

Oracle Utilities Customer To Meter
Installation Guide
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Oracle Utilities Customer To Meter Installation Guide, Release 2.7.0.1.0

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Preface

Welcome to the Oracle Utilities Customer To Meter Installation Guide.

This guide provides information about installing Oracle Utilities Customer To Meter and is intended for anyone interested in the installation process.

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

To complete the installation you should have:

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

Related Documents

For more information, refer to these Oracle documents:

Installation Guides and Release Notes

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

Administrative and Business User Guides

- *Oracle Utilities Customer To Meter Administrative User Guide*
- *Oracle Utilities Customer To Meter Business User Guide*

Supplemental Documents

- *Oracle Utilities Customer To Meter Server Administration Guide*
- *Oracle Utilities Customer To Meter 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.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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 a high-level overview of the Oracle Utilities Customer To Meter installation.

To install Oracle Utilities Customer To Meter:

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 *Oracle Utilities Customer To Meter Database Administrator's Guide*.

3. Install the database as described in the *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 post-installation guidelines described in [Chapter 8: Additional Tasks](#).

Chapter 2

Application Architecture Overview

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

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

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 chapter provides 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

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

Refer to [Supported Platforms](#) for information about the 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, refer to [Chapter 5: Installing Application Server Prerequisite Software](#).

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 7.x for x86_64
- Oracle Solaris 11.x for SPARC (64-bit)
- IBM AIX 7.2 TLx for POWER (64-bit)
- HP-UX 11.31 (64-bit)

Prerequisite Application Server Software

- Oracle Database Client 12.1.0.2+, 12.2.0.x
- Oracle Java SE Development Kit 1.8.0_x (Oracle platforms only)
- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)

- Hibernate ORM 4.1.0 and Hibernate 5.2.3 jars
- Oracle WebLogic Server 12c Release 2 (12.2.1.3+) 64-bit

Notes

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

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

Please note the following:

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

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

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

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

Windows Server

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

WebLogic Server

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

Oracle Database Server

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

- Oracle Database Server Enterprise Edition 12.1.0.
- Oracle Database Server Standard Edition 2 12.1.0.
- Oracle Database Server Enterprise Edition 12.2.0.x
- Oracle Database Server Standard Edition 2 12.2.0.x

Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are 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
Install Dir ("\$SPLEBASE") Location	10 GB recommended 5 GB minimum	This is the location where the application and Framework get installed. Startup, shutdown and other online log files are stored here. The size and space that is used should be monitored because various debugging options can significantly affect the size of log files. Note: This does not include the size of the edge product.
Log Dir ("\$SPLOUTPUT") Location	10 GB recommended 2 GB minimum	This location is used for storing batch log files and output from batch jobs. The size of this space should be influenced by which batches are run and how often, and the amount of debugging information that is collected.
Location of the application web work files on the web servers	5 GB recommended 2 GB minimum	This location is used by various web server vendors to expand the application. It should be considered when installing these products. Refer to the individual web server documentation to determine the location of the temporary files.
Installation Temporary Area	10 GB minimum	The application gets installed from this location. You need enough space to uncompress the files and install the application.

Location	Size	Usage
Oracle Data Area	10 GB minimum	This location is where the Oracle database data files are stored. The size of this space should be based on the requirements of the production environment. For an initial or demo database install 4 GB should be sufficient.

Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will periodically issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle products have already been tested against.

If it is necessary to apply an upgrade, please do so in a test environment that is running on the same platform as your production environment prior to updating the production environment itself. The exception to this is Hibernate software 4.1.0 which should not be upgraded.

Always contact Oracle Support prior to applying vendor updates that do not guarantee backward compatibility.

Chapter 4

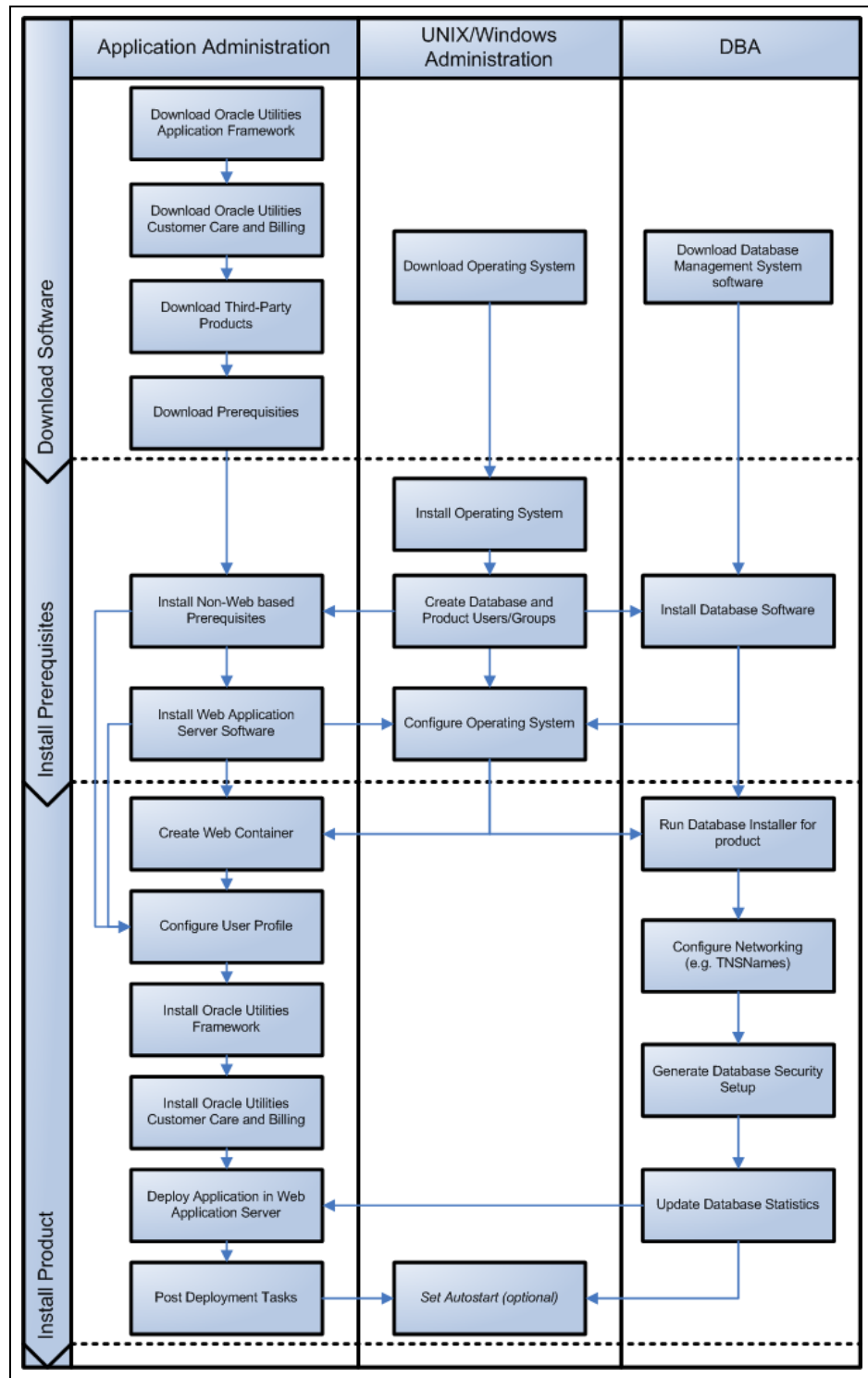
Planning the Installation

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.

WebLogic Native Installation

With Oracle Utilities Application Framework 4.4.0.0.0, a WebLogic native installation is required. Refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Framework (Doc ID 2413918.1)* whitepaper on My Oracle Support.

Application Server Clustering

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

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

Directory Names

Directory cannot contain whitespace characters.

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, refer to [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 12.2.1.3+.

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 (if there are any).
10. Install Oracle Utilities Customer To Meter.
11. Deploy the Oracle Utilities Customer To Meter application.
12. Complete the post-installation tasks.
13. Complete the 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 a numeric value in the prompt.

Please also note the following:

- When all options are set, type <P> at the main menu prompt option. This will save the option values selected throughout the configuration.
- During this processing the global variables are validated and the configuration file <SPLEBASE>/etc/ENVIRON.INI is created or updated. This file contains all the variables inputted and calculated. These are needed by the next part of the installation process.
- To exit the configuration utility without saving any of the values entered, type <X> and press 'Enter'.

Installation Menu Functionality Details

The Environment Installation Utility requires that Oracle Client Home is set in the path for the user performing the installation.

Prior to running the installation utility you will need to review the supported platforms document to ensure you have all of the Third Party software installed.

In this menu if the variables are set prior to execution, that value will be defaulted by the installation utility when performing the installation.

When the installation has been completed successfully, the values will be written to an ENVIRON.INI file. When splenviron.sh / cmd is executed, it will read from the ENVIRON.INI file to set the environment variables. Refer to the *Oracle Utilities Application Framework Server Administration Guide* for details about configuring these values.

Install the Oracle Client software specified in the [Operating Systems and Application Servers](#) section in [Supported Platforms and Hardware Requirements](#) prior to running any of the installation utilities.

