sample Data**. Browse to the saved XML file and upload it. Click **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: Perform the same steps to configure other reports except 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 Chapter 2: Supported Platforms and Hardware Requirements prior to running any of the installation utilities.

The following prompt appears 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 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 Pre-requisite 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	

* 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 Additional Prerequisite Software Information 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**: Populate the "Import Keystore Directory" option to import an existing keystore.

Keystore options include:

Menu Option	Name Used in Documentation	Customer Install Value
Import Keystore Directory	KS_IMPORT_KEYSTORE_FOLDER	

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	

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	
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	
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	
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	

Menu Option	Name Used in Documentation	Customer Install Value
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	

Menu Block 8 - OSB Configuration

The OSB configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
OSB Home		
OSB Host Server	slc11cds.us.oracle.com	
OSB Port Number		
OSB SSL Port Number		
OSB Managed Server Port Number		
OSB Managed Server SSL Port Number		
JDBC URL for Database		
OSB Service Table Schema Name		
OSB Service Table Schema Password		
OSB WebLogic User Name		
OSB WebLogic User Password		

Menu Option	Name Used in Documentation	Customer Install Value
Mount Point for OSB Files	/spl/sploutput/osb	

Menu Block 9 - SOA Configuration

The SOA configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
SOA Home		
SOA Host Server	slc11cds.us.oracle.com	
SOA Port Number		
SOA SSL Port Number		
SOA Internal URL		
SOA External URL		
JDBC URL for SOA Database		
SOA Service Table Schema Name		
SOA Service Table Schema Password		
SOA WebLogic User Name		
SOA WebLogic User Password		
Specify the Path for XAI/IWS Service	XAIApp/xaiservert	

Menu Block 10 - SOA Configuration Plan (MDF)

The SOA configuration plan (MDF) includes:

Menu Option	Name Used in Documentation	Customer Install Value
MDF Bulk Request Callback URL		
MDF Headend HTTP Connection Timeout	50000	
MDF Headend HTTP Read Timeout	500000	
MDF SOA Request Queue JNDI Name	queue/BulkRequestQueue	

Menu Option	Name Used in Documentation	Customer Install Value
MDF SOA Notify Queue JNDI Name	queue/BulkNotifyQueue	
MDF SOA Command Queue JNDI Name	queue/BulkCommandQueue	
SGG-NMS TestHarness Partition Name	SGG-NMS_Test	

Menu Block 11 - Configuration for DataRaker Integration

The DataRaker Integration configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
JNDI Name of Destination Queue to publish SGG payloads for DataRaker Integration Tool	DataRakerQueue	
Number of records (SGG Payloads) to accumulate	100	
Max file size for the accumulated (SGG Payloads) file in Kilobytes	524288	
Specify a time which, when exceeded, causes a new outgoing file to be created in seconds	600	
Polling frequency of Staging directory for new files in seconds	60	
Mount point/directory for the accumulated SGG payload file	/spl/sploutput/staging	
Mount Point/directory for the converted XML file to place for DataRaker	/spl/sploutput/int	

Menu Block 16 - SOA Configuration Plan (LG)

The SOA configuration plan (LG) includes:

Menu Option	Name Used in Documentation	Customer Install Value
LG SOA Partition Name	LG	

Menu Option	Name Used in Documentation	Customer Install Value
LG SOA TestHarness Partition Name	LG_Test	
AMI Event Subscriber Output Path	/spl/sploutput/osb/lg-cim-event	
MR_Server endpoint URI		
CD_Server endpoint URI		
CIM_Server endpoint URI		
MeteringServer endpoint URI		
Security policy attached to outbound web service calls to a CIM interface	sgg/d3_cfs_cim_header_client_policy	
Security policy attached to inbound web service calls from a CIM interface	sgg/d3_cim_token_service_policy	
The name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 17 - SOA Configuration Plan (NES)

The SOA configuration plan (NES) includes:

