

Oracle Utilities Customer To Meter
Installation Guide
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Oracle Utilities Customer To Meter Installation Guide, Release 2.8.0.0.0

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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](#)
- [Acronyms](#)
- [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 Database Changes 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

Documentation updates are posted on the [Oracle Technology Network](#) page as they become available.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Acronyms

The following acronyms and terms are used in this document:

Term	Description
C2M	Oracle Utilities Customer To Meter
OUIAF	Oracle Utilities Application Framework
MDM	Oracle Utilities Meter Data Management
BI	Business Intelligence

Additional Resources

Additional and updated information about the product is available on [My Oracle Support](#).

For more information and support, visit the [Oracle Support](#) website.

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)
Minimum	Pentium IV - 2.0 GHz	1024 MB
Recommended	Pentium IV - 3.0+ GHz or any Core 2 Duo or any Athlon X2	2048 MB

Minimum monitor display size: 1920 X 1080.

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

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

Prerequisite Application Server Software

- Oracle Database Client 19c
- Oracle Java SE Development Kit 1.8.0_x (Windows, Solaris and Linux platforms only)
- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)

- Select jars from Hibernate ORM 4.1.0
- Oracle WebLogic Server 12c (Release 12.2.1.4) 64-bit

Notes

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

Refer to the *Certification Matrix for Oracle Utilities Products (Document ID 1454143.1)* document on [My Oracle Support](#) to determine if support for newer versions of the listed products have been added.

Please note the following:

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

Example: Oracle 12.1.0.2+ means that 12.1.0.2 and any higher 12.1.0.x versions of Oracle are supported.

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

Example: Linux 8.x indicates that any version of Linux 8 (8.0, 8.1, 8.2 etc) will be supported.

Windows Server

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

WebLogic Server

- Oracle WebLogic Server (Fusion Middleware Infrastructure) 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 19c
- Oracle Database Server Standard Edition 2 19c

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.
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

