Oracle Utilities Customer To Meter

Installation Guide

Release 2.6.0.1.0

E92495-01

February 2018

ORACLE

Oracle Utilities Customer To Meter Installation Guide

Contents

Chapter 5

Chapter 6

Chapter 7

Chapter 8

Preface

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

- Related Documents
- Updates to Documentation
- Conventions
- Additional Resources

To complete installation you should have:

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

Related Documents

For more information, refer to these Oracle documents:

Installation Guides and Release Notes

- *Oracle Utilities Customer To Meter V2.6.0.1.0 Release Notes*
- *Oracle Utilities Customer To Meter V2.6.0.1.0 Quick Install Guide*
- *Oracle Utilities Customer To Meter V2.6.0.1.0 Installation Guide*
- *Oracle Utilities Customer To Meter V2.6.0.1.0 Database Administrator's Guide*
- *Oracle Utilities Customer To Meter V2.6.0.1.0 Optional Products Installation Guide*
- *Oracle Utilities Customer To Meter V2.6.0.1.0 Licensing Information User Manual*

Administrative and Business User Guides

- *Oracle Utilities Customer To Meter V2.6.0.1.0 Administrative User Guide*
- *Oracle Utilities Customer To Meter V2.6.0.1.0 Business User Guide*

Supplemental Documents

- *Oracle Utilities Customer To Meter V2.6.0.1.0 Server Administration Guide*

- *Oracle Utilities Customer To Meter V2.6.0.1.0 Security Guide*

Updates to Documentation

This documentation is provided with the version of the product indicated. Additional and updated information about the operations and configuration of the product is available from the Knowledge Base section of My Oracle Support (http://support.oracle.com). Please refer to My Oracle Support for more information.

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.
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.

Additional Resources

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

Chapter 1

Overview

This chapter provides an overview of the Oracle Utilities Customer To Meter installation.

Installation Overview

Installing Oracle Utilities Customer To Meter involves the following steps:

1. Review the different tiers of the application architecture as described in Chapter 2**:** Application Architecture Overview.
2. Understand the hardware requirements for installing the application and the supported platforms for the application and database servers as described in Chapter 3**:** Supported Platforms and Hardware Requirements.

   Note: The installation and administration of the database server tier is described in detail in the document *Oracle Utilities Customer To Meter Database Administrator's Guide.*
3. Install the database as described in the document *Oracle Utilities Customer To Meter Database Administrator's Guide.*
4. Plan your installation as described in Chapter 4**:** Planning the Installation.
5. Install all required third-party software as described in Chapter 5**:** Installing Application Server Prerequisite Software. The required software is listed for each supported combination of operating system and application server.
6. Install the framework for the application as described in Chapter 6**:** Installing the Application Server Component of Oracle Utilities Application Framework.
7. Install Oracle Utilities Customer To Meter as described in Chapter 7**:** Installing Oracle Utilities Customer To Meter.
8. Follow the installation guidelines described in Chapter 8**:** Additional Tasks.

Chapter 2

Application Architecture Overview

This section provides an overview of the Oracle Utilities Application Framework application architecture.

Application Architecture

The Oracle Utilities Application Framework application is deployed on multiple tiers.

Please refer to the *Oracle Utilities Customer To Meter Server Administration Guide* for a more detailed description of the application architecture and individual tiers.

Tier 1: Desktop/Client, or Presentation Tier

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

Tier 2: Web Application / Business Application Server, or Business Logic 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 Application Framework 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 Customer To Meter application. More specifically, the database tier contains the data server files and database executables that physically store the tables, indexes, and other database objects for your system.

Chapter 3

Supported Platforms and Hardware Requirements

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

- Software and Hardware Considerations
- Requirements by Tier
- Supported Platforms
- Application Server Memory Requirements
- Support for Software Patches and Upgrades

Software and Hardware Considerations

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

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

- On which hardware platform and operating system will Oracle Utilities Customer To Meter be deployed?
- Which web server product will Oracle Utilities Customer To Meter deploy on?
- Which database product will Oracle Utilities Customer To Meter deploy on?
- Do you plan to deploy multiple Oracle Utilities Customer To Meter instances on the same physical server?
- How do you plan to deploy Oracle Utilities Customer To Meter?
    - 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 the Oracle Utilities Customer To Meter product, as described in the rest of this chapter.

Requirements by Tier

The application is deployed on multiple Tiers:

- Tier 1, Desktop
- Tier 2, Web/Business Application Server
- Tier 3, Database Server

Tier 1, Desktop: Software and 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 improves client performance.

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

Tier 2, Web/Business Application Server: Software and Hardware Requirements

Please refer to Supported Platforms to determine which web application servers can be used with the operating system that will be hosting this tier.

The recommendations that follow are based on a standard installation with both the web application and business application servers on the same machine and the system running with the default values. The default values may not support a production environment. You should adjust these values according to your production needs. Refer to the *Server Administration Guide* on how to change the default values. The minimum resource requirements exclude third-party software installation requirements. Refer to the third-party vendors for specific requirements. The following sizing excludes the Oracle database server installation.

Tier 3, Database Server: Software and Hardware Requirements

See the section Supported Platforms for supported database servers.

Supported Platforms

The installation has been tested to operate on many operating system, application server, and database server combinations. For the software requirements for each of these combinations, see Chapter 5: Installing Application Server Prerequisite Software for more information.

Operating Systems and Application Servers

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

Application Server Operating Systems

- Oracle Linux 6.x for x86_64
- Oracle Linux 7.x for x86_64
- Oracle Solaris 11.x for SPARC (64-bit)
- IBM AIX 7.1/7.2 TLx for POWER (64-bit)

Prerequisite Application Server Software

- Oracle Database Client 12.1.0.x
- Oracle Java SE Development Kit 1.8.0_121+ (Oracle platforms only)

- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)
- Hibernate ORM 4.1.0 and Hibernate 5.2.3 jars
- Oracle WebLogic 12c (v12.2.1.1+) 64-bit

Notes

- Oracle Linux is 100% user space-compatible with Red Hat Enterprise Linux, therefore, OUAF is also supported on Red Hat Enterprise Linux.
- Refer to the Framework DBA Guide for the Oracle Database Server Requirements.

Refer to the Product Support Matrix (Doc ID 1454143.1) on 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 7.x indicates that any version of Linux 7 (7.0, 7.1, 7.2 etc) will be supported.

Windows Server

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

WebLogic Server

- Oracle WebLogic Server (Fusion Middleware Infrastructure) 12.2.1.1+

  WebLogic Server 12.2.1.1 and any higher versions of Oracle are supported.

- Customers must download Oracle WebLogic Server from the Oracle Software Delivery Cloud.

Oracle Database Server

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

- Oracle Database Server Enterprise Edition 12.1.0.2+
- Oracle Database Server Standard Edition 2 12.1.0.2+
- Oracle Database Server Enterprise Edition 12.2.0.2+
- Oracle Database Server Standard Edition 2 12.2.0.2+

  Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are not mandatory but are recommended. Standard Edition should only be considered suitable for very small, pilot projects or development environments where

scalability, performance, and database size-on-disk are not important considerations. Oracle Database Enterprise Edition, including the Advanced Compression and Partitioning options, is strongly recommended in all other situations.

Oracle VM Support
This version of Oracle Utilities Customer To Meter 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.

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
$SPLEBASE	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.
$SPLAPP	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	minimum	This location is used by various web server vendors to expand the application. It should be considered when installing these products. Refer to the individual web server documentation to determine the location of the temporary files.
Installation Temporary Area	4 GB	The application gets installed from this location. You need enough space to un-compress the files and install the application.

Location	Size	Usage
Oracle Data Area	4 GB minimum	This location is where the Oracle database data files are stored. The size of this space should be based on the requirements of the production environment. For an initial or demo database install 4 GB should be sufficient.