The following prompt appears when executing the installation utility:

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

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

Encryption Methods

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

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

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	

Menu Option	Name Used in Documentation	Customer Install Value
Web Java Home Directory	JAVA_HOME	
Hibernate JAR Directory	HIBERNATE_JAR_DIR	
**ONS JAR Directory	ONS_JAR_DIR	
Web Application Server Home Directory	WEB_SERVER_HOME	
***Additional JAR Directory	WLTHINT3CLIENT_JAR_DIR	

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

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

```

$ORACLE_HOME/opmn/lib/ons.jar

```

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

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

Menu Block 2: Keystore Options

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

```
<SPLEBASE>/ks/.ouaf_keystore
```

```
<SPLEBASE>/ks/.ouaf_storepass
```

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

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

Keystore options include:

Menu Option	Name Used in Documentation	Customer Install Value
Import Keystore Directory	KS_IMPORT_KEYSTORE_FOLDER	
Store Type	KS_STORETYPE	
Alias	KS_ALIAS	
Alias Key Algorithm	KS_ALIAS_KEYALG	
Alias Key Size	KS_ALIAS_KEYSIZE	

Menu Option	Name Used in Documentation	Customer Install Value
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 Sample CM Source Code	CM_INSTALL_ SAMPLE	

Menu Block 1: Environment Description

The environment description menu option includes:

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

Menu Block 2: [WebLogic] Business Application Server Configuration

WebLogic Business Application Server configuration options include:

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

Menu Block 3: [WebLogic] Web Application Server Configuration

WebLogic Web Application Server configuration options include:

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

Menu Option	Name Used in Documentation	Customer Install Value
Batch Database User ID	BATCH_DBUSER	
Batch Database Password	BATCH_DBPASS	
Web JDBC DataSource Name	JDBC_NAME	
Database Name	DBNAME	
Database Server	DBSERVER	
Database Port	DBPORT	
ONS Server Configuration	ONSCONFIG	
Database Override Connection String	DB_OVERRIDE_CONNECTION	
Character Based Database	CHAR_BASED_DB	
Oracle Client Character Set NLS_LANG	NLS_LANG	

Menu Block 5 - General Configuration Options

The general configuration options include:

Menu Option	Name Used in Documentation	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_PERFORMANCE	
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMANCE	
JMX Enablement System User ID	BSN_JMX_SYSUSER	
JMX Enablement System Password	BSN_JMX_SYSPASS	
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	

Menu Block 8 - OSB Configuration

The OSB configuration includes:

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

Menu Block 9 - SOA Configuration

The SOA configuration includes:

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

Menu Block 10 - SOA Configuration Plan (MDF)

The SOA configuration plan (MDF) includes:

Menu Option	Name Used in Documentation	Customer Install Value
MDF Bulk Request Callback URL		
MDF Headend HTTP Connection Timeout	50000	
MDF Headend HTTP Read Timeout	500000	
MDF SOA Request Queue JNDI Name	queue/BulkRequestQueue	
MDF SOA Notify Queue JNDI Name	queue/BulkNotifyQueue	
MDF SOA Command Queue JNDI Name	queue/BulkCommandQueue	
SGG-NMS TestHarness Partition Name	SGG-NMS_Test	

Menu Block 11 - Configuration for DataRaker Integration

The DataRaker Integration configuration includes:

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

Menu Block 16 - SOA Configuration Plan (LG)

The SOA configuration plan (LG) includes:

Menu Option	Name Used in Documentation	Customer Install Value
LG SOA Partition Name	LG	
LG SOA TestHarness Partition Name	LG_Test	
AMI Event Subscriber Output Path	/spl/sploutput/osb/lg-cim-event	
MR_Server endpoint URI		
CD_Server endpoint URI		
CIM_Server endpoint URI		
MeteringServer endpoint URI		

Menu Option	Name Used in Documentation	Customer Install Value
Security policy attached to outbound web service calls to a CIM interface	sgg/d3_cfs_cim_header_client_policy	
Security policy attached to inbound web service calls from a CIM interface	sgg/d3_cim_token_service_policy	
The name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 17 - SOA Configuration Plan (NES)

The SOA configuration plan (NES) includes:

Menu Option	Name Used in Documentation	Customer Install Value
NES endpoint URI		
SOA partition to which the application is installed	Echelon	
Path to the NES EventManager web service on the head end system	CoreServices/EventManager.asmx	
Path to the NES GatewayManager web service	CoreServices/GatewayManager.asmx	
Path to the NES DeviceManager web service on the head end system	CoreServices/DeviceManager.asmx	
Path to the NES SettingManager web service on the head end system	CoreServices/SettingManager.asmx	
Path to the NES UserManager web service on the head end system	CoreServices/UserManager.asmx	
Name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
Name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 18 - SOA Configuration Plan (Sensus)

The SOA configuration plan (Sensus) includes:

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

Menu Block 19 - SOA Configuration Plan (SSN)

The SOA configuration plan (Sensus) includes:

Menu Option	Name Used in Documentation	Customer Install Value
SSN SOA Partition Name	SSN	
SOA Weblogic User Name		
SOA Weblogic User Password		
SSN SOA Queue JNDI Name	queue/SSNODRQ	
SSN Headend DataAggregation Endpoint URI		
The URL for the SSN 4.7 DataAggregation service (DataAggregation.asmx)	http://127.0.0.1/CoreServices/ DataAggregation.asmx	
The URL for the SSN 4.10 DataAggregation service	https://ssn.snsngs.net:3000/amm/ webservice/v2_1/DataAggregat...	
SSN Headend DeviceManager Endpoint URI		

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

Menu Block 20 - SSN JMS Source Destination Bridge Configuration

The SSN JMS Source Destination Bridge configuration includes:

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

Menu Option	Name Used in Documentation	Customer Install Value
SSN Bridge Destination Queue JNDI Name	queue/SSNTestSSNODRQ	
SSN Destination Bridge Username		
SSN Destination Bridge Password		

Menu Block 21 - DG Reference Implementation SOA Configuration

The DG Reference Implementation SOA configuration includes:

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

Menu Block 22 - SOA Configuration Plan (Itron Openway)

The SOA Configuration Plan (Itron Openway) configuration includes:

Menu Option	Name Used in Documentation	Customer Install Value
Itron SOA Partition Name	Itron	
Headend Http Read Timeout	500000	
Headend Http Connection Timeout	50000	
DataSubscriberService Output Path		
ExceptionSubscriberService Output Path		
Itron Headend DataService Endpoint URI		

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

Advanced Menu Options

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

Unix:

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

Windows

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

Menu Block 50 - WebLogic Advanced Environment Miscellaneous Configuration

WebLogic advanced environment miscellaneous configurations include:

Menu Option	Name Used in Documentation	Customer Value Install
OUAF DBMS Scheduler User	OUAF_DBMS_SCHEDULER_USER	

Menu Option	Name Used in Documentation	Customer Value Install
Enter the location of the Application Server Profile Home	WAS_PROFILE_NAME_HOME	
Online JVM Batch Server Enabled	BATCHENABLED	
Online JVM Batch Number of Threads	BATCHTHREADS	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	
Enable Batch Edit Functionality	BATCHEDIT_ENABLED	
Batch Online Log Directory	BATCH_ONLINE_LOG_DIR	
JDBC Read Timeout	JDBC_TIMEOUT	
Enable JMS Global Flush for Batch	ENABLE_JMS_GLOBAL_FLUSH	
Add UsernameToken.xml	ADD_USERNAME_TOKEN_XML	
IWS deployment target	WLS_CLUSTER_NAME	
Web Admin Server Host	WEB_ADMIN_SERVER	
Split File Size in MB	TEMPSTORAGE_SPLITFILESIZE	
GIS Service Running on the same Web Server	GIS	
GIS Service URL	GIS_URL	
GIS WebLogic System User ID	GIS_WLSYSUSER	
GIS WebLogic System Password	GIS_WLSYSPASS	
Online Display Software Home	ONLINE_DISPLAY_HOME	
Max Queries To Hold In Cache Across All Threads	XQUERIES_TO_CACHE	
Seconds Timeout Flush Cache Completely	XQUERY_CACHE_FLUSH_TIMEOUT	

Menu Block 51 - WebLogic Advanced Environment Memory Configuration

WebLogic advanced environment memory configurations include:

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

Menu Block 52 - Advanced Web Application Configuration

Advanced web application configurations include:

Menu Option	Name Used in Documentation	Customer Install Value
Web Application Cache Settings	WEB_L2_CACHE_MODE	
Web Server Port Number	WEB_WLPORT	
CSRF Protection For REST Services	CSRF_PROTECTION	
OWSM Protection For REST Services	OWSM_PROTECTION_FOR_REST_SERVICES	
Domain Home Location	WLS_DOMAIN_HOME	
Batch Cluster URL	WEB_BATCH_CLUSTER_URL	
Strip HTML Comments	STRIP_HTML_COMMENTS	
Authentication Login Page Type	WEB_WLAUTHMETHOD	
Web Form Login Page	WEB_FORM_LOGIN_PAGE	
Web Form Login Error Page	WEB_FORM_LOGIN_ERROR_PAGE	
Application Viewer Form Login Page	WEB_APPVIEWER_FORM_LOGIN_PAGE	
Application Viewer Form Login Error Page	WEB_APPVIEWER_FORM_LOGIN_ERROR_PAGE	