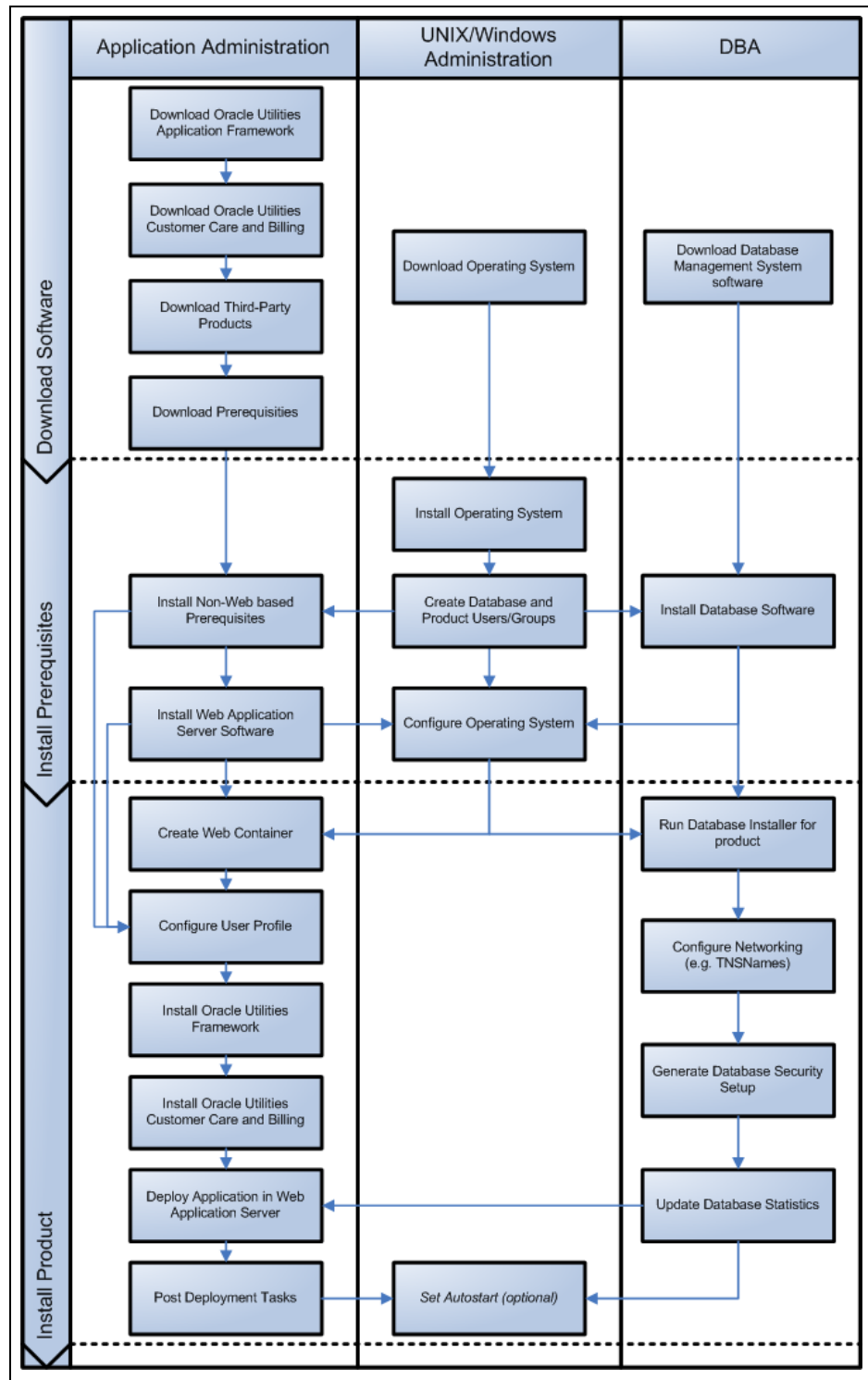
Planning the Installation

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 4.4.0.3.0, a WebLogic native installation is required. Refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Framework (Doc ID 2413918.1)* document on [My Oracle Support](#) for more information.

Application Server Clustering

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

Additional information about WebLogic clustering, refer to the [Fusion Middleware Using Clusters for Oracle WebLogic Server](#) documentation.

Directory Names

Directory cannot contain whitespace characters.

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 19c
 - Java 8
 - Hibernate 4.1.0
4. Install optional software.
5. Install web server Oracle WebLogic 12.2.1.4.

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 Care and Billing.
11. Install Oracle Utilities Customer Care and Billing prerequisite single fixes (if there are any).
12. Install Oracle Utilities Meter Data Management.
13. Install Oracle Utilities Operational Device Management.
14. Install Oracle Utilities Customer To Meter.
15. Install Oracle Utilities Customer To Meter prerequisite single fixes (if there are any).
16. Deploy the Oracle Utilities Customer To Meter application.
17. Complete the post-installation tasks.
18. 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 section in 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	
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 for more information.

Menu Block 2: Keystore Options

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

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

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

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

Note: Populate the “Import Keystore Directory” option to import an existing keystore.

Keystore options include:

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

Menu Block 50: Environment Installation Options

Environment installation options include:

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

Menu Block 1: Environment Description

The environment description menu option includes:

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

Menu Block 2: [WebLogic] Business Application Server Configuration

WebLogic Business Application Server configuration options include:

Menu Option	Name Used in Documentation	Customer Install Value
Business Server Host	BSN_WLHOST	
Business Server Application Name	BSN_APP	

Menu Block 3: [WebLogic] Web Application Server Configuration

WebLogic Web Application Server configuration options include:

Menu Option	Name Used in Documentation	Customer Install Value
Web Server Host	WEB_WLHOST	
Weblogic SSL Port Number	WEB_WLSSLPORT	
Weblogic Console Port Number	WLS_ADMIN_PORT	

Menu Option	Name Used in Documentation	Customer Install Value
Web Context Root	WEB_CONTEXT_ROOT	
WebLogic JNDI User ID	WEB_WLSYSUSER	
WebLogic JNDI Password	WEB_WLSYSPASS	
WebLogic Server Name	WEB_WLS_SVRNAME	
Web Server Application Name	WEB_APP	
Deploy Application Viewer Module	WEB_DEPLOY_APPVIEWER	
Enable The Unsecured Health Check Service	WEB_ENABLE_HEALTHCHECK	
MDB RunAs User ID	WEB_IWS_MDB_RUNAS_USER	
Super User Ids	WEB_IWS_SUPER_USERS	