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 4

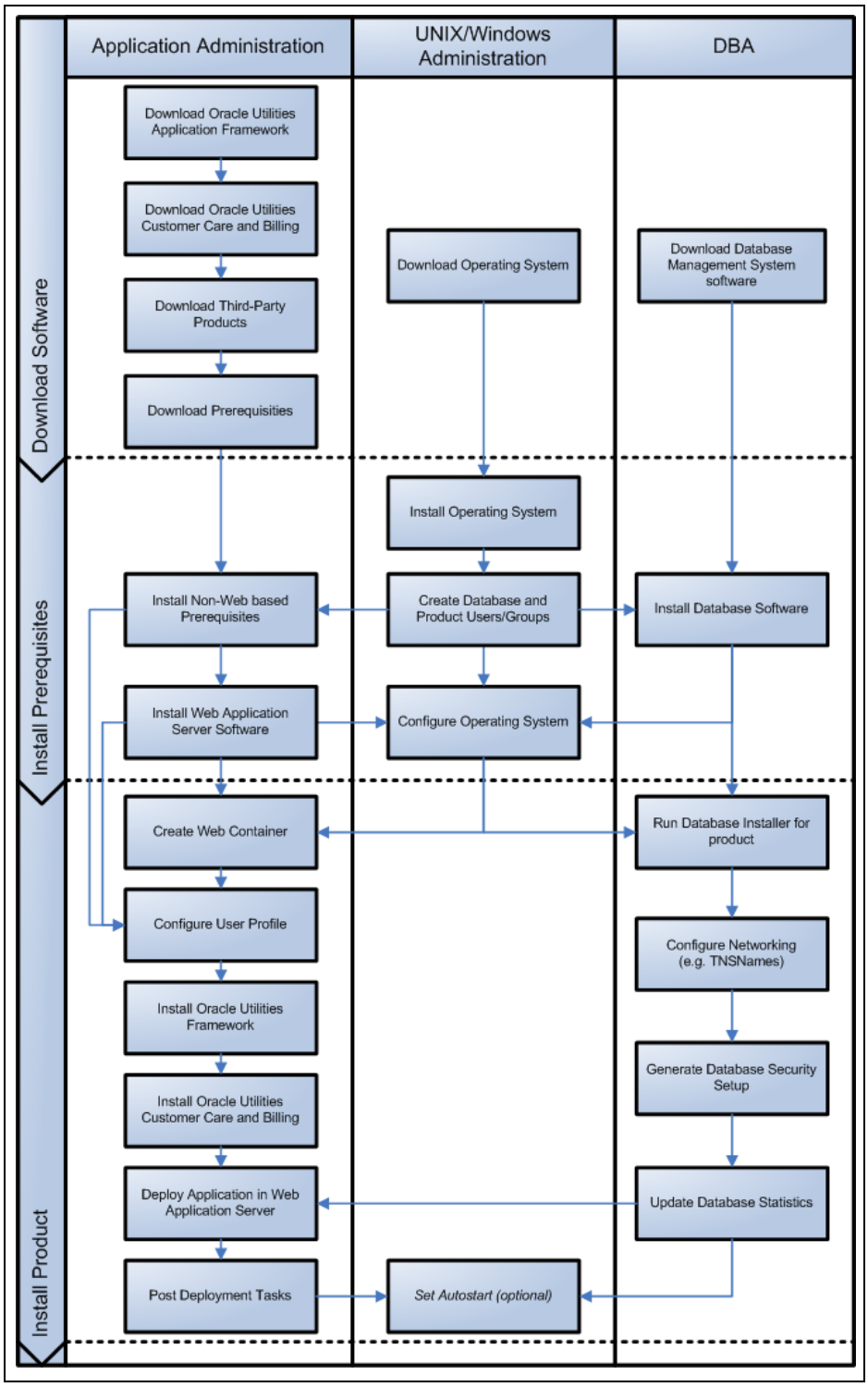
Planning the Installation

This chapter provides information for planning an Oracle Utilities Customer To Meter installation, including:

- Installation and Configuration Overview
- Before You Install
- Installation Checklist
- Installation Menu Functionality Overview
- Installation and Configuration Worksheets

Installation and Configuration Overview

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



Before You Install

Refer to My Oracle Support for up-to-date additional information on installing Oracle Utilities Customer To Meter.

Prerequisite Oracle Utilities Application Framework Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Customer To Meter. Refer to the *Oracle Utilities Customer To Meter Release Notes* for more information.

WebLogic Native Installation

With Oracle Utilities Application Framework 4.3.0.5.0, a WebLogic native installation is required. Refer to the *Native Installation Oracle Utilities Application Framework* (Doc ID: 1544969.1) white paper on My Oracle Support.

Application Server Clustering

If you are considering application server clustering, refer to the following whitepaper, available on My Oracle Support, for additional information:

- Implementing Oracle ExaLogic and/or Oracle WebLogic Clustering (Doc ID: 1334558.1)
- Additional information about WebLogic clustering can be found at http://docs.oracle.com/cd/E17904_01/web.1111/e13709/toc.htm.

Directory Names

Directory cannot contain whitespace characters.

Installation Checklist

The following checklist will help guide you through the installation process of the application tier. The details for each step are presented in subsequent chapters.

1. Install the database as described in the *Oracle Utilities Customer To Meter Database Administrator's Guide*.
2. Create Group/User ID.
3. Install the prerequisite software (for complete details about installing and configuring the prerequisite third-party software for your specific platform, see Chapter 5**:** Installing Application Server Prerequisite Software):
    - Oracle client 12c
    - Java 8
    - Hibernate 4.1.0
4. Install optional software.
5. Install web server Oracle WebLogic 12.2.1+.

    Note: If you are upgrading and you are currently running Oracle Application Server please contact your Global Support Representative.
6. Verify that the software installed.

7. Set up environment variables.
8. Install Oracle Utilities Application Framework.
9. Install Oracle Utilities Application Framework prerequisite single fixes.
10. Install Oracle Utilities Customer To Meter.
11. Deploy Oracle Utilities Customer To Meter application.
12. Complete post-installation tasks.
13. Optional third-party product integration (such as web self service or reporting tools).

Installation Menu Functionality Overview

The main configuration menu is structured so that related variables and/or options are grouped together and are associated by a menu item number. To access a particular group of variables and options, enter the menu item number associated with that group. Each option 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 an 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 prior to running any of the installation utilities.

The following prompt will appear when executing the installation utility:

```
Enter Oracle Client Home Directory (<ENTER> quit):
```

Note: If the environmental variable ORACLE_CLIENT_HOME is set, the install script will validate the variable. If it passes the validation you will not be prompted for it. This is needed in order to run Perl installation utilities.

Encryption Methods

When the application server choice is Oracle WebLogic, the Oracle Utilities Application Framework installation uses the WebLogic API to encrypt the User ID and password that perform admin functions for the WebLogic application servers. Please refer to the WebLogic documentation for further information about the encryption.

The Oracle Utilities Application Framework installation also uses industry standard cryptography to encrypt passwords that are prompted within the installation.

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

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, as described in the Chapter 6**:** Installing the Application Server Component of Oracle Utilities Application Framework.

Note: Some web application server information will not be available until the software installation steps have been completed as described in the Chapter 5**:** Installing Application Server Prerequisite Software.

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

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

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

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

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

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

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

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

*** See How to use and setup the "Additional JAR Directory" 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.

Please review the section on configuring the OUAF Keystore in the *Security Guide* for information on setting up the keystore properly.

Keystore options include:

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

Menu Block 50: Environment Installation Options

Environment installation options include:

Menu Option	Name Used in Documentation	Customer Install Value
Environment Mount Point	SPLDIR	
Log File Mount Point	SPLDIROUT	
Environment Name	SPLENVIRON	
Installation Application Viewer Module	WEB_ ISAPPVIEWER	
Install Demo Generation Cert Script	CERT_INSTALL_ SCRIPT	
Install Sample CM Source Code	CM_INSTALL_ SAMPLE	

Menu Block 1: Environment Description

The environment description menu option includes:

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

Menu Block 2: [WebLogic] Business Application Server Configuration

WebLogic Business Application Server configuration options include:

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

Menu Block 3: [WebLogic] Web Application Server Configuration

WebLogic Web Application Server configuration options include:

Menu Option	Name Used in Documentation	Customer Install Value
Web Server Host	WEB_WLHOST	
Weblogic SSL Port Number	WEB_WLSSLPORT	
Weblogic Console Port Number	WLS_ADMIN_PORT	
Web Context Root	WEB_CONTEXT_ ROOT	
WebLogic JNDI User ID	WEB_WLSYSUSER	
WebLogic JNDI Password	WEB_WLSYSPASS	
WebLogic Server Name	WEB_WLS_ SVRNAME	
Web Server Application Name	WEB_APP	
Deploy Using Archive Files	WEB_DEPLOY_EAR	
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	
MPL Database User ID	MPL_DBUSER	
MPL Database Password	MPL_DBPASS	
XAI Database User ID	XAI_DBUSER	
XAI Database Password	XAI_DBPASS	
Batch Database User ID	BATCH_DBUSER	
Batch Database Password	BATCH_DBPASS	
Web JDBC DataSource Name	JDBC_NAME	
JDBC Database User ID	DBUSER_WLS	
JDBC Database Password	DBPASS_WLS	
Database Name	DBNAME	
Database Server	DBSERVER	
Database Port	DBPORT	
ONS Server Configuration	ONSCONFIG	
Database Override Connection String	DB_OVERRIDE_ CONNECTION	
Character Based Database	CHAR_BASED_DB	
Oracle Client Character Set NLS_LANG	NLS_LANG	

Menu Block 5 - General Configuration Options

The general configuration options include:

Menu Option	Name Used in Documentation	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_ PERFORMANCE	

Menu Option	Name Used in Documentation	Customer Install Value
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMANCE	
JMX Enablement System User ID	BSN_JMX_SYSUSER	
JMX Enablement System Password	BSN_JMX_SYSPASS	
Coherence Cluster Name	COHERENCE_ CLUSTER_NAME	
Coherence Cluster Address	COHERENCE_ CLUSTER_ADDRESS	
Coherence Cluster Port	COHERENCE_ CLUSTER_PORT	
Coherence Cluster Mode	COHERENCE_ CLUSTER_MODE	

Menu Block 6 - OUAF TrustStore Options

The OUAF truststore configuration is required for IWS.