Menu Option	Name Used in Documentation	Customer Install Value
NES endpoint URI		
SOA partition to which the application is installed	Echelon	
Path to the NES EventManager web service on the head end system	CoreServices/EventManager.asmx	
Path to the NES GatewayManager web service	CoreServices/GatewayManager.asmx	
Path to the NES DeviceManager web service on the head end system	CoreServices/DeviceManager.asmx	
Path to the NES SettingManager web service on the head end system	CoreServices/SettingManager.asmx	

Menu Option	Name Used in Documentation	Customer Install Value
Path to the NES UserManager web service on the head end system	CoreServices/UserManager.asmx	
Name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
Name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 18 - SOA Configuration Plan (Sensus)

The SOA configuration plan (Sensus) includes:

Menu Option	Name Used in Documentation	Customer Install Value
Sensus SOA TestHarness Partition Name	Sensus_Test	
Sensus SOA Partition Name	Sensus	
MR Server Endpoint URI		
CD Server Endpoint URI		
OD Server Endpoint URI		
Headend Http Read Timeout	500000	
Headend Http Connection Timeout	50000	
The name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 19 - SOA Configuration Plan (SSN)

The SOA configuration plan (Sensus) includes:

Menu Option	Name Used in Documentation	Customer Install Value
SSN SOA Partition Name	SSN	
SOA Weblogic User Name		
SSN SOA Queue JNDI Name	queue/SSNODRQ	

Menu Option	Name Used in Documentation	Customer Install Value
SSN Headend DataAggregation Endpoint URI		
The URL for the SSN 4.7 DataAggregation service (DataAggregation.asmx)	http://127.0.0.1/CoreServices/DataAggregation.asmx	
The URL for the SSN 4.10 DataAggregation service	https://ssn.ssnsgs.net:3000/amm/webservice/v2_1/DataAggregat...	
SSN Headend DeviceManager Endpoint URI		
The URL for the SSN 4.7 DeviceManager service (DeviceManager.asmx)	http://127.0.0.1/CoreServices/DeviceManager.asmx	
The URL for the SSN 4.10 DeviceManager service	https://ssn.ssnsgs.net:3000/amm/webservice/v2_1/DeviceManage...	
SSN Headend DeviceResults Endpoint URI		
The URL for the SSN 4.7 DeviceResults service (DeviceResults.asmx)	http://127.0.0.1/CoreServices/DeviceResults.asmx	
The URL for the SSN 4.10 DeviceResults service	https://ssn.ssnsgs.net:3000/amm/webservice/v2_1/DeviceResult...	
SSN Headend JobManager Endpoint URI		
The URL for the SSN 4.7 JobManager service (JobManager.asmx)	http://127.0.0.1/CoreServices/JobManager.asmx	
The URL for the SSN 4.10 JobManager service:	https://ssn.ssnsgs.net:3000/amm/webservice/v2_1/JobManagerPo...	
The name of the OWSM policy to use when SOA calls a head end system	oracle/http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/http_basic_auth_over_ssl_service_policy	

Menu Block 20 - SSN JMS Source Destination Bridge Configuration

The SSN JMS Source Destination Bridge configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
SSN Bridge Destination Name	SSNTestHarnessBridgeDestination	
SSN Bridge Destination Additional Classpath		
SSN Bridge Destination Connection URL		
SSN Bridge Destination Initial Context Factory	weblogic.jndi.WLInitialContextFactory	
SSN Bridge Connection Factory JNDI Name	jms/SSNTestHarnessConnectionFactory	
SSN Bridge Destination Queue JNDI Name	queue/SSNTestSSNODRQ	
SSN Destination Bridge Username		

Menu Block 21 - DG Reference Implementation SOA Configuration

The DG Reference Implementation SOA configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
DG SOA Partition Name	DG	
MR Server Endpoint URI		
CD Server Endpoint URI		
OD Server Endpoint URI		
Headend Http Read Timeout	500000	
Headend Http Connection Timeout	50000	
DG SOA TestHarness Partition Name	DG_Test	

Menu Block 22 - SOA Configuration Plan (Itron Openway)

The SOA Configuration Plan (Itron Openway) configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
Itron SOA Partition Name	Itron	