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

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_ENABLE	
Custom SQL Security	CUSTOM_SQL_SECURITY	
White List Full Path	CLOUD_WHITE_LIST_PATH	

Menu Option	Name Used in Documentation	Customer Install Value
Custom White List Full Path	CLOUD_CUSTOM_WHITE_LIST_PATH	
Substitution Variable List File Location	CLOUD_SUBSTITUTION_VARIABLE_LIST_FILE_LOCATION	
Directory For Variable F1_CMA_FILES	CLOUD_LOCATION_F1_MIGR_ASSISTANT_FILES	
URI For Variable F1_OAUTH2_URI	CLOUD_LOCATION_F1_OAUTH2_URI	
URI for Variable F1_BASE_REST_URL	CLOUD_LOCATION_F1_BASE_REST_URL	
URI for Variable F1_OPEN_API_BASE_URL	CLOUD_LOCATION_F1_OPEN_API_BASE_URL	
URI For Variable F1_BASE_WEB_URI	CLOUD_LOCATION_F1_BASE_WEB_URI	
URI For Variable F1_BASE_IWS_URI	CLOUD_LOCATION_F1_BASE_IWS_URI	
Consolidated Logfile Full Path	CONSOLIDATED_LOG_FILE_PATH	
Temporary File Location	TMP_FILE_LOCATION	

Menu Block 56 - Mobile Security Configuration

Mobile Security configurations include:

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

Menu Block 60 - Advanced Configurations for OSB

The advanced configurations for OSB include:

Menu Option	Name Used in Documentation	Customer Install Value
Enable OSB SSL Port	false	
OSB Trust Keystore Type	Demo	
OSB Trust Keystore File Type	JKS	
OSB Trust Keystore File		

Menu Block 61 - Advanced Memory Configurations for SOA

The advanced memory configurations for SOA include:

Menu Option	Name Used in Documentation	Customer Install Value
SOA Initial Heap Size	1024	
SOA Maximum Heap Size	2048	
SOA Minimum Perm Size	512	
SOA Maximum Perm Size	1024	
SOA Application Additional Options		
The name of the OWSM policy to use when SOA calls another SOA service	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by another SOA service	oracle/ http_basic_auth_over_ssl_service_policy	
The name of the OWSM policy to use when SOA calls an OUAF service	oracle/ wss_http_token_over_ssl_client_policy	

Menu Block 62 - Advanced Memory Configurations for OSB

The advanced memory configurations for OSB include:

Menu Option	Name Used in Documentation	Customer Install Value
OSB Initial Heap Size	512	
OSB Maximum Heap Size	1024	
OSB Minimum Perm Size	512	

Menu Option	Name Used in Documentation	Customer Install Value
OSB Maximum Perm Size	1024	
OSB Application Additional Options		

Menu Block 63 - Data Migration

The data migration configurations include:

Menu Option	Name Used in Documentation	Customer Install Value
Enable Data Migration	FALSE	
Data Migration Database User		
Data Migration Database Password		

Menu Block 64 - Advanced Configurations for SOA

The advanced configurations for SOA include:

Menu Option	Name Used in Documentation	Customer Install Value
Enable SOA SSL Port	false	
SOA Trust Keystore Type	Demo	
SOA Trust Keystore File Type	JKS	
SOA Trust Keystore File		

Menu Block 70 - SSN SOA TestHarness Configurations

The SSN SOA TestHarness configurations include:

Menu Option	Name Used in Documentation	Customer Install Value
SSN TestHarness SOA Host Server	slc11cds.us.oracle.com	
SSN TestHarness SOA Port Number	8920	
SSN SOA TestHarness Partition Name	SSN_Test	
SSN SOA TestHarness Queue JNDI Name	queue/SSNTestSSNODRQ	

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.

- [AIX Application Server](#)
- [Oracle Linux 7.x and Red Hat Linux 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 7.2 (64-bit) TL0	POWER 64-bit	Oracle WebLogic (12.2.1.3+) 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 exist to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 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 12.2.0.1+ 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 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 12c Release 2 (12.2.1.3+) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12c Release 2 (12.2.1.3+) 64-bit.

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

Oracle Linux 7.x and Red Hat Linux 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 7.x (64-bit) Red Hat Enterprise Linux 7.x (64-bit))	x86_64	Oracle WebLogic 12.2.1.3+ (64-bit)

Web/Application Server Tier

Oracle Enterprise Linux 7.x or Red Hat Enterprise Linux 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	

Description	Default Value	Customer Defined Value
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 the ‘cisusr’ user group.
2. Create the ‘cissys’ user. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

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

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

```
set +o noclobber
```

Security Configuration

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 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 12.2.0.1+ 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 8.0 Update 131 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 12c Release 2 (12.2.1.3+) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1.3+.

Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to *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 12.2.1.3+ (64-bit)

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 exist to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 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. 2.0.1+ 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 8.0 Update 131 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 12c Release 2 (12.2.1.3+) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12c Release 2 (12.2.1.3+) 64-bit.

Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to *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 12.2.1.3+ (64-bit)

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 12.2.0.1+ - 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 8.0 Update 131 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 12c Release 2 (12.2.1.3+) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12c Release 2 (12.2.1.3+) 64-bit.

Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to *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 12.2.1.3+ (64-bit)

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 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 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 12.2.0.1+ 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 8.0 Update 131 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 12c Release 2 (12.2.1.3+) 64-bit

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

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

- Download and install WebLogic Server 12c Release 2 (12.2.1.3+) 64-bit.

Note: If you plan on using the Oracle Utilities Application Framework in native mode within Oracle WebLogic (as opposed to embedded mode), refer to *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 installing the prerequisite software, including:

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

Setting Up and Using the Additional JAR Directory

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

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

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

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

Special Note to Upgrade from a WebLogic 12.1.3.x Environment

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

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

```
$SPLEBASE
```

5. Set the environment:

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

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

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

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

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

7. Set the environment again.

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

8. Upgrade the Oracle Utilities Application Framework to V4.4.0.0.0.

```
install.sh -u
```

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 chapter describes the process to install Oracle Utilities Application Framework, including:

- [Installation Overview](#)
- [Pre-Installation Tasks](#)
- [Installing Oracle Utilities Application Framework](#)
- [Installing Hibernate 4.1.0](#)

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 V4.4.0.0.0 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 V4.4.0.0.0 installation file is delivered in jar format for both UNIX and Windows platforms.

If you are planning to install multiple Oracle Utilities Application Framework V4.4.0.0.0 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 V4.4.0.0.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as `c:\ouaf\temp` or `/ouaf/temp`. (Referred to below as <TEMPDIR>.)

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

4. Copy the file `FW-V4.4.0.0.0-MultiPlatform.jar` from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the `BINARY` option for the FTP transfer.
5. Decompress the file:

```
cd <TEMPDIR>
```

```
jar -xvf FW-V4.4.0.0.0-MultiPlatform.jar
```

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

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

A sub-directory named “FW-V4.4.0.0.0” 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-V4.4.0.0.0` directory named `cistab_<SPLENVIRON>.sh`. Run the generated script using the root account before continuing with the installation process. The script initializes the `cistab` file in `/etc` directory (if it is the first Oracle Utilities 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-V4.4.0.0.0` 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-V4.4.0.0.0` 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 `%SPLEBASE%\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.
- `$$SPLEBASE` (`%SPLEBASE%`) - stands for `<SPLEDIR>/<SPLENVIRON>` directory
- `$$SPOUTPUT` (`%SPOUTPUT%`) - stands for `<SPLEDIROUT>/<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.

Refer to [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-encrypted 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 ORADB does not require the keystore files. 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:

- Synchronizes the keystore to the database
- Regenerates the user hashes
- Re-encrypts any passwords (from the legacy-encrypted passwords) using the current keystore.
- Is used 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 decrypt 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 encrypt new application server-stored passwords
- Synchronize 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`):

```
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`).

```
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

Important! In this release, Oracle Utilities Operational Device Management is included as part of Oracle Utilities Customer To Meter for all customers. However, the existing customers can disable the Oracle Utilities Operational Device Management functionality.

This chapter provides instructions to install Oracle Utilities Customer To Meter, as well as enable/disable Oracle Utilities Operational Device Management.

- [Prerequisites](#)
- [Installing Customer To Meter Components](#)
 - [Installing Oracle Utilities Customer Care and Billing V2.7.0.1.0](#)
 - [Installing Oracle Utilities Meter Data Management V2.3.0.0.0](#)
 - [Installing Oracle Utilities Operational Device Management V2.2.0.3.0](#)
 - [Installing Oracle Utilities Application Framework V4.4.0.0.0 Prerequisite Single Fixes](#)
 - [Installing Oracle Utilities Customer To Meter V2.7.0.1.0](#)
- [Disabling/ Enabling Oracle Utilities Operational Device Management inside Oracle Utilities Customer To Meter](#)

Prerequisites

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

- [Oracle Utilities Application Framework V4.4.0.0.0](#)

Refer to [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#) for instructions.