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

Advanced Menu Options

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

Unix:

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

Windows

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

Menu Block 50 - WebLogic Advanced Environment Miscellaneous Configuration

WebLogic advanced environment miscellaneous configurations include:

Menu Option	Name Used in Documentation	Customer Value Install
OUAF DBMS Scheduler User	OUAF_DBMS_SCHEDULER_USER	
Enter the location of the Application Server Profile Home	WAS_PROFILE_NAME_HOME	
Online JVM Batch Server Enabled	BATCHENABLED	
Online JVM Batch Number of Threads	BATCHTHREADS	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	
Enable Batch Edit Funtionality	BATCHEDIT_ ENABLED	
Batch Online Log Directory	BATCH_ONLINE_LOG_DIR	
Enable JMS Global Flush for Batch	ENABLE_JMS_GLOBAL_FLUSH	
Enable Web Services Functionality	WEBSERVICES_ ENABLED	
IWS deployment target	WLS_CLUSTER_NAME	
Web Admin Server Host	WEB_ADMIN_SERVER	
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 Java Max Perm Size	BATCH_MEMORY_OPT_MAXPERMSIZE	
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	

Menu Option	Name Used in Documentation	Customer Install Value
Application Viewer Form Login Error Page	WEB_APPVIEWER_FORM_LOGIN_ERROR_PAGE	
Help Form Login Page	WEB_HELP_FORM_LOGIN_PAGE	
Help Form Login Error Page	WEB_HELP_FORM_LOGIN_ERROR_PAGE	
Web Security Role	WEB_SECURITY_NAME	
Web Principal Name	WEB_PRINCIPAL_NAME	
Application Viewer Security Role	WEB_APPVIEWER_ROLE_NAME	
Application Viewer Principal Name	WEB_APPVIEWER_PRINCIPAL_NAME	
This is a development environment	WEB_ISDEVELOPMENT	
Preload All Pages on Startup	WEB_PRELOADALL	
Maximum Age of a Cache Entry for Text	WEB_MAXAGE	
Maximum Age of a Cache Entry for Images	WEB_MAXAGEI	
JSP Recompile Interval (s)	WEB_wlpageCheckSeconds	

Menu Block 53 - OIM Configuration Settings

OIM configurations include:

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

Menu Block 54 - WebLogic Diagnostics

WebLogic diagnostic options include:

Menu Option	Name Used in Documentation	Customer Install Value
Diagnostic Context Enabled	WLS_DIAGNOSTIC_CONTEXT_ ENABLED	

Menu Block 55 - URI, File and URL Related Options

URI, File and URL Related Options include:

Menu Option	Name Used in Documentation	Customer Install Value
Restriction URLs Enable	CLOUD_RESTRICTION_URLS_E NABLE	
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_OAUT H2_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	

Menu Option	Name Used in Documentation	Customer Install Value
Force Http Connection	FORCE_HTTP	
Web Mobile Form Login Page	WEB_MOBILE_FORM_LOGIN_PAGE	
Web Mobile Form Login Error Page	WEB_MOBILE_FORM_LOGIN_ERROR_PAGE	

Chapter 5

Installing Application Server Prerequisite Software

This chapter describes the software that needs to be installed for each of the supported operating system and application server combinations. The sections for this chapter are:

- AIX Application Server
- Oracle Linux 6.5+/7.x and Red Hat Linux 6.5+/7.x Application Server
- Solaris 11 Application Server
- Windows 2012 Application Server
- HP-UX 11.31 Application Server
- Additional Prerequisite Software Information

AIX Application Server

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

Supported Application Servers

Operating System	Chipsets	Application Server
AIX 7.1/7.2 (64-bit) TL0	POWER 64-bit	Oracle WebLogic (12.2.1+) 64-bit version

Web/Application Server Tier

AIX 7.2 TL0 Operating System Running on Power5 and Power6 Architecture

UNIX Administrator Userid

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

Description	Default Value	Customer Defined Value
C2M Administrator UserID	cissys	
C2M User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group).
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

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 077 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

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.

You must use the same user for starting and stopping a process. For example, if cissys is used to start the application server, the use cissys to stop it as well.

Oracle 12.1.0.2+ Client - Runtime Option

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

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

IBM Java Software Development Kit version 8.0 (64-bit)

Installation of Java as a prerequisite is only needed if you are using Oracle WebLogic as a Web application server.

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

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

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

For the Administrator user ID (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

You must install Hibernate 4.1.0 before installing Oracle Utilities Customer To Meter. For instructions to install Hibernate 4.1.0, refer to the Installing Hibernate 4.1.0 section.

Oracle WebLogic Server 12.2.1+ (64-bit)

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1+.

  Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to the whitepaper "*Native Installation Oracle Utilities Application Framework*" (Doc Id: 1544969.1) on My Oracle Support.

Oracle Linux 6.5+/7.x and Red Hat Linux 6.5+/7.x Application Server

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

Supported Application Servers

Operating System	Chipsets	Application Server
Oracle Linux 6.5+/7.x (64-bit) Red Hat Enterprise Linux 6.5+/7.x (64-bit))	x86_64	Oracle WebLogic 12.2.1+ (64-bit) version

Web/Application Server Tier

Oracle Enterprise Linux 6.5+/7.x or Red Hat Enterprise Linux 6.5+/7.x Operating System Running on x86_64 64-bit Architecture

UNIX Administrator UserID

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

Description	Default Value	Customer Defined Value
C2M Administrator UserID	cissys	
C2M User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

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 077 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

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.

You must use the same user for starting and stopping a process. For example, if cissys is used to start the application server, the use cissys to stop it as well.

Oracle 12.1.0.2+ Client - Runtime Option

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

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

Oracle Java Development Kit Version 8.0 Update 51 or Later, 64-Bit

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

http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

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

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

Hibernate 4.1.0

You must install Hibernate 4.1.0 before installing Oracle Utilities Customer To Meter. For instructions to install Hibernate 4.1.0, refer to the Installing Hibernate 4.1.0 section.

Oracle WebLogic Server 12.2.1+ (64-bit)

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1+.

  Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to the whitepaper "*Native Installation Oracle Utilities Application Framework*" (Doc ID: 1544969.1) on My Oracle Support.

Solaris 11 Application Server

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

Supported Application Servers

Operating System	Chipsets	Application Server
Solaris 11 (64-bit)	SPARC	Oracle WebLogic 12.2.1+ (64-bit) version

Web/Application Server Tier

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

UNIX Administrator UserID

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

Description	Default Value	Customer Defined Value
C2M Administrator UserID	cissys	
C2M User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

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 077 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

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.

You must use the same user for starting and stopping a process. For example, if cissys is used to start the application server, the use cissys to stop it as well.

Oracle 12.1.0.2+ Client - Runtime Option

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

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

Oracle Java Development Kit Version 8.0 Update 51 or Later (64-Bit)

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

http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

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

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

Hibernate 4.1.0

You must install Hibernate 4.1.0 before installing Oracle Utilities Customer To Meter. For instructions to install Hibernate 4.1.0, refer to the Installing Hibernate 4.1.0 section.

Oracle WebLogic Server 12.2.1+ (64-bit)

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1+.

  Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to the whitepaper "*Native Installation Oracle Utilities Application Framework*" (Doc Id: 1544969.1) on My Oracle Support.

Windows 2012 Application Server

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

Note: 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.

Supported Application Servers

Operating System	Chipsets	Application Server
Window Server 2012	x86_64	Oracle WebLogic 12.2.1+ (64-bit) version

Web/Application Server Tier

File and Directory Names Limitations

File and directory names cannot contain spaces. Due to the limitations in Windows, fully qualified filenames cannot exceed 2047 characters.

Oracle Client 12.1.0.2+ - 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 51 or Later, 64-Bit

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

http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

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

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

Hibernate 4.1.0

You must install Hibernate 4.1.0 before installing Oracle Utilities Customer To Meter. For installation instructions, refer to the Installing Hibernate 4.1.0 section.

Oracle WebLogic Server 12.2.1+ (64-bit)

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1+.

  Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to the whitepaper "*Native Installation Oracle Utilities Application Framework*" (Doc ID: 1544969.1) on My Oracle Support.

HP-UX 11.31 Application Server

This section describes the software requirements for operating the application using the HP-UX application server.

Supported Application Servers

Operating System	Chipsets	Application Server
HP-UX ia (64-bit)	ia64	Oracle WebLogic 12.2.1+ (64-bit) version

Web/Application Server Tier

HP-UX Operating System Running on Itanium 64-bit Architecture

UNIX Administrator UserID

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

Description	Default Value	Customer Defined Value
C2M Administrator UserID	cissys	
C2M User Group	cisusr	

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

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

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

1. Create a group called cisusr (user group).
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

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 077 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

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.

You must use the same user for starting and stopping a process. For example, if cissys is used to start the application server, the use cissys to stop it as well.

Oracle 12.1.0.2+ Client - Runtime Option

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

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

HP-Ux Java Development Kit Version 8.0 Update 51 or Later (64-Bit)

This software is only required for Oracle WebLogic installations. At the time of release, the Java packages used in the test cycle were downloaded from the HP website.

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

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

Hibernate 4.1.0

You must install Hibernate 4.1.0 before installing Oracle Utilities Customer Care and Billing. For instructions to install Hibernate 4.1.0, refer to the Installing Hibernate 4.1.0 section.

Oracle WebLogic Server 12.2.1+ (64-bit)

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1+.

  Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to the whitepaper "*Native Installation Oracle Utilities Application Framework*" (Doc ID: 1544969.1) on My Oracle Support.