Menu Option	Name Used in Documentation	Customer Install Value
Headend Http Read Timeout	500000	
Headend Http Connection Timeout	50000	
DataSubscriberService Output Path		
ExceptionSubscriberService Output Path		
Itron Headend DataService Endpoint URI		
Itron Headend DiagnosticService Endpoint URI		
Itron Headend UtilService Endpoint URI		
Itron Headend ControlService Endpoint URI		
Itron Headend ProvisioningService Endpoint URI		
Itron Headend ProvisioningService370 Endpoint URI		
Itron Headend ControlService370 Endpoint URI:		
Itron SOA TestHarness Partition Name	Itron_Test	
The name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

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	
WebLogic ThreadPoolWorker Enabled	WLS_THEADPOOLWORKERENABLED	
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	
Add UsernameToken.xml	ADD_USERNAMETOKEN_XML	
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	
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	

Menu Block 51 - WebLogic Advanced Environment Memory Configuration

WebLogic advanced environment memory configurations include:

Menu Option	Name Used in Documentation	Customer Install Value
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 Additional Options	BATCH_MEMORY_ ADDITIONAL_OPT	

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_L2_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	

Menu Option	Name Used in Documentation	Customer Install Value
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	
Enable Strict Transport Security	STRICT_TRANSPORT_SECURITY	
Strict Transport Security Max Age	HSTS_MAX_AGE	
Strict Transport Security Include Subdomains	HSTS_SUBDOMAINS	
Strict Transport Security Preload	HSTS_PRELOAD	

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	

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 URIs Enable	CLOUD_RESTRICTION_URIS_ ENABLE	
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_VARIA BLE_LIST_FILE_LOCATION	
Directory For Variable F1_CMA_FILES	CLOUD_LOCATION_ F1_MIGR_ASSISTANT_FILES	
URI For Variable F1_OAUTH2_URI	CLOUD_LOCATION_F1_ OAUTH2_URI	
URI for Variable F1_BASE_REST_URL	CLOUD_LOCATION_F1_BASE_ REST_URL	
URI for Variable F1_OPEN_API_BASE_URL	CLOUD_LOCATION_F1_OPEN_ API_BASE_URL	
URI For Variable F1_BASE_WEB_URI	CLOUD_LOCATION_F1_BASE_ WEB_URI	
URI For Variable F1_BASE_IWS_URI	CLOUD_LOCATION_F1_BASE_I WS_URI	
Consolidated Logfile Full Path	CONSOLIDATED_LOG_FILE_P ATH	
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	

Menu Option	Name Used in Documentation	Customer Install Value
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	RCUSTBSCHEMA_OSB	
OSB Service Table Schema Password	RCUSTBSCHEMAPWD_OSB	
OSB WebLogic User Name	WEBLOGIC_USERNAME_OSB	
OSB WebLogic User Password	WEBLOGIC_PASSWORD_OSB	
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	

Menu Option	Name Used in this Documentation	Customer Install Value
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	
JDBC URL for database	DBURL_SOA	
SOA Service table schema Name	RCUSTBSCHEMA_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_CONN_ 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	
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_MEMORY_OPT_ MAXPERM SIZE	
SOA Application Additional Options	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_MAXPER MSIZE	
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	

The SSN SOA TestHarness configurations include:

Menu Option	Name Used In Documentation	Customer Install Value
SSN TestHarness SOA Host Server	SOA_HOST_TEST_D7	
SSN TestHarness SOA Port Number	SOA_PORT_NUMBER_D7	
SSN SOA TestHarness Partition Name	SOA_PARTITION_TEST_D7	
SSN SOA TestHarness Queue JNDI Name	SOA_QUEUE_TEST_D7	

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

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

Windows

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

To Stop the Thread Pool Worker

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

   UNIX

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

   Windows

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

To Modify the Configuration Values

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

   UNIX

   ```
   configureEnv.sh
   ```

   Windows

   ```
   configureEnv.cmd
   ```

   The configuration utility launches menu items. Select any Menu option.
3. Change the menu values.
4. After you change the menu values, press P to write the changes to the configuration file.
5. To apply the changes to the environment, run the initial setup script:

   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

Application Framework Prerequisite Patches

There are no Oracle Utilities Application Framework prerequisite patches to be installed in this Oracle Utilities Meter Data Management release.