Installing Customer To Meter Components

The Oracle Utilities Customer to Meter installation includes:

- [Installing Oracle Utilities Customer Care and Billing V2.7.0.1.0](#)
- [Installing Oracle Utilities Meter Data Management V2.3.0.0.0](#)
- [Installing Oracle Utilities Operational Device Management V2.2.0.3.0](#)
- [Installing Oracle Utilities Application Framework V4.4.0.0.0 Prerequisite Single Fixes](#)
- [Installing Oracle Utilities Customer To Meter V2.7.0.1.0](#)

Installing Oracle Utilities Customer Care and Billing V2.7.0.1.0

This section describes how to install Oracle Utilities Customer Care and Billing, including:

- [Copying and Decompressing Install Media](#)
- [Preparing for the Installation](#)
- [Installing the Oracle Utilities Customer Care and Billing Application Component](#)
- [Installing Post-release Patches](#)

Copying and Decompressing Install Media

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

Oracle Utilities Customer Care and Billing is delivered in a separate installation package for each supported operating system. Refer to the [Supported Platforms](#) section in [Chapter 3: Supported Platforms and Hardware Requirements](#) for version and installation details regarding the database and operating system versions. Also refer to [Chapter 5: Installing Application Server Prerequisite Software](#) for the prerequisite third-party software installation instructions.

Download the installation package for your operating system and proceed with the following instructions.

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 file CCB-V2.7.0.1.0-MultiPlatform.jar in the delivered package to a <TEMPDIR>. 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 CCB-V2.7.0.1.0-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://java.sun.com/products/archive/index.html>.

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

For both Unix and Windows platforms, a sub-directory named CCB.V2.7.0.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Preparing for the Installation

1. Log on as an Oracle Utilities Customer Care and Billing Administrator (default is “cissys”).
2. Initialize the Framework environment that you want to install the product into.

UNIX:

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

Windows:

```
$SPLBASE\bin\splenvron.cmd -e %SPLENVIRON%
```

3. Stop the environment if running.

Installing the Oracle Utilities Customer Care and Billing Application Component

To install the Oracle Utilities Customer Care and Billing application:

1. Change to the <TEMPDIR>/CCB.V2.7.0.1.0 directory.
2. Set the following path:

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

Note: The above command is only applicable on a Linux platform. <JAVA_HOME> is the location where the JDK has been installed.

3. Execute the script:

UNIX

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

Windows

```
install.cmd
```

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

4. Follow the messages and instructions that are produced by the install utility. Please note that some of the steps may take some time to complete.
5. If the install utility execution was not stopped due to errors and you did not interrupt the execution, you have finished the installation of the Oracle Utilities Customer Care and Billing application product.
6. Execute the following commands:

UNIX

```
splenviron.sh -e <ENV_NAME>
configureEnv.sh
```

Type **P** and <ENTER> (you don't need to change anything)

```
splenviron.sh -e <ENV_NAME>
initialSetup.sh
```

Windows

```
splenviron.cmd -e <ENV_NAME>
configureEnv.cmd -e <ENV_NAME>
```

Type **P** and <ENTER> (there is no need to change anything)

```
splenviron.cmd -e <ENV_NAME>
initialSetup.cmd
```

7. Start up the environment.

The final step of the installation process is the environment startup. The install utility executes the command `spl.sh start` (for UNIX) or `spl.cmd start` (for Windows) to start up the environment. You may start the environment by this command any time. Follow the messages on the screen and check the logs in `$SPLSYSTEMLOGS` (`%SPLSYSTEMLOGS%` on Windows) directory to ensure that the environment was started successfully. If the startup failed, identify the problem by reviewing the logs, and start up the environment manually while you are connected to the new environment in your online session.

Installing Post-release Patches

Oracle Utilities Customer Care and Billing patches must be installed after installing Oracle Utilities Customer Care and Billing

The patches are available as a convenience rollup inside the `CCB-V2.7.0.1.0-Rollup-MultiPlatform.zip` file, which is part of the downloaded media pack.

For a list of the patches included in this rollup, refer to [Appendix C: Oracle Utilities Customer Care and Billing Post-release Patches](#).

To install the application and database patches on top of Oracle Utilities Customer Care and Billing 2.7.0.1.0:

1. Copy the `CCB-V27010-Rollup-MultiPlatform.jar` in the delivered package to a `<TEMPDIR>`. Unjar using below command.

```
jar -xvf CCB-V27010-Rollup-MultiPlatform.jar
```

2. Initialize the Oracle Utilities Customer To Meter environment to install the Oracle Utilities Customer To Meter patch rollup into.

UNIX

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

Windows

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

3. Install application patches.
 - a. Navigate to the <temp location>/CCB-V2.7.0.1.0-Rollup/Application folder.
 - b. Execute the group installation script.

Unix /Linux

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

Windows

```
installSFgroup.cmd
```

4. Start the environment.

Installing Oracle Utilities Meter Data Management V2.3.0.0.0

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

- [Copying and Decompressing the Install Media](#)
- [Installing the Oracle Utilities Meter Data Management Application Component](#)

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

You must initialize the Oracle Utilities Application Framework environment.

Copying and Decompressing the Install Media

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

To copy and decompress the install media:

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 V2.7.0.1.0.

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-V2.3.0.0.0-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-V2.3.0.0.0-MultiPlatform.jar
```

For UNIX and Windows platforms, a sub-directory named MDM.V2.3.0.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing the Oracle Utilities Meter Data Management Application Component

To install the Oracle Utilities Meter Data Management application component:

1. Log in to the application server host as Oracle Utilities Application Framework Administrator (default cissys).

2. Change directory:

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

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

3. Initialize the environment by running the appropriate command:

UNIX

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

Windows

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

4. Navigate to <TEMPDIR>/MDM.V2.3.0.0.0 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
```

6. Choose option P to proceed with the installation.

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

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

Installing Oracle Utilities Operational Device Management V2.2.0.3.0

Important! Note that the Oracle Utilities Operational Device Management installation is not different from that of Oracle Utilities Work and Asset Management installation. Installing Oracle Utilities Work and Asset Management will install Oracle Utilities Operational Device Management also.

In this release, Oracle Utilities Operational Device Management is included as part of Oracle Utilities Customer To Meter for all customers. However, the existing customers can disable the Oracle Utilities Operational Device Management functionality. Follow the manual post-installation steps to disable Oracle Utilities Operational Device Management inside the Oracle Utilities Customer To Meter stack. For instructions refer to [Disabling/ Enabling Oracle Utilities Operational Device Management inside Oracle Utilities Customer To Meter](#).

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

- [Copying and Decompressing the Oracle Utilities Work and Asset Management Install Media](#)
- [Installing the Oracle Utilities Work and Asset Management Application Component](#)

Copying and Decompressing the Oracle Utilities Work and Asset Management Install Media

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

To copy and decompress the install media:

1. Log in to the application server host as the administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Download the Oracle Utilities Work and Asset Management V2.2.0.3.0 Multiplatform zip file from Oracle Software Delivery Cloud.
3. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Work and Asset Management application environment.

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

4. Copy the WAM-V2.2.0.3.0-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.
5. Decompress the file.

```
cd <TEMPDIR>
jar -xvf WAM-V2.2.0.3.0-Multiplatform.jar
```

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

A sub-directory W1.V2.2.0.3.0 is created for both UNIX and Windows platforms. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing the Oracle Utilities Work and Asset Management Application Component

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

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

```
cd <install_dir>
```

where <install_dir> is the location where the Oracle Utilities Application Framework V4.4.0.0.0 base application component is installed.

3. Initialize the environment.

UNIX

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

Windows

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

4. Change to the <TEMPDIR>/W1.V2.2.0.3.0 directory where <install_dir> is the Oracle Utilities Work and Asset Management application component installation directory.

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

UNIX

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

Windows

```
install.cmd
```

5. Initialize the environment.

UNIX

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

Windows

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

6. Generate the appviewer.

Note: Before generating the appviewer, make sure that Oracle Utilities Operational Device Management is enabled or set to ON. This ensures that Data Dictionary and Javadocs are generated without errors.

- a. Change the directory.

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


where <install_dir> is Oracle Utilities Work and Asset Management application component installation directory.

- b. Generate the appviewer.

UNIX

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

Windows

```
genappvieweritems.cmd
```

Installing Oracle Utilities Application Framework V4.4.0.0.0 Prerequisite Single Fixes

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Customer To Meter.

The patches are available as a convenience roll-up inside the C2M-V2.7.0.1.0-FWPREREQ-MultiPlatform.zip file which is part of the downloaded media pack.

For a list of the patches included in this roll-up, refer to [Appendix A: Application Framework Prerequisite Patches](#).

To install the application and database patches on top of Oracle Utilities Application Framework V4.4.0.0.0:

1. Copy the C2M-V27010-FW-PREREQ-MultiPlatform.jar file in the delivered package to a <TEMPDIR>.

2. Unjar the file.

```
jar -xvf C2M-V27010-FW-PREREQ-MultiPlatform.jar
```

3. Initialize the Oracle Utilities Application Framework environment that you want to install the patch roll-up into:

UNIX

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

Windows

```
$$SPLBASE\bin\splenvron.cmd -e %SPLENVIRON%
```

4. Install application patches.

- a. Navigate to the <temp location>/FW-V4.4.0.0.0-Rollup/Application folder.
- b. Execute the group installation script.