Additional Prerequisite Software Information

This section outlines additional information related to installation of prerequisite software, including:

- How to use and setup the "Additional JAR Directory"
- Special Note for Upgrading from a WebLogic 12.1.3.x Environment

How to use and setup the "Additional JAR Directory"

The "Additional JAR Directory" must be populated if the "Web Application Server Home Directory" is not set. For instance if the environment is for Batch only and the server has no WebLogic installed.

In this scenario the "Additional JAR Directory" must be created prior the installation and the following list of WebLogic JARs need to be copied there (full path from original 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.woodstox-core-asl.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 the "Additional JAR Directory" is configured, the initialSetup process will pull those JARs from that directory.

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

Special Note for Upgrading from a WebLogic 12.1.3.x Environment

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

1. Install Oracle WebLogic Server (Fusion Middleware Infrastructure) 12.2.1.x.
2. Install Oracle Java SE Development Kit 1.8.0_121+ (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 in order to point to the new WebLogic and Java (if upgrade 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 version 4.3.0.5.0 using the installSP.sh script.

Chapter 6

Installing the Application Server Component of Oracle Utilities Application Framework

Installing Oracle Utilities Application Framework ("the framework") is the prerequisite and foundation for installing a framework-based application such as Oracle Utilities Customer To Meter. This section describes the process for installing the Oracle Utilities Application Framework, including:

Installation Overview

The installation packages for your Oracle Utilities Application Framework-based application must be downloaded from the Oracle Software Delivery Cloud.

Application server installations are new, you cannot upgrade an existing application server. The database installation can be an initial install or an upgrade install.

Before you proceed with the installation process:

1. Complete the database installation/upgrade process. Refer to the Oracle Utilities Customer To Meter *Database Administrator's Guide*.
2. Make sure that you have installed all the required third-party software as described in Chapter 5**:** Installing Application Server Prerequisite Software.

Once the Oracle Utilities Application Framework installation is successfully completed and the framework application environment is created, Oracle Utilities Customer To Meter can be installed on top of the framework environment.

You can download the installation packages from the Oracle Software Delivery Cloud.

This section describes how to install a working Oracle Utilities Application Framework Server, which can then be further configured manually to allow for production performance levels.

Application server installation packages delivered for this version are multi-platform and are ready to install on any supported platform (as described in Chapter 3: Supported Platforms and Hardware Requirements).

Pre-Installation Tasks

Hardware and Software Version Prerequisites

Chapter 3: Supported Platforms and Hardware Requirements contains all of the available platforms that are required with this release of the product.

Database Installation

Verify that the database has been installed and is operational. See Oracle Utilities Customer To Meter *Database Administrator's Guide* for more information.

Installation Prerequisites

Chapter 5**:** Installing Application Server Prerequisite Software describes all preparations that need to be done on the server prior to installing the application server. Please read carefully the server setup requirements and make sure that all prerequisite software is installed and that all required environment variables are set. Correct server setup and proper environment variable settings are an essential prerequisite for successful environment installation.

System Architecture Overview

Oracle Utilities Application Framework V4.3.0.5.0 is a decoupled system architecture involving a business service application tier and a web application tier. Typically both will run on the same server, but the design does allow each tier to be installed on separate servers.

The design implements a stateless session bean (EJB technology, under Java EE 7), to provide remote access to service invocations. The root web app and XAI web apps can be configured to access service processing locally (as in previous versions), or to make a remote EJB call to perform the service request. In the latter case, the served containers, effectively, run as very thin servlet wrappers around the remote call.

For all supported application servers except for WebLogic expanded configuration (SDK environment), the deployment is in the form of two Enterprise Archive (ear) Files: SPLService.ear and SPLWeb.ear. Web Archive (war) files are created during the installation process but are not deployed.

Copying and Decompressing Install Media

The Oracle Utilities Application Framework V4.3.0.5.0 installation file is delivered in jar format for both UNIX and Windows platforms.

If you are planning to install multiple Oracle Utilities Application Framework V4.3.0.5.0 environments operated by different Oracle Utilities administrator user IDs, you must complete each of the following installation steps for each administrator user ID.

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

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.3.0.5.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

   Note: This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
4. Copy the file FW-V4.3.0.5.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:

   ```
   cd <TEMPDIR>

   jar -xvf FW-V4.3.0.5.0-MultiPlatform.jar
   ```

   Note: You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages:

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

A sub-directory named "FW-V4.3.0.5.0-SP5" is created. It contains the installation software for the Oracle Utilities framework application server.

Set Permissions for the cistab File in UNIX

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

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW-V4.3.0.5.0-SP5 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 Application 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 Application 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.

Installing Oracle Utilities Application Framework

This section outlines the steps for installing the Application Framework.

Installation Process (Brief Description)

1. Log on as the Oracle Utilities Framework administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Configure your application server and any third-party software required for your platform, as outlined in Chapter 5**:** Installing Application Server Prerequisite Software.
3. Change directory to the <*TEMPDIR*>/FW-V4.3.0.5.0-SP5 directory.
4. Set the following path:

   ```
   export PATH=/<JAVA_HOME>/bin:/<JAVA_HOME>/lib:$PATH
   ```

   Note: The above command is only applicable on a Unix platform. <JAVA_HOME> is the location where the JDK has been installed.
5. Start the application installation utility by executing the appropriate script:

   Unix: `ksh ./install.sh`

   Windows: `install.cmd`
6. Follow the messages and instructions that are produced by the application installation utility. Use the completed worksheets in Chapter 4: Planning the Installation to assist you.

7. Installation of Oracle Utilities Framework Application Server is complete if no errors occurred during installation.

Installation Process (Detailed Description)

1. Log on to the host server as Oracle Utilities Application Framework administrator.

   Log on as cissys (on UNIX) or as a user with Administrator privileges (on Windows).

2. Configure application server and third-party software.

   Complete all steps outlined in Chapter 5**:** Installing Application Server Prerequisite Software. You will need to obtain specific information for the install.

3. Change directory to the <*TEMPDIR*>/FW-V4.3.0.5.0-SP5 directory and start the application installation utility by executing the appropriate script:

   Unix: `ksh ./install.sh`

   Windows: `install.cmd`

4. On the Environment Installation Options menu, select item 1: Environment ID, Roles, Third Party Software Configuration.

   Use the completed Environment ID, Roles, Third Party Software Configuration worksheet in Installation Menu Functionality Overview to complete this step.

5. Select menu item 2: Keystore Options.

   Use the completed Keystore Options Worksheet to complete this step. See Installation Menu Functionality Overview.

6. Select menu item 50: Environment Installation Options.

   Use the completed Environment Installation Options Worksheet to complete this step. See Installation Menu Functionality Overview.

   Note: You must create the directory for output (the Log Mount Point). The installation process fails if this directory does not exist.

   - Specify the environment mount point, log files mount point, name and the environment directory names for a new installation on a menu screen.
   - Specify the web application server type your environment will run with (the default will be WebLogic).
   - Specify if you want to install the application viewer module.
   - Specify if you want to install the demo certificate generation scripts.
   - Specify if you want to install sample custom code.
   - Enter P to accept the selected options.
   - During this step, the specification of a new environment is checked for validity against /etc/cistab and the permissions on mount points and directories.

7. Configure the environment parameters.

   - During this step you will configure environment parameters such as web server hosts and ports, database name, and user ID.

- The application installation utility shows default values for some configuration options.
- Use the completed Environment Configuration Worksheet to assist you.

Note: Some options require a value for a successful install. It is important to provide these values as described in the previous sections.

- When you are done with the parameters setup, proceed with the option P.
- All of the options will be written in the following File: $ SPLEBASE/etc/ENVIRON.INI.
- You will be warned if you did not edit a section. You may proceed if you want to keep the default settings.
- The application installation utility copies the installation media to a new environment.
- The application installation utility generates environment configuration parameters.

  The application installation utility automatically executes the script initialSetup.sh (on UNIX) or initialSetup.cmd (on Windows), located in $SPLEBASE/bin (%SPLEBASE%\bin on Windows) directory. This script populates different application template configuration files with the new environment variables values and completes the rest of the installation steps.

8. Set up environment variables.

   Once the ENVIRON.INI file is created and contains the correct environment parameters, the application installation utility starts a sub shell to the current process by executing the splenviron.sh (on UNIX) or splenviron.cmd (on Windows) script, located in $SPLEBASE/bin (or *%SPLEBSE%\etc for Windows)* directory. This script sets up all the necessary environment variables and shell settings for the application server to function correctly.

   From this point, a number of environment variables have been set up. Some key ones are:

   - $PATH - an adjustment to $PATH is made so that all of the environment scripts and objects will be in the path.
   - $SPLEBASE (%SPLEBASE%) - stands for <SPLDIR>/<SPLENVIRON> directory
   - $SPLOUTPUT (%SPLOUTPUT%) - stands for <SPLDIROUT>/<SPLENVIRON> directory
   - $SPLENVIRON (%SPLENVIRON%) - environment name

   For future operations or any post installation steps, you need to first execute the following command to setup your session to the new environment:

   Unix: `$SPLEBASE/bin/splenviron.sh -e <SPLENVIRON>`

   Windows: `%SPLEBASE%\bin\splenviron.cmd -e <SPLENVIRON>`

   You need to execute this script each time you want to be connected to the specific environment before performing manual operations such as shutdown, startup or performing an additional application product installation.

When you have finished the install process, your current online session will be connected to the new environment.

See Chapter 4: Planning the Installation for settings and configuration.