Menu Block 4 - Database Configuration

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

Menu Option	Name Used in Documentation	Customer Install Value
Application Server Database User ID	DBUSER	
Application Server Database Password	DBPASS	
XAI Database User ID	XAI_DBUSER	
XAI Database Password	XAI_DBPASS	
Batch Database User ID	BATCH_DBUSER	
Batch Database Password	BATCH_DBPASS	
Web JDBC DataSource Name	JDBC_NAME	
Database Name	DBNAME	
Database Server	DBSERVER	
Database Port	DBPORT	
ONS Server Configuration	ONSCONFIG	

Menu Option	Name Used in Documentation	Customer Install Value
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	

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		

Menu Option	Name Used in Documentation	Customer Install Value
SOA WebLogic User Name		
SOA WebLogic User Password		
Specify the Path for XAI/IWS Service	XAIApp/xaiservt	

Menu Block 10 - SOA Configuration Plan (MDM)

The SOA configuration plan (MDF) includes:

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

Menu Option	Name Used in Documentation	Customer Install Value
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		
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	

Menu Option	Name Used in Documentation	Customer Install Value
Headend Http Connection Timeout	50000	
The name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 19 - SOA Configuration Plan (SSN)

The SOA configuration plan (Sensus) includes:

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

Menu Option	Name Used in Documentation	Customer Install Value
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.ssnsnsgs.net:3000/amm/webservice/v2_1/JobManagerPo...	
The name of the OWSM policy to use when SOA calls a head end system	oracle/ http_basic_auth_over_ssl_client_policy	
The name of the OWSM policy to use when SOA is called by a head end system	oracle/ http_basic_auth_over_ssl_service_policy	

Menu Block 20 - SSN JMS Source Destination Bridge Configuration

The SSN JMS Source Destination Bridge configuration includes:

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

Menu Block 21 - DG Reference Implementation SOA Configuration

The DG Reference Implementation SOA configuration includes:

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

Menu Option	Name Used in Documentation	Customer Install Value
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		
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		

Menu Option	Name Used in Documentation	Customer Install Value
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:

Linux/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
OAAF DBMS Scheduler User	OAAF_DBMS_SCHEDULER_USER	
WebLogic ThreadPoolWorker Enabled	WLS_THREADPOOLWORKERENABLED	
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	

Menu Option	Name Used in Documentation	Customer Value Install
JDBC Read Timeout	JDBC_TIMEOUT	
Enable JMS Global Flush for Batch	ENABLE_JMS_GLOBAL_FLUSH	
Add UsernameToken.xml	ADD_USERNAMETOKEN_XML	
IWS deployment target	WLS_CLUSTER_NAME	
Web Admin Server Host	WEB_ADMIN_SERVER	
Split File Size in MB	TEMPSTORAGE_SPLITFILESIZE	
GIS Service Running on the same Web Server	GIS	
GIS Service URL	GIS_URL	
GIS WebLogic System User ID	GIS_WLSYSUSER	
GIS WebLogic System Password	GIS_WLSYSPASS	
Online Display Software Home	ONLINE_DISPLAY_HOME	
Max Queries To Hold In Cache Across All Threads	XQUERIES_TO_CACHE	
Seconds Timeout Flush Cache Completely	XQUERY_CACHE_FLUSH_TIMEOUT	

Menu Block 51 - WebLogic Advanced Environment Memory Configuration

WebLogic advanced environment memory configurations include:

Menu Option	Name Used in Documentation	Customer Value Install
Global JVM Arguments	GLOBAL_JVMARGS	
Ant Min Heap Size	ANT_OPT_MIN	
Ant Max Heap Size	ANT_OPT_MAX	
Ant Additional Options	ANT_ADDITIONAL_OPT	
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	
Thread Pool Worker 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	
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 Option	Name Used in Documentation	Customer Install Value
Enable Strict Transport Security	STRICT_TRANSPORT_SECURITY	
Strict Transport Security Max Age	HSTS_MAX_AGE	
Strict Transport Security Include Subdomains	HSTS_SUBDOMAINS	
Strict Transport Security Preload	HSTS_PRELOAD	