UNIX/Linux

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

Windows

```
installSFgroup.cmd
```

Installing Oracle Utilities Customer To Meter V2.7.0.1.0

This section describes how to install Oracle Utilities Customer to Meter, including:

- [Copying and Decompressing the Install Media](#)
- [Installing the Oracle Utilities Customer To Meter Application Component](#)

Copying and Decompressing the 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 V2.7.0.1.0.

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 C2M.V2.7.0.1.0-MultiPlatform.jar file 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-V2.7.0.1.0-MultiPlatform.jar
```

For UNIX platform, a sub-directory named C2M.V2.7.0.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

Installing the Oracle Utilities Customer To Meter Application Component

This section outlines the steps to install Oracle Utilities Customer to Meter.

Preparing for the Installation

1. Log in as an Oracle Utilities Customer to Meter administrator (default cissys).
2. Initialize the Oracle Utilities Application Framework environment where the product should be installed.

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.V2.7.0.1.0 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 need not modify anything).
4. Start up the environment.

Follow the message on the screen and review the logs in the \$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: while starting the first time, log into the WebLogic console and provide system access to the 'cisusers' role. The WebLogic console application can be accessed through the following URL: `http://<hostname>:<portname>/console`.

Disabling/ Enabling Oracle Utilities Operational Device Management inside Oracle Utilities Customer To Meter

By default, Oracle Utilities Operational Device Management is enabled. It can be disabled or enabled manually.

Important! Before enabling or disabling Oracle Utilities Operational Device Management, make sure the Oracle Utilities Operational Device Management database is enabled or disabled. For instructions, refer to the *Oracle Utilities Customer To Meter Database Administrator's Guide*.

To disable Oracle Utilities Operational Device Management:

1. Execute a flush to clear the cache.
2. Clear the browser cache.
3. Restart the application.

To enable Oracle Utilities Operational Device Management:

1. Execute a flush to clear the cache.
2. Clear the browser cache.
3. Restart the application.

Chapter 8

Additional Tasks

This chapter 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](#)
- [Database Patching](#)

Importing Self-Signed Certificates

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

Make sure to perform these steps before deploying the IWS application.

To import the self-signed certificates into the OUAF truststore:

1. Start WebLogic.
2. Initialize a command shell and setup the environment.

UNIX

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

For example:

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

Windows

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

For example:

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

3. Generate all information.

UNIX

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

Windows

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

Customizing Configuration Files

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

Below is a sample procedure to customize Hibernate properties of the SPLWeb web application:

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

Unix:

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

Windows:

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

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

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 exists 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> if it doesn't exist.

<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_connection=[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 rebuilt.

Note: Before generating the appviewer, make sure that Oracle Utilities Operational Device Management is enabled or set to ON. This ensures that Data Dictionary and Javadocs are generated without errors.

To generate the additional items in the application viewer:

1. Shut down the environment.
2. Initialize a command shell and setup the environment.

UNIX

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

For example:

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

Windows

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

For example:

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

- Execute the following script to generate all information.

UNIX

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

Windows

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

- 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.

To rebuild the Javadoc indexes:

Windows

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

UNIX

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

Configuring the Environment for Batch Processing

Refer to the *Server Administration Guide* for information about 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 inbound web services 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 inbound web services to take full advantage of the new, more efficient Web service technology.

For more information on migrating from XAI to IWS, 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 detailed instructions to deploy inbound web services, refer to *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Framework (Doc ID 2413918.1)* on My Oracle Support.

To deploy inbound web services:

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 options as below:

- “IWS Deployment Target” is recommended to be set to the server to which the web service EAR will be deployed.
- “Web Admin Server Host” is recommended to be set to the WebLogic admin server host.

Select option 52 and set the option as below:

- “This is a development environment” is recommended to set to true to allow web service deployment from the browser user interface.

Enter “P” to process.

2. Execute `initialSetup.sh`.

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

3. Create an Oracle WebLogic user configuration file (as <SPLEBASE>/etc/.wlsuserconfig) and an associated key file (as <SPLEBASE>/etc/.wlsuserkey).

Refer to the Oracle WebLogic product documentation on the storeUserConfig WLST command for additional details.

Make sure the admin server and web service target managed server(s) are running.

4. Run `initialSetup[.sh|.cmd] -i` to import the WebLogic server certificate into the Oracle Utilities Application Framework trust key store.

```
initialSetup.sh -i
```

5. Execute the step below in `$(SPLEBASE)/bin` to deploy the web service EAR file. 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:

- a. `cd $(SPLEBASE)/bin`
- b. Execute `configureEnv.cmd -a`

Select option 50 and set the options as below:

- “IWS Deployment Target” is recommended to be set to the server to which the web service EAR will be deployed.
- “Web Admin Server Host” is recommended to be set to the WebLogic admin server host.

Select option 52 and set the option as below:

- “This is a development environment” is recommended to set to true to allow web service deployment from the browser user interface.

Enter “P” to process.

2. Execute `initialSetup.sh`.

```
cd $(SPLEBASE)/bin
ksh ./initialSetup.cmd
```

3. Create an Oracle WebLogic user configuration file (as <SPLEBASE>/etc/.wlsuserconfig) and an associated key file (as <SPLEBASE>/etc/.wlsuserkey).

Refer to the Oracle WebLogic product documentation on the storeUserConfig WLST command for additional details.

Make sure the admin server and web service target managed server(s) are running.

4. Run `initialSetup[.sh|.cmd] -i` to import the WebLogic server certificate into the Oracle Utilities Application Framework trust key store.

```
initialSetup.cmd -i
```

- Execute the step below in \$SPLEBASE/bin to deploy the web service EAR file. Please note that the application server should be up before running the below command.

```
ksh ./iwsdeploy.cmd
```

Domain Templates

Configure the WebLogic application server to deploy it. Refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Framework* (Doc ID 2413918.1) on My Oracle Support for more details.

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.

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

```
=====
```

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>

- Once the Domain Home location has been completed, enter <P>.

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:

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

Chapter 9

Upgrading Oracle Utilities Customer To Meter

This chapter provides the instructions to upgrade Oracle Utilities Customer To Meter, including:

- [Upgrade Paths](#)
- [Before You Upgrade](#)
- [Upgrade Procedure](#)
- [Post-Upgrade Verifications](#)
- [Installing Service Packs and Patches](#)

Upgrade Paths

The following upgrade paths are applicable to this release:

- From v2.7.0.0.0 to v2.7.0.1.0

Note: Before you can upgrade you must have a prior version installed. If not, follow the procedures described in [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#) and [Chapter 7: Installing Oracle Utilities Customer To Meter](#) in this guide.

Before You Upgrade

Review the list of operating system, application server, and database server combinations supported for this version of Oracle Utilities Customer To Meter in the [Supported Platforms](#) section in [Chapter 3: Supported Platforms and Hardware Requirements](#).

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

Note: While upgrading a previously installed application server, it is recommended to take a backup before starting the upgrade procedure. The upgrade installation removes the existing environment including the configurations.

Upgrade Procedure

The upgrade installation procedure consists of:

- [Upgrading the Database Component](#)
- [Upgrading the Application Component](#)

Upgrading the Database Component

Upgrading the Oracle Utilities Service and Measurement Data Foundation database component must be complete before you can upgrade the application component.

Refer to the **Upgrade Install** section in the *Oracle Utilities Customer To Meter Database Administrator's Guide* for instructions to upgrade the database component.

Upgrading the Application Component

A successful upgrade consists of the following steps:

- [Upgrading the Oracle Utilities Application Framework Application Component](#)
- [Upgrading the Oracle Utilities Customer Care and Billing Application Component](#)

Upgrading the Oracle Utilities Application Framework Application Component

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

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

Copying and Decompressing Install Media for the Oracle Utilities Application Framework Application Component

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

Refer to the [Copying and Decompressing Install Media](#) section in [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#) for instructions on copying and decompressing install media.

Setting Permissions for the cistab file in UNIX for the Oracle Utilities Application Framework Application Component

Refer to the [Set Permissions for the cistab File in UNIX](#) section in [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#) for instructions.

Upgrading the Oracle Utilities Application Framework Application Component

To upgrade the Oracle Utilities Application Framework application component:

1. Login to the application server host as administrator (the default is cissys on **UNIX**) or as a user with administrator privileges (on Windows).

2. Change directory to the bin folder.

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

where <install_dir> is the location where the Oracle Utilities Application Framework V4.4.0.0.0 base application component is installed.

3. Initialize the environment by running the appropriate command:

UNIX

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

Windows

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

4. Change directory to the <TEMP_DIR>/FWV4.4.0.0.0 directory.

NOTE: While installing Application Framework V4.4.0.0.0 from the previous environment to Oracle Utilities Customer To Meter V2.7.0.1.0 the install utility removes the existing environment and re-creates the environment. Take a backup before you proceed with installing Application Framework V4.4.0.0.0 to retain any configurations for future reference.

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

UNIX

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

Windows Server