Detailed Description for Configuring the OUAF Keystore

The following section details the steps required to configure the OUAF keystore.

OUAF Keystore

The OUAF Keystore feature secures sensitive data such as passwords and prevents tampering of long login IDs via direct updates to the database. The application server uses an external keystore to store keys for system password and other sensitive system data including user "hashes" that are used to verify the validity of email long login IDs. In order to run the application correctly, the keystore used by the application server must match the data encrypted in the database. If they do not match, the application will not be able to decrypt passwords correct, nor will users be able to log on due to a mismatch of user security hashes.

To help manage the keystore and ensure that the keystore matches the database-encypted data, there is a system check at startup of the application that display warning messages when the system detects that the keystore in use does not match the encrypted data in the database. Thus after any keystore operation, fresh installation of the application, or reconfiguration to point to a different database, the keystore will need to be synchronized with the database. Synchronization of the keystore happens any time ChangeCryptographyKey or ResetCryptography key programs are run.

After running the cryptography programs, it is necessary to reset the database credentials used by the database patching utility with the nvokeDBUpdatePatch.sh|cmd script.

> **Note**: The database utility ORADBI does not require the keystore files. Please refer to the database documentation for more details.

The following lists the common administrative activities related to the keystore.

Determining Keystore in Use

You can determine if an existing application server uses a keystore through the existence of the files in the following location. (Use the ls -a option in Unix systems to list all files):

```
<SPLEBASE>/ks/.ouaf_keystore

<SPLEBASE>/ks/.ouaf_storepass
```

If there are no files in this location, then the system is not using a keystore. Starting from 4.2.0.2.0, a keystore should be in use.

Configuring the Keystore Options

If you would like to customize the keystore options, the Install Menu includes a section for keystore options as shown below. You can access the Install Menu later through (execute configureEnv.sh|cmd -i):

```
2. Keystore options
       Import Keystore Directory:
       Store Type: JCEKS
       Alias: ouaf.system
       Alias Key Algorithm: AES
       Alias Key Size: 128
```

```
HMAC Alias: ouaf.system.hmac
Padding: PKCS5Padding
Mode: CBC
```

Importing an Existing Keystore

This will import a keystore from an existing environment to the current one. Use this when upgrading from 4.2.0.2.0 or when reconfiguring environments using different keystores and you want them to point to the same database schema (e.g. you want to have more than one application server pointing to the same database schema).

Follow these steps:

1. Enter the keystore options from the the install menu or from the configureEnv.sh|cmd –i as above.
2. Run initialSetup.sh|cmd –s so that the keystore is imported and appropriate property files are updated.
3. Run configureEnv.sh|cmd and re-enter the passwords so they are encrypted with the imported keystore.
4. Run initialSetup.sh|cmd again to update property files with the encrypted data.
5. Run the following:

```
perl $SPLEBASE/bin/run_java_standalone.plx
com.splwg.shared.common.ChangeCryptographyKey -l -h
```

6. Run $SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd and follow the prompts.

   You can use the –h option to obtain help.

Upgrading from the Legacy Keystore

This process will:

- Synchronize the keystore to the database
- Regenerate the user hashes
- Re-encrypt any passwords (from the legacy-encrypted passwords) using the current keystore.
- Use this only when upgrading from a framework prior to version 4.2.0.2.0.

Follow these steps:

1. Run the following command:

```
perl $SPLEBASE/bin/run_java_standalone.plx
com.splwg.shared.common.ChangeCryptographyKey -l -h
```

2. Run $SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd and follow the prompts. You can use the –h option to obtain help.

Forcing the Environment to Use the Current Keystore

This process will:

- Prompt for and encrypt application server-stored passwords
- Synchronize the keystore to the database
- Regenerate the user hashes

- Invalidate any database-stored passwords
- Use this option when, for example, a keystore has been lost, and thus, the system will not be able to decypt the passwords stored in the configuration files or database. All passwords will need to be reentered.

Follow these steps:

1. Using configureEnv.sh|cmd, re-enter the menu passwords to encrypt the data.
2. Run initialSetup.sh|cmd to update property files with the encrypted data.
3. Run the following commands:

```
perl $SPLEBASE/bin/run_java_standalone.plx
com.splwg.shared.common.ResetCryptographyKey
```

4. Run $SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd and follow the prompts. You can use the –h option to obtain help.
5. Re-enter stored password information using the application (example: passwords for reports).

Synchronizing the Keystore

This process will:

- Synchronize the keystore to the database
- Regenerate the user hashes
- Follow these instructions only when you are sure the data in the database is encrypted with the current keystore. This is used to synchronize the keystore to the database.

Follow these steps:

1. Run the following:

```
perl $SPLEBASE/bin/run_java_standalone.plx
com.splwg.shared.common.ResetCryptographyKey
```

2. Run $SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd and follow the prompts. You can use the –h option to obtain help.

Creating a New Keystore

This process will:

- Prompt for and encyrpt new application server-stored passwords
- Synchonize the keystore to the database
- Regenerate user hashes
- Decrypt the passwords using the old keystore and encrypt them using the new keystore.

Follow these steps:

1. Copy the old keystore to a temporary directory as a backup measure.
2. Run initialSetup.sh|cmd –k to generate the new keystore.
3. Using configureEnv.sh|cmd, re-enter the menu passwords to encrypt the data.
4. Run initialSetup.sh|cmd to update property files with the encrypted data.

5. Run the following:

```
perl $SPLEBASE/bin/run_ java_standalone.plx
-Dcom.oracle.ouaf.system.old.keystore.file={property-value}
-Dcom.oracle.ouaf.system.old.keystore.passwordFileName={property-
value}
-Dcom.oracle.ouaf.system.old.keystore.type={property-value}
-Dcom.oracle.ouaf.system.old.keystore.alias={property-value}
-Dcom.oracle.ouaf.system.old.keystore.padding={property-value}
-Dcom.oracle.ouaf.system.old.keystore.mode={property-value}
 com.splwg.shared.common.ChangeCryptographyKey
```

   where {property-value}is related to the old keystore

6. Run $SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd and follow the prompts. You can use the –h option to obtain help.

Installing Hibernate 4.1.0

To install Hibernate 4.1.0 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. Be sure to install the JDK that is supported for your platform.

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

```
cp hibernate-release-4.1.0.Final/lib/optional/
ehcache/ehcache-core-2.4.3.jar $HIBERNATE_JAR_DIR
cp hibernate-release-4.1.0.Final/lib/optional/
ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR
cp hibernate-release-4.1.0.Final/lib/required/
hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR
cp hibernate-release-4.1.0.Final/lib/required/
hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR
cp hibernate-release-4.1.0.Final/lib/required/
hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR
cp hibernate-release-4.1.0.Final/lib/required/
javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR
cp hibernate-release-4.1.0.Final/lib/required/
jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
```

6. Another package needs to be downloaded in order to get the jboss-logging-3.3.0.Final.jar.

Download the hibernate-search-5.5.4.Final-dist.zip file from:
https://sourceforge.net/projects/hibernate/files/hibernate-search/

7. Click the "5.5.4.Final" link to download the zip file.
8. Extract the contents of the archive file:

   ```
   unzip hibernate-search-5.5.4.Final-dist.zip
   ```

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

   ```
   cp hibernate-search-5.5.4.Final/dist/lib/required/jboss-logging-3.3.0.Final.jar to $HIBERNATE_JAR_DIR
   ```

Chapter 7

Installing Oracle Utilities Customer To Meter

This chapter provides instructions for installing Oracle Utilities Customer to Meter. It includes:

Prerequisites

Before you can install the Customer To Meter components, the following must be installed:

- Oracle Utilities Application Framework v4.3.0 Service Pack 5 (see Chapter 7: Installing the Application Server Component of Oracle Utilities Application Framework)
- Oracle Utilities Customer Care and Billing v2.6.0.1.0

Installing Customer To Meter Components

Installing Oracle Utilities Customer To Meter includes:

- Installing Oracle Utilities Meter Data Management
- Installing Oracle Utilities Customer To Meter
- Installing Oracle Utilities Smart Grid Gateway (Optional)

Installing Oracle Utilities Meter Data Management

Installing Oracle Utilities Meter Data Management involves the following:

- Installing Oracle Utilities Service and Measurement Data Foundation V2.2.0.2.0 Application Component
- Installing the Oracle Utilities Meter Data Management V2.2.0.2.0 Application Component

Installing Oracle Utilities Service and Measurement Data Foundation V2.2.0.2.0 Application Component

This section describes how to install the application component of Oracle Utilities Service and Measurement Data Foundation, including:

- Copying and Decompressing Install Media
- Installing Oracle Utilities Service and Measurement Data Foundation V2.2.0.2

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

The Oracle Utilities Service and Measurement Data Foundation is delivered as a separate installation package that is downloaded as part of Oracle Utilities Customer To Meter V2.6.0.1.0.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Customer Care and Billing application

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

3. Copy the SMDF-V2.2.0.2-MultiPlatform.jar file in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

```
cd <TEMPDIR>
jar -xvf SMDF-V2.2.0.2-MultiPlatform.jar
```

For Windows and Unix platforms, a sub-directory named MDF.V2.2.0.2.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing Oracle Utilities Service and Measurement Data Foundation V2.2.0.2

This section outlines the steps for installing the Service and Measurement Data Foundation:

Preparing for the Installation

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

   UNIX

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

   Windows

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

3. Stop the environment if running.

Installing the Application

1. Change to the <TEMPDIR>/MDF.V2.2.0.2 directory.
2. Execute the script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

   The Configuration menu for Oracle Utilities Service and Measurement Data Foundation Application appears.