Menu Block 54 - WebLogic Diagnostics

WebLogic diagnostic options include:

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

Menu Block 55 - URI, File and URL Related Options

URI, File and URL Related Options include:

Menu Option	Name Used in Documentation	Customer Install Value
Restriction URIs Enable	CLOUD_RESTRICTION_URIS_ENABLE	
Custom SQL Security	CUSTOM_SQL_SECURITY	
White List Full Path	CLOUD_WHITE_LIST_PATH	
Custom White List Full Path	CLOUD_CUSTOM_WHITE_LIST_PATH	
Substitution Variable List File Location	CLOUD_SUBSTITUTION_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	

Menu Option	Name Used in Documentation	Customer Install Value
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	
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	

Menu Option	Name Used in Documentation	Customer Install Value
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 8.x and Red Hat Linux 8.x Application Server](#)
- [Solaris 11.4+ \(64-bit\) Application Server](#)
- [Windows 2012 Application Server](#)
- [Additional Prerequisite Software Information](#)

AIX Application Server

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

Supported Application Servers

Operating System	Chipsets	Application Server
AIX 7.1 TL5 and 7.2 TL3+ (64-bit)	POWER 64-bit	Oracle WebLogic (12.2.1.4) 64-bit version

Web/Application Server Tier

AIX 7.1 TL5 and 7.2 TL3+ 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 19c 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), make sure 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 (12.2.1.4) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12c Release 2 (12.2.1.4) 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 8.x and Red Hat Linux 8.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 12.2.1.4 (64-bit)
Oracle Linux 8.x (64-bit) Red Hat Enterprise Linux 8.x (64-bit)		

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

Web/Application Server Tier

Oracle Enterprise Linux 8.x or Red Hat Enterprise Linux 8.x Operating System Running on x86_64 64-bit Architecture

UNIX Administrator UserID

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

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

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

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

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

1. Create 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 19c 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 (12.2.1.4) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12.2.1.4.

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 11.4+ (64-bit) Application Server

This section describes the software requirements for operating the application using the Sun Solaris 11.4+ (64-bit) application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Solaris 11.4+ (64-bit)	SPARC	Oracle WebLogic 12.2.1.4 (64-bit)

Web/Application Server Tier

Solaris 11.4+ (64-bit) 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 19c 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 (12.2.1.4) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12c Release 2 (12.2.1.4) 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 12.2.1.4 (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 19c - Runtime Option

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

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

Oracle Java Development Kit 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 (12.2.1.4) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 12c Release 2 (12.2.1.4) 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) 12.2.1.4.
2. Install Oracle Java SE Development Kit 1.8.0_261 (if not installed yet).
3. Shutdown the application server environment.

4. Take a full backup of the application:

```
$SPLEBASE
```

5. Set the environment:

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

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

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

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

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

7. Set the environment again.

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

8. Upgrade the Oracle Utilities Application Framework to V4.4.0.3.0.

```
install.sh -u
```

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 **Appendix 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 V4.4.0.3.0 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

To copy and decompress the Oracle Utilities Customer To Meter installation media:

1. Download Oracle Utilities Customer To Meter V2.8.0.0.0 from Oracle Software Delivery Cloud (eDelivery) and extract the following:
 - Oracle Utilities Application Framework V4.4.0.3.0 Application Installation Media
 - Oracle Utilities Application Framework V4.4.0.3.0 Single Fix Prerequisite Rollup for Oracle Utilities Customer To Meter V2.8.0.0.0 (if there is any)
 - Oracle Utilities Customer Care and Billing v2.8.0.0.0 for Multiplatform
 - Oracle Utilities Customer Care and Billing V2.8.0.0.0 Single Fix Prerequisite Rollup for Oracle Utilities Customer to Meter V2.8.0.0.0 (if there is any)
 - Oracle Utilities Meter Data Management V2.4.0.0.0 Multiplatform
 - Oracle Utilities Work and Asset Management v2.3.0.0.0 Multiplatform
 - Oracle Utilities Customer to Meter V2.8.0.0.0 for Multiplatform
 - Oracle Utilities Customer to Meter V2.8.0.0.0 Single Fix Prerequisite Rollup for Oracle Utilities Customer to Meter V2.8.0.0.0 (if there is any)
2. Copy the following Oracle Utilities Customer To Meter files to your local machine:
 - FW-V4.4.0.3.0-Multiplatform
 - C2M-V2.8.0.0.0-FW-PREREQ-MultiPlatform (if there is any)
 - CCB-V2.8.0.0.0-Multiplatform
 - CCB-V2.8.0.0.0-Rollup-MultiPlatform (if there is any)
 - MDM-V2.4.0.0.0-Multiplatform
 - Oracle Utilities Work and Asset Management V2.3.0.0.0 Multiplatform
 - C2M-V2.8.0.0.0-Multiplatform
 - C2M-V2.8.0.0.0-Rollup-MultiPlatform (if there is any)

The Oracle Utilities Application Framework V4.4.0.3.0 installation file is delivered in jar format for both UNIX and Windows platforms.

If you are planning to install multiple Oracle Utilities Application Framework V4.4.0.3.0 environments operated by different Oracle Utilities administrator user IDs, you must complete each of the following installation steps for each administrator 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 V4.4.0.3.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as `c:\ouaf\temp` or `/ouaf/temp`. (Referred to below as <TEMPDIR>.)

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

4. Copy the file `FW-V4.4.0.3.0-MultiPlatform.jar` from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the `BINARY` option for the FTP transfer.
5. Decompress the file:

```
cd <TEMPDIR>
```

```
jar -xvf FW-V4.4.0.3.0-MultiPlatform.jar
```

Note: 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-V4.4.0.3.0” 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-V4.4.0.3.0` directory named `cistab_<SPLENVIRON>.sh`. Run the generated script using the root account before continuing with the installation process. The script initializes the `cistab` file in `/etc` directory (if it is the first Oracle Utilities 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. Login 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 **Appendix 5: Installing Application Server Prerequisite Software**.
3. Change directory to the <TEMPDIR>/FW-V4.4.0.3.0 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 **Appendix 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 **Appendix 5: Installing Application Server Prerequisite Software**. You will need to obtain specific information for the install.
3. Change directory to the <TEMPDIR>/FW-V4.4.0.3.0 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 <SPLDIR>/<SPLENVIRON> directory
- \$\$SPOUTPUT (%\$SPOUTPUT%) - stands for <SPLDIROUT>/<SPLENVIRON> directory
- \$\$SPLENVIRON (%\$SPLENVIRON%) - environment name

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

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

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

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

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

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 `ResetCryptographyKey` programs are run.

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

Note: The database utility `ORADBI` does not require the keystore files. 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
```

- 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:

- Run the following command:

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

- 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:

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

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

- Run `$SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd` and follow the prompts. You can use the `-h` option to obtain help.
- 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 Application Framework V4.4.0.3.0 Prerequisite Single Fixes](#)
 - [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0](#)
 - [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches](#)
 - [Installing Oracle Utilities Meter Data Management V2.4.0.0.0](#)
 - [Installing Oracle Utilities Operational Device Management V2.3.0.0.0](#)
 - [Installing Oracle Utilities Customer To Meter V2.8.0.0.0](#)
 - [Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches](#)
- [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 V4.4.0.3.0

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 Application Framework V4.4.0.3.0 Prerequisite Single Fixes](#)
- [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0](#)
- [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches](#)
- [Installing Oracle Utilities Meter Data Management V2.4.0.0.0](#)
- [Installing Oracle Utilities Operational Device Management V2.3.0.0.0](#)
- [Installing Oracle Utilities Customer To Meter V2.8.0.0.0](#)
- [Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches](#)

Installing Oracle Utilities Application Framework V4.4.0.3.0 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-V2.8.0.0.0-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 V4.4.0.3.0:

1. Copy the C2M-V28000-FW-PREREQ-MultiPlatform.jar file in the delivered package to a <TEMPDIR>.

2. Unjar the file.