```
installSP.cmd
```

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

Upgrading the Oracle Utilities Customer Care and Billing Application Component

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

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

Copying and Decompressing Install Media

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

Refer to the [Copying and Decompressing Install Media](#) section in [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#) for instructions on copying and decompressing install media.

Upgrading the Application Component

Refer to the [Installing the Application](#) section in [Chapter 7: Installing the Application Server Component of Oracle Utilities Customer Care and Billing](#) for steps to upgrade the Oracle Utilities Customer Care and Billing application component.

Creating WebLogic Domain

With Oracle Utilities Application Framework V4.4.0.0 a WebLogic native installation is required. Refer to *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Application Framework (Doc ID 2413918.1)* on My Oracle Support for more information.

Post-Upgrade Verifications

After you complete the upgrade, verify the following:

1. Verify installation logs created under decompressed installer location for any errors.
2. Confirm that the installation logs do not contain any errors.
3. Confirm that all the configurations are correct.

Refer to the [Installation and Configuration Worksheets](#) section in [Chapter 4: Planning the Installation](#) for details.

4. Confirm that the database is ready.
5. Generate the Application Viewer.
6. Start the application server.

At this point, the installation is complete.

Refer to the *Oracle Utilities Customer Care and Billing Server Administration Guide* for more information on further configuring and operating the system.

Installing Service Packs and Patches

Periodically, Oracle Utilities releases a service pack of single fixes for its products. A service pack is an update to an existing release that includes solutions to known problems and other product enhancements. A service pack is not a replacement for an installation, but a pack consisting of a collection of changes and additions for it. The service pack may include changes to be applied to the application server, the database, or both. The service pack includes all files necessary for installing the collection of changes, including installation instructions.

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information about installing patches, refer to **Document ID 974985.1** on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support (<https://support.oracle.com/>).

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 roll-up, C2M-V2.7.0.1.0-FW-PREREQ-MultiPlatform.zip, which is included in the downloaded Media Pack.

Refer to the instructions included in the roll-up directory for steps to install the patches. The roll-up contains the following patches:

Bug Fix	Description
28922633	PLACEHOLDER FOR TO DO MANAGEMENT PORTAL FIXES
28942032	INTEGRATE NEW UI CHANGES [UPDATE 1116, 1121, 1129]
28943536	UNNECESSARY SCROLLBAR IN IFRAMES (PKAREAPKANEL)
28943625	GAP BETWEEN LABEL & FIELD IN OLD AND NEW STYLE PAGES
28943654	MISSING NEW CLOCK ICON
28943705	SEARCH ICONS ARE NOT ALIGNED ON OLD STYLE SEARCH PAGES
28943711	END OF ZONE LINE OVERLAPPING WITH TABLE IN CLOSING ZONE (DASHBOARD)
28975950	ADA : KEYBOARD FOCUS ISSUE IN DATA EXPLORER POP UP'S
28983549	COMMENT / LOG ICONS ON CURRENT TO DO ZONE ARE STRETCHED TO THE WIDTH OF THE ZONE
28987400	RADIO BUTTON SIZES ARE TOO BIG ON CHROME AND IE
28987420	HISTORY MENU LIST IS SHOWN INCONSISTENTLY, WHEN HISTORY VIEWED
29003938	RATE CHECK PAGE IS UNRESPONSIVE
29008460	INVALID VALUES IN DROPDOWNS ON DATAEXPLORER WHEN NAVIGATING BACK/FORWARD TO A PAGE
29015274	SEARCH MENU INPUT HAS A BORDER

Bug Fix	Description
29016780	PROCESS CONTROLLER ISSUES POST UI RESKIN
29020764	COPY OF 28884365 - COPY OF 28660926 - UNABLE TO ADD CHARACTERISTICS WHEN CREATING TO DO ENTRY AT IE11.0.9600
29021511	COMPLETION BANNER IN PROCESS CONTROLLER
29023096	INTEGRATE NEW UI CHANGES [UPDATE 1205]
29024305	COPY 28400576 - MDM WEBLOGIC SERVERS GOING INTO CRITICAL STATE AND THEN GOING INTO FAILED STATE
29024808	GROOVY JAVADOCS ARE NOT GENERATED IN 23000 ENVS (MAIN AND II)
29025833	LOGGING CHANGES TO SUPPORT CLOUD INSTALLATIONS
29028127	INTEGRATE NEW UI CHANGES [UPDATE 1206]
29029569	COPY 28584400 - MDM: UPDATE REPLACE ACTION TO NOT CALL UPDATE - REDUCE GC
29030254	PROCESS FLOW DELETE CONFIRMATION HAS CONFUSING TEXT
29041677	MENUS ARE NOT WORKING IN RTL ALIGNMENT
29047911	INTEGRATE NEW UI CHANGES [UPDATE 1211]
29053862	PROCESS CONTROLLER: IMAGE FIELDS ARE ACCESSIBLE VIA KEYBOARD IN READONLY PANELS
29058794	UI RESKIN - NEW LOGIN SCREEN
29138184	MISSING GRIDLINES FOR F1-CHARADDDDELETEBUTTON
29139592	UPGRADE SWAGGER UI TO 3.18.1
29139618	NEW APPLICATION LOGO FOR FRAMEWORK
29148046	EXTRA VERTICAL SPACING ON OLD STYLE SEARCH PAGES
29161746	TO DO MANAGEMENT PORTAL - MULTIPLE CHAR FILTERS ISSUE
29163044	IMPROVE ERROR HANDLING FOR JUST-IN-TIME PROVISIONING ON IDCS SERVLET FILTERS
29167072	OUIAF-6687: CNE BATCH DRAIN OUT
29168331	UI FIXES: REM GRID LINES FOR GRIDS IN DASHBOARD ZONES AND POS OF WORKLIST ICONS
29172836	UI RESKIN PACKAGE IMAGE, STYLESHEET UPDATES AND PROCESS CONTROLLER FIXES

Appendix B

Oracle Utilities Customer To Meter Fixes

The following table lists the product fixes included in this release:

Bug Number	Description
Oracle Utilities Customer Care and Billing	
19262743	JOINING TO FT ON SIBLING_ID
28512619	COPY OF 28473189 - ALGORITHM TYPE(CSEN-CC) IS TRYING TO CREATE WRONG CC CHAR
28519635	COPY OF 28058916 - BATCH TD-PYUPL, BASE CODE CIPQPYUB TO DO ISSUE
28528747	COPY OF 27912665 - CIPWEBPX ERROR WHEN RUNNING WFET BATCH
28535683	COPY OF 27507288 - VAT/CCL - DE-MINIMIS CALCULATION ISSUE
28558827	COPY OF 28491781 - DESCRIPTION COLUMN ON BILL SEGMENT CALC LINE SCREEN IS DISPLA
28558833	COPY OF 28411296 - BILLING BATCH GENERATES A WORK IN PROGRESS TODO'S WITH A DATE
28566430	COPY OF 25896444 - PERSON ADDRESS VALIDATION
28566514	COPY OF 26978686 - XML WIDTH SHOULD BE INCREASED TO SHOW TEXT IN A SINGLE LINE
28575151	UNABLE TO CREATE NON-CIS PAYMENT WITH CREDIT CARD AUTHORIZATION
28579101	COPY OF 27977926 - SEARCHING VIA GEOGRAPHIC TYPE IN CONTROL CENTRAL CAUSES CCB
28612517	COPY OF 27340473 - FA IS NOT BROADCASTED ON PREMISE->PREMISE PORTAL->SOM INFORMA