3. Type **P** and <ENTER> to proceed with the installation. (you don't need to change anything).

Installation of Oracle Utilities Service and Measurement Data Foundation Application Server is complete if no errors occurred during installation.

Installing the Oracle Utilities Meter Data Management V2.2.0.2.0 Application Component

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

- Installation Prerequisite
- Copying and Decompressing Install Media
- Installing the Application Component

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

You must initialize the Service and Measurement Data Foundation environment. For detailed instructions see the Preparing for the Installation section.

Installation Prerequisite

Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 must be installed prior to installing Oracle Utilities Meter Data Management 2.2.0.2.

Copying and Decompressing Install Media

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

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

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

   The Oracle Utilities Meter Data Management is delivered as a separate installation package that is downloaded as part of Oracle Utilities Customer To Meter V2.6.0.1.0.

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

3. Copy the MDM-V2.2.0.2.0-MultiPlatform.jar file in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

   ```
   cd <TEMPDIR>
   jar -xvf MDM-V2.2.0.2.0-MultiPlatform.jar
   ```

For Unix and Windows platforms, a sub-directory named MDM.V2.2.0.2.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing the Application Component

Follow the steps below to install Oracle Utilities Customer To Meter application component:

1. Log in to the application server host as Oracle Utilities Customer To Meter Administrator (default cissys).
2. Change directory:

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

   where <install_dir> is the location where the Oracle Utilities Service and Measurement Data Foundation application component is installed.
3. Initialize the environment by running the appropriate command:

   UNIX

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

   Windows

   ```
   splenviron.cmd -e <ENV NAME>
   ```
4. Navigate to <TEMPDIR>/MDM.V2.2.0.2.0 directory.
5. Execute the install script:

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

   UNIX

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

   Windows

   ```
   install.cmd
   ```

   Choose option **P** to proceed with the installation (you don't need to change anything).

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

Installing Oracle Utilities Customer To Meter

This section describes how to install the Customer To Meter component, including:

- Copying and Decompressing Install Media
- Installing Oracle Utilities Customer To Meter V2.6.0.1.0

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

The Customer To Meter is delivered as a separate installation package that can be downloaded along with Oracle Utilities Customer To Meter V2.6.0.1.0.

Download the installation package and proceed as follows:

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

2. Create a <TEMPDIR> directory on the application server, which is independent of any current or other working Oracle Utilities Customer To Meter application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file C2M.V2.6.0.1.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your application server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

   ```
   cd <TEMPDIR>
   jar -xvf C2M-V2.6.0.1.0-MultiPlatform.jar
   ```

   For Unix platform, a sub-directory named C2M.V2.6.0.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing Oracle Utilities Customer To Meter V2.6.0.1.0

This section outlines the steps for installing Customer To Meter:

Preparing for the Installation

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

   UNIX

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

   Windows

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

3. Stop the environment if running.

Installing the Application

1. Change to the <TEMPDIR>/C2M.V2.6.0.1.0 directory.
2. Execute the script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

   The Configuration menu for the Oracle Utilities Customer To Meter application appears.
3. Choose option P to proceed with the installation (you don't need to change anything).
4. Start up the environment.

Follow the message on the screen and review the logs in $SPLSYSTEMLOGS directory to ensure that the environment was started successfully.

If the startup failed, identify the problem by reviewing the logs. Resolve any issues before attempting to restart the environment.

Note: The first time you start you need to log into the WebLogic console and give system access to cisusers role. The WebLogic console application can be accessed through the following URL: http://<hostname>:<portname>/console.

Installing Oracle Utilities Smart Grid Gateway (Optional)

Important: Oracle Utilities Smart Grid Gateway installation is optional and requires a separate license.

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

- Installing the MV90 Adapter for Itron
- Installing the Adapter Development Kit
- Installing the Adapter for Networked Energy Services
- Installing the Adapter for Itron OpenWay
- Installing the Adapter for Landis+Gyr
- Installing the Adapter for Sensus RNI
- Installing the Adapter Silver Spring Networks

Unzip Oracle Utilities Smart Grid Gateway V2.2.0.2.0 Multiplatform-<Adapter>.zip provided in the package in <TEMPDIR> to install the adapters.

Installing the MV90 Adapter for Itron

This section describes the installation of the MV90 Adapter for Itron, including:

- Pre-installation Tasks for the MV90 Adapter
- Installing the MV90 Adapter

Pre-installation Tasks for the MV90 Adapter

This section describes the steps that should be taken before installing Oracle Utilities Customer To Meter MV90 Adapter, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media
- Initializing the Service and Measurement Data Foundation

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 application must be installed prior to installing Oracle Utilities Customer To Meter 2.6.0.1.0.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Supported Platforms and Hardware Requirements** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Navigate to the <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Smart Grid Gateway Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation environment that you want to install the product into.

   UNIX

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

   Windows

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

Installing the MV90 Adapter

To install the Oracle Utilities Customer To Meter MV90 Adapter:

1. Execute the install script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

2. Choose option P to proceed with the installation.

Once the install has finished successfully, execute the post-installation steps described in the **Configuration Tasks for MV90 Adapter** section in *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

Installing the Adapter Development Kit

This section describes the installation of the Adapter Development Kit, including:

- Pre-installation Tasks for the Adapter Development Kit
- Installation Tasks for the Adapter Development Kit

Pre-installation Tasks for the Adapter Development Kit
This section describes the steps that should be taken before installing Oracle Utilities Smart Grid Gateway, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 application must be installed prior to installing Oracle Utilities Customer To Meter 2.6.0.1.0.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Supported Platforms and Hardware Requirements** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Navigate to <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Installation Tasks for the Adapter Development Kit
This section describes the installation of the Adapter Development Kit, including:

- Initializing the Service and Measurement Data Foundation
- Installing the Adapter Development Kit

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Smart Grid Gateway Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation 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 Adapter Development Kit

To install the Oracle Utilities Smart Grid Gateway Adapter Development Kit:

1. Execute the install script:

UNIX

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

Windows

```
install.cmd
```

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

The Configuration menu for Oracle Utilities Smart Grid Gateway appears.

2. Select menu item 21 to configure the URI of the head-end system.

   Use the completed SOA configuration worksheet to assist you in this step. See the **Smart Grid Gateway Installation and Configuration Worksheets** section in **Appendix B** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

3. When you are done setting up the parameters, choose option **P** to proceed with the installation.

Once the install has finished successfully, execute post-installation steps described in **Configuration Tasks for the Adapter Development Kit** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

Installing the Adapter for Networked Energy Services

This section describes the installation of the Adapter for Networked Energy Services, including:

- Pre-installation Tasks for the Adapter for Networked Energy Services
- Installing the Adapter for Networked Energy Services

Pre-installation Tasks for the Adapter for Networked Energy Services

This section describes the steps that should be taken before installing Oracle Utilities Customer To Meter, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media
- Initializing the Service and Measurement Data Foundation

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2.0 application must be installed prior to installing Oracle Utilities Customer To Meter 2.6.0.1.0.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Supported Platforms and Hardware Requirements** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Navigate to the <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Smart Grid Gateway Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation 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 Adapter for Networked Energy Services

To install the Oracle Utilities Smart Grid Gateway Adapter for Networked Energy Services:

1. Execute the following install script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

   The configuration menu for Oracle Utilities Smart Grid Gateway appears.

2. Select menu item 17 to configure the URI for the NES head-end system web services.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

3. When you are done setting up the parameters, choose option **P** to proceed with the installation.

Once the install has finished successfully, execute post-installation steps described in the **Configuration Tasks for the Adapter for Networked Energy Services** section in the **Configuring the Oracle Utilities Smart Grid Gateway Adapters** chapter. See *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2* for more details.

Installing the Adapter for Itron OpenWay

This section describes the installation of the Adapter for Itron OpenWay, including:

- Pre-installation Tasks for the Adapter for Itron OpenWay
- Installation Tasks for the Adapter for Itron OpenWay

Pre-installation Tasks for the Adapter for Itron OpenWay

This section describes the steps that should be taken before installing Oracle Utilities Smart Grid Gateway, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 application must be installed prior to installing Oracle Utilities Customer To Meter 2.6.0.1.0.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Supported Platforms and Hardware Requirements** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Navigate to the <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Installation Tasks for the Adapter for Itron OpenWay

This section describes the installation of the Adapter for Itron OpenWay, including:

- Initializing the Service and Measurement Data Foundation
- Installing the Adapter for Itron OpenWay

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Smart Grid Gateway Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation 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 Adapter for Itron OpenWay

To install the Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay:

1. Execute the install script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

   The configuration menu for Oracle Utilities Smart Grid Gateway appears.

2. Select menu item 22 to configure the URI of the head-end system.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

3. When you are done setting up the parameters, choose option **P** to proceed with the installation.

   Once the install has finished successfully, execute post-installation steps described in the **Configuration Tasks for the Adapter for Itron OpenWay** section in *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

Installing the Adapter for Landis+Gyr

This section describes the installation of the Adapter for Landis+Gyr, including:

- Pre-installation Tasks for the Adapter for Landis+Gyr
- Installing the Adapter for Landis+Gyr

Pre-installation Tasks for the Adapter for Landis+Gyr

This section describes the steps that should be taken before installing Oracle Utilities Customer To Meter, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media
- Initializing the Service and Measurement Data Foundation

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 application must be installed prior to installing Oracle Utilities Customer To Meter 2.2.0.2.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Operating Systems and Application Servers** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Navigate to the <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Smart Grid Gateway Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation 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 Adapter for Landis+Gyr

To install the Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr:

1. Execute the install script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh. The configuration menu for Oracle Utilities Smart Grid Gateway appears.

2. Select menu item 16 to configure the URI of the head-end system.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

3. When you are done setting up the parameters, choose option P to proceed with the installation.

Once the install has finished successfully, execute post-installation steps described in the **Configuration Tasks for the Adapter for Landis+Gyr** section in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

Installing the Adapter for Sensus RNI

This section describes the installation of the Adapter for Sensus RNI, including:

- Pre-installation Tasks for the Adapter for Sensus RNI
- Installing the Adapter for Sensus RNI

Pre-installation Tasks for the Adapter for Sensus RNI

This section describes the steps that should be taken before installing Oracle Utilities Customer To Meter, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media
- Initializing the Service and Measurement Data Foundation

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 application must be installed prior to installing Oracle Utilities Customer To Meter 2.6.0.1.0.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Operating Systems and Application Servers** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Navigate to the <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Customer To Meter Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation environment that you want to install the product into.

   UNIX

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

   Windows

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

Installing the Adapter for Sensus RNI

To install the Oracle Utilities Smart Grid Gateway Adapter for Sensus RNI:

1. Execute the install script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

The configuration menu for Oracle Utilities Smart Grid Gateway appears.

2. Select menu item 18 to configure the URI of the head-end system.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

3. When you are done setting up the parameters, choose option **P** to proceed with the installation.

Once the install has finished successfully, execute post-installation steps described in the **Configuration Tasks for the Adapter for Sensus RNI** section in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

Installing the Adapter Silver Spring Networks

This section describes the installation of the Adapter for Silver Spring Networks, including:

- Pre-installation Tasks for the Adapter for Silver Spring Networks
- Installing the Adapter for Silver Spring Networks

Pre-installation Tasks for the Adapter for Silver Spring Networks

This section describes the steps that should be taken before installing Oracle Utilities Customer To Meter, including:

- Installation Prerequisite
- Copying and Decompressing the Installation Media
- Initializing the Service and Measurement Data Foundation

Installation Prerequisite

The Oracle Utilities Service and Measurement Data Foundation 2.2.0.2 application must be installed prior to installing Oracle Utilities Customer To Meter 2.6.0.1.0.

Copying and Decompressing the Installation Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Smart Grid Gateway is delivered as a separate installation package. Refer to the **Supported Platforms and Hardware Requirements** and **Installing Prerequisite Software** sections (in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*) for versions and installation details regarding the database and operating system, and prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.

2. Navigate to <TEMPDIR>/App/SGG.V2.2.0.2.0 folder.

Initializing the Service and Measurement Data Foundation

1. Log on as Oracle Utilities Customer To Meter Administrator (default cissys).
2. Initialize the Service and Measurement Data Foundation environment that you want to install the product into.

   UNIX

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

   Windows

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

Installing the Adapter for Silver Spring Networks

To install the Oracle Utilities Customer To Meter Adapter for Silver Spring Networks:

1. Execute the install script:

   UNIX

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

   Windows

   ```
   install.cmd
   ```

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

   The configuration menu for Oracle Utilities Smart Grid Gateway appears.
2. Select menu item 19 to configure the URI of the head-end system.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.
3. Select menu item 20 to configure the JMS source destination bridge.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.
4. Select menu item 70 to configure the test harness.

   Use the completed SOA configuration worksheet to assist you in this step. See **Appendix B: Installation and Configuration Worksheets** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.
5. When you are done setting up the parameters, choose option **P** to proceed with the installation.

Once the install has finished successfully, execute post-installation steps described in **Configuration Tasks for the Adapter for Silver Spring Networks** in the *Oracle Utilities Smart Grid Gateway Installation Guide V2.2.0.2*.

Chapter 8

Additional Tasks

This section describes tasks that should be completed after installing Oracle Utilities Customer To Meter, including:

- Importing Self-Signed Certificates
- Customizing Configuration Files
- Integrating Existing Customer Modifications
- Generating the Application Viewer
- Building Javadocs Indexes
- Configuring the Environment for Batch Processing
- Customizing the Logo
- Deploying Inbound WebServices (IWS)
- Domain Templates (Linux WebLogic 12.2.1+)
- Database Patching

Importing Self-Signed Certificates

If you are using self-signed certificates and the Inbound Web Services (IWS) feature, then it is necessary to import these certificates into the 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. Execute the following script to generate all information:

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

   Windows
   ```
   %SPLEBASE%\bin\ initialSetup.cmd –i
   ```

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

Customizing Configuration Files

If you wish to make customer modifications to various configuration files, create a 'CM copy' of the template file or user exit instead. 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. Use the following procedure:

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

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

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

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

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

Centralized Properties Customization

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 files etc/cm_properties.ini (this can be created as a Customer Customization), if the file exists the content will be processed for the relevant properties.

Note: Product teams might use this file format: etc/ <PROD>_properties.ini (where <PROD> could be one of the list of installed products included in etc/PRODUCT.txt). If it exits it will be processed as well.

cm_properties.ini examples

Type of entries that could be 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, perform the following:

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

   UNIX

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

   For example:

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

   Windows

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

   For example:

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

3. Execute the following script to generate all information.

   UNIX

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

   Windows

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

4. Restart your application.

Building Javadocs Indexes

Rebuilding Javadoc indexes is already part of generating application viewer above. However, there are times when you need to run it separately. For example, this is required

after customer modifications (CM) have been applied to an environment when it includes Java code.

Perform the following to rebuild the Javadoc indexes.

Windows

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

UNIX

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

Configuring the Environment for Batch Processing

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

Customizing the Logo

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

Windows:

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

UNIX:

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

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

Deploying Inbound WebServices (IWS)

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

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

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

For deploying IWS, please follow the steps below:

UNIX

1. Enable the Web Services Functionality as shown below:

   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. Execute initialSetup.sh as shown below:

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

3. Set the classpath as shown below:

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

4. Execute the following command:

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

   Select y

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

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

Windows

1. Enable the Web Services Functionality as shown below:

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

2. Execute configureEnv.cmd –a

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

3. Execute initialSetup.cmd as shown below:

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

4. Set the classpath as shown below:

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

5. Execute the following command:

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

Select y
```

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

```
iwsdeploy.cmd
```

Domain Templates (Linux WebLogic 12.2.1+)

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

- Install and configure application stack (OUAF and Edge Product).

  Environment will need to be configuring to deploy in ear format.
- Review domain templates (Simple /Complex).
- Execute config.sh.
- Configure domain.
- Complete domain configuration.

  Configure nodemanager.properties and setDomainEnv.sh.
- Update SPLEBASE (ENVIRON.INI).

Detailed Description

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

$SPLEBASE/tools/domaintemplates

- Oracle-Utilities-Simple-Unix-12.2.1.1.0.jar (Unix generic)

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

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

You are able to create a custom domain template from the existing domain by using the Domain Template Builder or the pack command. By using the Domain Template Builder, you can also create a custom domain template from an existing template.

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

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

Note: For 12.2.1: Set the password of SYSUSER and ouafjndi through the WebLogic console.

- JTA Settings
- Node Manager Settings
- WebLogic Server
- JRF Restricted (Oracle-Utilities-Simple-Unix-12.2.1.1.0.jar only)
- JMS Global Flush Queues (Oracle-Utilities-Simple-Unix-12.2.1.1.0.jar only)

Configure setUserOverrides.sh (12.2.1 template only)

Change environmental variables here, if needed.

Update Domain Home Location

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

1. Initialize the Environment: splenviron.sh –e <Environment_Name>
2. Execute: configureEnv.sh –a
3. Select Menu Item: 52. Advanced Web Application Configuration

==========

4. 02. Configuration Option: Domain Home Location

   Current Value <ENTER>:

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

   Enter Value: <Enter your domain home location>

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

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 8 installed. You can also install database patches using the components that are delivered under SPLEBASE without the need to move the database patching utility to a different server.

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

To generate the jar file:

1. Initialize a command shell:

   The scripts that are provided with the system need to be run from a shell prompt on the machine where you installed the application server. Before such scripts can be

run the shell must be "initialized" by running the splenviron script provided with the system.

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

In the following example, replace the variables:

- $SPLEBASE with the Full directory name that you installed the application into.
- $SPLENVIRON with the name you gave to the environment at installation time.

To initialize the environment enter:

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

For example:

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

Windows
The command window should be opened on the Windows server that you installed the application on.

In the below example you should replace the following variables:

- %SPLEBASE%: The Full directory name that you installed the application into.
- %SPLENVIRON%: The name you gave to the environment at installation time.

To initialize the environment, type the following in your command prompt:

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

For example:

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

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

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

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

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

3. Transfer the generated jar (db_patch_standalone.jar) to the Windows/Unix machine where you want to run the database patching utility.
4. Extract the contents of the archive file:

   ```
   jar xvf db_patch_standalone.jar
   ```

Note: You must have Java 8 JDK installed on the machine to use the jar command. Be sure to install the JDK that is supported for your platform.

Overview of Database Patching Application

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

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

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

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

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

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

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

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

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

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

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

Unix Sample - Database Patch Application (ouafDatabasePatch.sh)

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

- Sample Execution – Passing a Password