28618873	COPY OF 28086522 - CONTINUOUS ISSUE WITH BUG 27959364
28644530	COPY OF 28589857 - PREV QUANTITY SQ IS NOT FETCHED IN BSEG FOR BILLABLE CHARGE

Bug Number	Description
28695061	COPY OF 28565461 - PREMISE TREE DISPLAYS DUPLICATE ACCOUNT NODES
28695116	COPY OF 28222791 - PUPLS PROCESSED RECORDS COUNTER INCREMENTED FOR STAGINGS AND
28697462	COPY OF 27525486 - UNABLE TO DELETE ITEM OF TRACK LOCATION TYPE
28714970	COPY OF 28209381 - FA SYNC REQUEST ERRORS OUT FOR VALID DUPLICATE SA/SPS SCENARI
28749356	COPY OF 28730546 - RATE CHECK, RESULTS TAB, MAIN ZONE, CALCULATED AMOUNT DISPLAY
28770653	COPY OF 28718882 - CUP-409 - INCORRECT CURRENCY SIGN IS DISPLAYED UNDER ACCOUNT
28778155	COPY OF 28755132 - BILL ID FOREIGN KEY REFERENCE VALIDATION NOT WORKING
28789141	COPY OF 28148792 - UPGRADE 2.6 - ERROR LOADING C1FACOMPLETIONWITHSTEPS WSDL
28803424	COPY OF 28795940 - BILL SEGMENT ERROR WHEN METERED SQ IS NEGATIVE
28803430	COPY OF 28513100 - NO APPOINTMENT RETURNED FROM CC&B WITH DEFAULT ABG
28829001	COPY OF 27857094 - ALLOWING TO DEL THE TODO ROLE, WHICH IS IN USE ON RESPECTIVE
28867780	COPY OF 28530582 - WO EVT LTR ALGORITHM WILL NOT CREATE CUSTOMER CONTACT WITH PREDEFINED VALUE
28888701	APPOINTMENT VALIDATION MESSAGE ISSUE
28899929	COPY OF 28710677 - CUSTOMER CONTACT TYPE PHYSICAL BO MISSING CUSTOMARCHIVEELIGIBILITYCRITERIA
28971536	COPY OF 28298457 - SAACT CREATES ADDITIONAL CANCELED AND PENDING FAS FOR SAME DA
28980380	COPY OF 27956650 - CSS ENROLL ACCOUNT WITH INVALID ACCOUNT ID
29008045	COPY OF 28839697 - COMPLETED ORDER WIPES OUT PER_DATA_AREA WHEN ONE OF THE PENDI
Oracle Utilities Meter Data Management	
26396739	COPY OF 25920518 - D2-UTID BATCH NEEDS AN ADDITIONAL PARAMETER US TYPE
28194152	ER - IMPROVE HANDLING OF LARGE NUM OF RE-EVALUATE MSMRTS PREVENT STACKOVERFLOW
28571206	COPY OF 28570970 - SEQUENCE FIELD MISSING ERROR WHEN EDITING SCALAR READ IN UI

Bug Number	Description
28604868	COPY OF 28604858 - COPY OF 27792498 - ODM-MDM INTEGRATION - UNABLE TO NAVIGATE F
28673312	COPY OF 28513804 - IMD NOT CREATED FOR FIRST RECORD IN A LANDIS + GYR INTERVAL F
28674166	COPY OF 28533781 - MV90 PARSER : NEGATIVE VALUES ARE CONVERTED TO POSITIVE VALUE
28681879	COPY OF 28681876 - MDM DISCONNECT LOCATION IS NOT CUSTOMIZABL
28703155	COPY OF BUG 28703150 - USAGE SUBSCRIPTION SEARCH RETRIEVING MULTIPLE
28716802	US SEARCH PORTAL FAILS TO FIND EXISTING RECORDS BY USSP IDENTIFIER SEARCH
28722790	COPY OF 28514300 - MDM MANUAL READ ENTRY CAUSES NULL POINTER ISSU
28748615	COPY OF BUG 28706315 - MDM INBOUND SYNC ERROR - US FK RES ERROR & USMP PRE-ADD ERROR
28749100	DUPLICATE KEY ERROR IN HEADEND SYSTEM SCREEN
28769427	US SYNC REQUEST WITH STARTDATETIME GOES IN ERROR WHEN D2-TRNUS IS PLUGGED IN
28782686	COPY OF 28348896 - MATH RULE IMPLEMENT FILTER SP/ DEVICE CONFIG ALGO SPOT
28809846	COPY OF 28802897 - RATE CHECK THROWING ERROR USING THE `NEW
28809858	COPY OF 28788172 - COPY OF 28579210 - PARENT UT END RANGE OPTION: DERIVE USING
28815173	COPY OF 28815157 - UT CORRECTIONS WHEN READS IN MIDDLE OF UT PERIOD AND START/END READS UNAFFECTED
28825895	US MARKET PARTICIPANT DOES NOT TRANSITION FROM ACTIVE TO CANCELED
28850836	COPY OF 28850827 - MDM INAPPROPRIATELY RETURNING "NO USAGE GROUP" ERROR FOR CCB RATE CHECK
28885534	COPY OF 28674166 - MV90 PARSER : NEGATIVE VALUES ARE CONVERTED TO POSITIVE VALUE
28890729	COPY OF 28191541 RENAME BACKFILL TAG FROM SENDINVTERTVALDATETIMES TO SENDINTERVAL
28891303	COPY OF 28891295 - NAVIGATE TO CCB NOT RESPONDING
28891658	COPY OF 28827297 - COPY OF 28793650 - BILL PERIOD AND USAGE PERIOD ARE MISMATCHI
28891664	COPY OF 28826595 - COPY OF 28565113 - INFO: MDM SP3 ERROR ON Î²INTERVAL INITIAL

Bug Number	Description
28891678	COPY OF 28687870 - COPY OF 28685149 - NULL POINTER EXCEPTION OCCURS WHEN FINALIZ
28891682	COPY OF 28427996 - COPY OF 28264418 - SERVER ERROR WHEN USER CREATES USAGE TRANS
28891688	COPY OF 28376081 - COPY OF 28150650 - UT FOR MULTI SP W DIFFERENT UOM AND DYNAMI
28891689	COPY OF 28369097 - COPY OF 28247512 - EXPORT TO EXCEL NOT EXPORTING UT DATA IN A
28891715	COPY OF 26542007 - COPY OF 26541755 - MDF PERFORMANCE: USE TRUNCATE ON GTT
28891717	COPY OF 26403693 - COPY OF 26361683 - UNABLE TO PROCESS A REBILL IN MDM WHEN USA
28893829	COPY OF 28077033 SGG OPENWAY ADAPTER NOT MAPPING REGISTER READ STATUS CODE TO
28934195	COPY BUG 28870746 - INBOUND COMMUNICATION DOES NOT DISPLAY COMMUNICATION HEIRARCHY ZONE
28982222	COPY OF BUG 28408446 - EXPIRED DEVICE COMMAND ACTIVITIES INITIATING OUTBOUND COMMUNICATIONS
14365754	COPY OF 14041991 - EXP DATE IS OVER WRITTEN BY CREATE DATE FOR ALL THE ACTIVITIES
23496925	COPY OF BUG 23105849 - COMMUNICATION EXPIRATION TIMEOUT
27357685	POTENTIAL NPE CAN OCCUR ON SETTLEMENT TRANSACTION OBJECT
28420515	ASTERISK FOR SERVICE DATE TIME FIELD IS MISPLACED
28502169	ISSUES FOUND IN 2203 INITIAL INSTALL
28681741	COPY OF 28681739 - THE INTERVAL AUDIT VIEW (MC ON 360 DEGREE
28696908	COPY OF - BUG 28467526 - ERROR: "TO DO CREATED FOR DEVICE EVENT. (11801, 12306)"
28727436	COPY OF 28736241 - COPY OF 28672165 - INFO:MDMS LIBRARY CACHE WAIT ISSUE ON MDM PROD DUE TO OOB QUER
28742347	COPY OF - BUG 28474403 - C2M - CANNOT REQUEST APPOINTMENTS
28754985	COPY OF BUG 28533066 - RELATED OBJECTS LINK DOESN'T GET CREATED IN COMMUNICATION
28782264	COPY OF 28641508 - SGG L&G INTERVALS DOES NOT LOAD CORRECTLY FOR SPRING DST
28786508	PERFORMANCE: DATE TIME CONVERSION ERROR FOR IWS PAYLOADS - XAI TO IWS SERVICE CALLS

Bug Number	Description
28804435	COPY OF 28429611 - COPY OF 28404368 - COPY OF 27729523 - COPY OF
27419526	SP DOWNLOAD BATCH JOBS ERROR WHEN USING US TYPE METER EXCHANGE OPTION OF "DE
28813704	UPDATE SSN TO HANDLE 4.11 FIELDS
28826236	COPY OF 28739969 - OSB GENERATES ADDITIONAL RECORD FOR D1-PAYLOADERRORNOTIF WHENEVER THERE IS AN ERROR IN DATA FILE.
28849159	COPY OF 28781906 - REQUEST-RESPONSE TIMEOUT IN STATUSCHANGELISTENER
28886096	COPY OF 28673312 - IMD NOT CREATED FOR FIRST RECORD IN A LANDIS + GYR INTERVAL F
28903959	COPY OF 28430714 - COPY OF 27836788 - COPY OF 27346767 - PERFORMANCE: DATA CONNE
28921035	COPY OF 28709205 - COPY OF 28144253 - WHEN US HAS LOTS OF SPS 'OUTOFMEMORY' JAVA HEAP SPACE ERROR W
28925274	FW 4.4: SERVICE ORDER TRENDS DASHBOARD (ACTIVITY STATISTICS ZONE) - BUTTON LABELS ARE TRUNCATED.
28927734	COPY OF 28436790 - COPY OF 28135832 - APPOINTMENT BOOKING RESULTS ZONE DOES NOT HAVE PICKER ICONS F