```
./ouafDatabasePatch.sh -x ouafadm -p "-t O -d
CISADM_Z1_12C_43020_BLD001,slc04lds:1522:Z143Q12C"
```

- Sample Execution – Prompting for a Password

```
./ouafDatabasePatch.sh  -p "-t O -d
CISADM_Z1_12C_43020_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:
```

Appendix A

Application Framework Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Customer To Meter. The patches listed below are available as a convenience rollup, C2M-V2.6.0.1.0-FW-PREREQ-MultiPlatform.zip, which is included in the downloaded Media Pack.

Please refer to the instructions included in the rollup directory for steps to install the patches. The rollup contains the following patches:

Bug Fix	Description
24433554	COPY OF 23326349 - NEED PRIMARY KEY AT DETAIL SQL LEVEL FOR CMA
25972804	COPY OF 25924110 - TIMELINE CONTROL CENTRAL ZONE TEXT SHIFT
26086748	ENH BUG 19462367 - MISSING VALIDATION MESSAGES FOR (CTI/ IVR)SYSTEM
26592839	INITIALSETUP.SH -I FAILS ON AIX
26595973	COPY OF 25657971 - COPY OF 24705117 - MAP XML FIELD NOT BEING SET ON AN ELEMENT
26636136	COPY OF 26003977 - CONTROL CENTRAL SEARCH - FILTER UI MAP LABELS ARE NOT SHOWN
26714491	COPY OF BUG 26661253 - RENDERING ISSUES WITH OLD STYLE SEARCH POP UPS
26753800	COPY OF 26199664 - ENABLE NON FW ALGORITHMS ON FW BASE MIGRATION PLANS
26758392	COPY OF 26738835 - THERE IS NO LOOKUP CLASS DEFINED FOR LOOKUP FIELD 'MSG_PARM
26759103	COPY OF 26710886 - BS Â¿F1-MOVEBYNAMEÂ¿ UNABLE TO MOVE EXTENDED DA ELEMENTS.
26761544	COPY OF 26731567 - COPY OF 26578199 - SCHEDULED JOB STREAM BATCH PROCESSES NOT

Bug Fix	Description
26761558	COPY OF 26739901 - COPY OF 26527483 - STEPS MISSING ON JOBS WHEN F1-DBMSGETJOBS
26761571	COPY OF 26732169 - COPY OF 26553604 - UPDATING A JOB WHILE ITS RUNNING DISABLES
26761583	COPY OF 26740008 - COPY OF 26527433 - DBMS GET JOB DETAILS SERVICE INCORRECTLY
26761593	COPY OF 26725427 - COPY OF 26711975 - UPGRADE FROM 2.2 TO 4.2.0.3: ERROR
26779697	COPY OF BUG 26646646 - COPY OF BUG 25220999 - INCORRECT FILTER DESCRIPTION ON ZO
26782008	COPY OF 26769841 - COPY OF 26514814 - AUTO FORMATTING OF NUMBER FIELD IN UI MAP
26802852	COPY BUG 26843074 - OWSM CLIENT NOT WORKING FROM WL-TPW
26807738	DATA EXP FIREFOX:UNABLE TO SEARCH ENTITY LIST MIGRATION REQUEST WITH DROP-DOWN
26813455	COPY OF 26813241 - COPY OF 26726064 - NULLPOINTEREXCEPTION WHEN TIMED BATCH JOBS
26824593	ANNOTATIONS ARE NOT ALLOWING TO ADD WHILE CREATING NEW IWS
26824617	[IPADAIR2]SEARCHMENU WIDGET IS NOT VISIBLE ON CCB QA ENVIRONMENTS
26824639	[IPADAIR2] DASHBOARD IS SHOWN EMPTY WHEN LOGIN TO APPLICATION IN IPADAIR2
26836282	COPY OF 26836275 - COPY OF 26527472 - DBMS JOB GETS CREATED WITH START DATE IN
26863969	COPY OF 26863796 - COPY OF 26841139 - WARNING MESSAGE ON FEATURE CONFIG SCREEN
26896544	PREPAREDSTATEMENT EXTRACTCORRECTLYSIZEDSTRING() METHOD PADS CLOB FIELDS
26918436	COPY OF 25110700 - UIHINT:SECTIONOPEN IS NOT WORKING PROPERLY FOR CHILD SECTION
26922593	COPY OF 26922579 - COPY OF 26164259 - BATCH THROW NULL POINTER EXCEPTION WHILE
26927133	COPY OF 25929810 - DD VALIDATION MISSING FOR SEASONAL ADDRESS ON PERSON CONTACT
26956156	FOR PATCHING OUAF-4392 DEVELOPMENT FOR CAPTURE EXTENSION ON AN ATTACHMENT
27000442	COPY OF 26899800 - GLOBAL CONTEXT VARIABLES CAUSING ERRORS IN BPA SCRIPTS WHEN

Bug Fix	Description
27045649	COPY OF BUG 26920239 - F1_CMA_FILES DIRECTORY FAILED TO BE CREATED IN SPLOUTPUT
27053570	COPY OF BUG 26867108 - UPGRADE 2.6 - INCORRECT DISPLAY OF BPA SCRIPT PAGE
27058231	COPY OF BUG 26958743 - DATAMASKINGHELPER OF FW MASKS SENSITIVE DATA ALWAYS IN FU
27063020	SP5 CHANGES TO F1-MAINPROC FOR POST PROCESSING MAP SCHEMA
27063491	COLLAPSED INFO DATA EXPLORER ZONE NOT DISPLAYING DATA WHEN EXPANDED
27064689	COPY OF 27009119 - COPY OF 26869720 - HEIGHT OF REPORT PARAMETER FOR ZONE NOT WO
27070593	COPY OF 27070580 - COPY OF 27053300 - F1-DOESENTITYEXIST BS REFERENCES NON-EXIST
27077859	BACKPORT SCHEMA EDITOR, REMOVE LEGACY ONE AND YUI LIBRARY
27078662	COPY OF 27078636 - MWM - CLOB WITH 8000 BYTES CONTENT CANNOT BE READ
27079815	COPY OF BUG 26847851 - PAGINATION ERROR WHEN THERE ARE TWO BROADCAST PRESENT
27100772	PLUGIN DRIVEN EXTRACT BEHAVIOR WITH EXTENDED DA
27119998	DISPLAY MAPS DO NOT HAVE CORRECT HEIGHT
27120009	DATA EXPLORER RESULTS AREA DOES NOT HAVE CORRECT HEIGHT
27127741	SECURITY RIGHTS ISSUE ON F1-DFLTS FOR SERVICE CFLZSELL
27135224	BUSY FADE NOT REMOVED ON THE CLOSE OF A SCRIPT INVOKED UI MAP
27144844	COPY OF 26969586 - MWM - PROVIDE NEW URL PARAMETER TO SET DASHBOARD MINIMIZED
27167325	MENU SEARCH INPUT - SMALLER THAN USUAL IN IE
27168124	COPY OF BUG 27067352 - CURRENCY SYMBOL IS NOT DISPLAYED IN BO BASED SCREEN WHEN
27168195	COPY OF BUG 26983791 - COPY OF BUG 26961168 - ON LAUNCHING THE BPA SCRIPT THE SC
27222125	COPY OF BUG 27222114 - COPY OF BUG 27222058 - ADD WEBSERVICES TARGET_FOLDER FOR
27226557	BUG 25885378 - COPY OF BUG 27225808 - COPY OF BUG 27225794 - COPY OF BUG 2722578
27229838	COPY OF BUG 27229834 - COPY OF BUG 27229830 - COPY OF BUG 27229822 - COPY OF BUG

Bug Fix	Description
27268999	CHAR TYPE DROPDOWNS ARE NOT BEING POPULATED

Appendix B

Oracle Utilities Customer To Meter Fixes

The following table lists the Oracle Utilities Customer To Meter fixes included in this release:

Bug Number	Description
25654364	C2M: HEAD END SYSTEMS ARE NOT SEPARATED FROM EXTERNAL APPLICATIONS
25920757	C2M - FR: C2M CONFIGURATION PORTAL SHOULD ONLY BE DISPLAY ONLY
25963051	SP CONTEXT RESET BASED ON THE PREMISE EVEN IF DIFFERENT SP IS LOADED
25962514	IMPLEMENT POSTAL DEFAULTING TO C2M SP MAINTENANCE
26320119	C2M - REMOVED MONITOR BATCH VALUE ON SYNC REQUEST BOS
26716491	POSTAL CODE %1 DOES NOT HAVE A CORRESPONDING RECORD ON THE POSTAL DEFAULTS
25956840	C2M - BS C1D-SPREADGEO AND C1D-SPUPDATEGEO SHOULD BE X1
25887903	C2M - RATE CHECK - USAGE PERIOD SECTION IS NOT PROPERLY POPULATED
25741833	C2M - FR: BILL CYCLE - CHANGE TO AUDIT ALGORITHM INSTEAD OF SYNC REQUEST