28928667	COPY OF 28834488 - COPY OF 28513805 - PATCH: 28140905 DID WORK BATCH JOB STILL HIT THE OUT OF MEMORY AND HEAP ISSUE
28935454	COPY OF 28349219 - COPY OF 28349193 - STOP FA DISCONNECTING WHEN REALLY SHOULDN'
28935464	COPY OF 28615054 - COPY OF 28538017 - ALIGN & DELAY RULE CREATES INCORRECT ALIGN
28935477	COPY OF 28429805 - COPY OF 28429774 - COPY OF 28162247 - COPY OF 27621807 - INCO
28935486	COPY OF 28623427 - COPY OF 28557699 - INTERVAL SPIKE CHECK VEE RULE (D2-INTSPKCH
28952389	COPY OF BUG 28936813 - C2M - FIELD RELATED ACTIVITY MONITOR ALGORITHM D1-WTMTMOUTEX ISSUES ERROR
28952779	COPY OF 28727669 - COPY OF 28698132 - USAGE TRANSACTIONS FOR MULTI-ITEM SPS FAIL
28972798	COPY OF 28956098 - PERFORMANCE: DATE TIME CONVERSION ERROR FOR IWS PAYLOADS - XAI TO IWS SERVICE CALLS
29006869	SUMMARY OF ISSUES FOR MDM 23000 INITIAL INSTALL ENV
29020442	ZONE FILTERS UI REVIEW FOR FW 4.4 CHANGES
29024130	VALUE FIELDS FROM SERVICE POINT EDIT SCREEN ARE ALL OUT OF ALIGNMENT

Bug Number	Description
29029191	ZONE FILTERS UI REVIEW FOR FW 4.4 CHANGES FOR MENU
Oracle Utilities Work and Asset Management	
25898810	W1-WO BATCH PROCESS ALL WO EVEN IF RESTRICT BO IS SPECIFIED
28363393	COPY: LOCATION DOESN'T SHOW INSTALLED ASSETS BUT ASSETS ARE AS PART OF ASSET HIS
28506767	SERVER ERROR MESSAGE DISPLAYED WHEN CLICKED ON THE VENDOR LOCATION
28580548	COPY: THE SYSTEM IS GIVING USERS THE ABILITY TO RETURN MORE THAN
28606236	COPY: ASSET REPLICATION: REPLICATE ASSET - RESERVED, COMPLETION ERROR
28606249	COPY: WORK ORDER REPORT - ORA EXCEPTION ERROR
28606252	COPY: UNABLE TO DUPLICATE ODM ASSET
28621614	COPY: SPECIFICATION QUERY SEARCH ERRORS WHERE SEARCH CRITERIA OF >29 CHARA
28627680	COPY: ISSUE AFTER APPLIED WAM PATCH 28395060
28633571	COPY: CONCURRENCY ISSUE WITH DOCUMENT NUMBER GENERATION ALGORITHM
28640524	INVENTORY BLIND COUNT - LOT MANAGED
28665353	CREATE A GENERIC BO APP SERVICE THAT WILL BE USED IN C2MO
28667568	W1-QUESTION MIGRATION PLAN INCORRECT TRAVERSAL CRITERIA
28691517	COPY: RESOURCE (LABOUR) DESCRIPTION COMES UP BLANK WHEN YOU TRY TO EDIT IT
28691547	COPY: REORDER REVIEW - UNIT PRICE IS COMING IN AS ZERO
28705396	COPY: ERROR WHILE TRYING TO ADD A NOTE TO WORK ORDER
28710536	COPY: REORDER REVIEW QTY EXCEEDS SID MAX QUANTITY WHEN MASTER CONFIG ROUNDING SET
28711340	COPY: CREATE A WO TEMPLATE FROM THE EXISTING WORK ORDER [MAIN]
28711383	COPY: QUESTION SECTION NOT DISPLAYED WHEN A CMPL EVT IS EDITED [MAIN]
28716151	COPY: GIVE OPTION TO SEND WO ACTIVITY TO EXTERNAL SYSTEM ASYNCHRONOUSLY

Bug Number	Description
28716450	COPY: FOREIGN KEY TRANSLATIONS NEED TO USE MASTER DATA SYNC CFG INSTEAD OF ERP
28716558	COPY: TAX AMOUNT ISSUES ON PURCHASE ORDER FROM ERP TO WAM
28725799	COPY: DROP-DOWN LIST BY "ASSET TYPE" DOES NOT DISPLAY ALL AVAILABLE ASSET TYPE [MAIN]
28736714	COPY BUG 28736641 - OWNED ATTACHMENT: THERE ARE NO AVAILABLE BUSINESS OBJECT FOUND FOR MAINTENANCE OBJECT F1-ATCHMT.
28764444	COPY: RECEIPT ERROR ON PARTIAL RECEIPT OF PO AND PO VERSION CHANGE
28770136	COPY OF BUG 28564934 - BATCH CODE W1-STAT - RUN STATUS ERROR
28778914	COPY: BATCH STOCK REORDER PROCESSING
28784353	COPY: ATTACHMENTS - ATTACHMENTS ADDED TO TEMPLATE ACTIVITY ARE NOT FLOWING INTO ACTIVITY
28785562	APP SECURITY ACCESS ISSUES ENCOUNTERED WHILE TESTING SS
28791651	COPY - ABLE TO WITHDRAW THE PARENT PROJECT EVEN THOUGH A CHILD EXISTS WITH APPROVED OR
28791656	COPY: ABLE TO ASSOCIATE A PROJECT IN CREATED STATE TO AN APPROVED WORK ORDER
28810084	DUPLICATE REORDER REVIEW WHEN W1-SID IS EXECUTED EVEN WITH APPROVED PO
28857344	COPY WORK REQUEST: MISSING CREATE WORK DESIGN BUTTON AND APP SECURITY
28865391	SYNC REQUEST BOS BATCH CONTROL OUT OF SYNC BETWEEN DEV AND QA
28897429	COPY OF BUG 28811953 - ASSET CONDITION RATING SCORE ISSUE
28925114	COPY: MASTER: MULTIPLE ISSUES WITH PURCHASING, EXPENSE CODES, TAXES
28974541	COPY: DUPLICATION OF ASSET LOCATION WHILE EXECUTING CONSTRUCTION WORK ACTIVITY IN WACS [2.2.0.3.0]
29020697	COPY: ODM ACTIVITY CREATION THROWS WARNING ACCESSING A PRIVATE FIELD [2.2.0.3.0]
29030249	REMOVE ALL UNNECESSARY INACTIVE ALGORITHMS ON INBOUND SYNCs

Bug Number	Description
Oracle Utilities Customer To Meter	
27219998	{INFO}VALIDATION ERROR ON INITIAL SYNC OF CONTACT: UNABLE TO TRANSFORM CONTACT
28223592	COPY OF 28074616 - BILL SEGMENT ERROR IF MULTIPLE RATE VERSIONS ARE EFFECTIVE IN
28338659	CONTACT CONTEXT MENU AND GO TO NAVIGATION
28650430	C2MO:ERROR WHEN DELETING ASSET IN IN RECEIPT STATE
28667510	COPY OF 28667506 - C2M DASHBOARD CURRENT CONTEXT IS NOT UPDAT
28839298	COPY OF 28839227 - PERF: SCRIPT X1-UUTRANSD IMPROVE PERFORMAN
28878098	CCB-SA RELATIONSHIP SYNC
28898723	COPY OF 28653922 - C2MO: DEVICE CONFIGURATION AND MEASURING COMPONENTS NOT CREATED ON ASSET SYNC
28906632	COPY OF 28804901 - CCB PREMISE ADDRESS UPDATES NOT CASCADING TO MDM SP ADDRESS

Appendix C

Oracle Utilities Customer Care and Billing Post-release Patches

The following table lists the Oracle Utilities Customer Care and Billing post-release patches included in this release:

Bug Number	Description
27580126	FIX DESCRIPTION OF IWS - FORMS MANAGEMENT INBOUND XAI SERVICE
29038996	FIELDS ARE NOT DISPLAYED CORRECTLY ON MAINTENANCE UI MAP
29057125	UI RESKIN: VERIFY C1/IMAGES ARE UPDATED
29061172	PAPF - ALIGNMENT ISSUE ON PAYMENT ARRANGEMENT TYPE DOWNPAYMENT
29115131	PAPF - DUPLICATE PROCESS FLOWS CREATED WHEN AUTO-SAVE IS 'YES'
29115536	PAPF - SYSTEM DATA FIXES: WORK_FLD_SW, HELP AND DESCRIPTION FIXES
29115800	UI-RESKIN ISSUE: MISSING GRID LINES ON THE INLINE GRID
29118930	UI RESKIN - OLD STYLE SEARCH - ICON LOCATION
29125358	CHARACTERISTIC VALUE NOT GETTING DISPLAYED FOR CALCULATION RULE
29129934	PAPF - DAYS UNTIL NEXT BILL ALERT WHEN CIS DIVISION IS BLANK IN BILL CYCLE
29130027	APPLY DUP PERSON VALIDATION ONLY WHEN RECORD IS CHANGED
29140869	PAPF - PANEL LAYOUT CHANGES
29140983	UI RESKIN: NEW APPLICATION LOGO
29146615	UI RESKIN - OLD CAROUSEL CONTROL
29157896	UI RESKIN: VARIOUS ALIGNMENT ISSUES
29173408	CUSTOMER CONTACT DASHBOARD ZONE - NEW XSL

Bug Number	Description
29187385	UI RESKIN ISSUE: PA RQUEST DOWN PAYMENT AMOUNT AND DUE DATE DISPLAY
29190860	PAPF - SA GRID MISSING LEFT BORDER WHEN MANUAL SELECTION IS NOT ALLOWED
29194821	COPY OF PAPF - PA REQUEST DETAILS ZONE (USABILITY): PROVIDE DIRECT NAV TO PA REQUEST AND PA SA
29201739	ISSUES FOUND ON THE RATE SCHEDULE DISPLAY
29205293	PAPF - PA REQUEST ELIGIBILITY CRITERIA ADDITIONAL SCENARIO FOR PASS