```
jar -xvf C2M-V28000-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/splenviron.sh -e $SPLENVIRON
```


Windows

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

4. Install application patches.
 - a. Navigate to the <temp location>/FW-V4.4.0.3.0-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 Care and Billing V2.8.0.0.0

This section describes the steps 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](#)

Copying and Decompressing Install Media

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

Oracle Utilities Customer To Meter 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. Login 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 To Meter application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file CCB-V2.8.0.0.0-MultiPlatform.jar in the delivered package to a <TEMPDIR>. To use FTP to transfer this file, make sure to use the BINARY option.
4. Decompress the file:

```
cd <TEMPDIR>
```

```
jar -xvf CCB-V2.8.0.0.0-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://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.V2.8.0.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Preparing for the Installation

1. Login as an Oracle Utilities Customer To Meter Administrator (default is “cissys”).
2. Initialize the Framework environment that you want to install the product into.

UNIX:

```
$$PLEBASE/bin/splenvron.sh -e $$PLENVIRON
```

Windows:

```
$$PLEBASE\bin\splenvron.cmd -e %$PLENVIRON%
```

3. Stop the environment if running.

Installing the Oracle Utilities Customer Care and Billing Application Component

To install the Oracle Utilities Customer To Meter application:

1. Change to the <TEMPDIR>/CCB.V2.8.0.0.0 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. Run the following 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 To Meter Application product.

- Run 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> (you don't need to change anything)

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

- 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 Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches

The 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-V2.8.0.0.0-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: Post-release Patches](#).

To install the application and database patches on top of Oracle Utilities Customer Care and Billing 2.8.0.0.0:

- Copy the `CCB-V28000-Rollup-MultiPlatform.jar` file in the delivered package to a `<TEMPDIR>`.

- Unjar the file.

```
jar -xvf CCB-V28080-Rollup-MultiPlatform.jar
```

- Initialize the Oracle Utilities Customer Care and Billing environment where the Oracle Utilities Customer Care and Billing patch rollup has to be installed.

UNIX

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

Windows

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

4. Install application patches.
 - a. Navigate to the <temp location>/CCB-V2.8.0.0.0-Rollup/Application folder.
 - b. Run the group installation script.

UNIX/Linux

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

Windows

```
installSFgroup.cmd
```

5. Start up the environment.

Installing Oracle Utilities Meter Data Management V2.4.0.0.0

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.

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. Login to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Meter Data Management V2.4.0.0.0 Multiplatform.zip from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>)

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

4. Unzip Oracle Utilities Meter Data Management V2.4.0.0.0 Multiplatform.zip to get the file MDM_V2.4.0.0.0.zip from the delivered package and copy to the <TEMPDIR>. To use FTP to transfer this file, use the BINARY option.
5. Decompress the file:

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

```
cd App
```

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

Installing the Oracle Utilities Meter Data Management Application Component

To install the Oracle Utilities Meter Data Management application component:

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

2. Change directory:

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

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

3. Initialize the environment by running the appropriate command:

UNIX

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

Windows

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

4. Navigate to <TEMPDIR>/MDM.V2.4.0.0.0 directory.
5. Run the install script.

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

UNIX

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

Windows

```
install.cmd
```

6. Choose option P to proceed with the installation.

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

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

Installing Oracle Utilities Operational Device Management V2.3.0.0.0

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. Login 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 V2.3.0.0.0 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-V2.3.0.0.0-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.
5. Decompress the file.

```
cd <TEMPDIR>
jar -xvf WAM-V2.3.0.0.0-Multiplatform.jar
```

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

A sub-directory W1.V2.3.0.0.0 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. Login 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 V4.4.0.3.0 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.V2.3.0.0.0 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 Customer To Meter V2.8.0.0.0

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 V2.8.0.0.0.

Download the installation package and proceed as follows:

1. Login 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.V2.8.0.0.0-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-V2.8.0.0.0-MultiPlatform.jar
```

For UNIX platform, a sub-directory named C2M.V2.8.0.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

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. Login 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.V2.8.0.0.0 directory.
2. Run the following 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`.

Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches

The Oracle Utilities Customer To Meter patches must be installed after installing Oracle Utilities Customer To Meter.

The patches are available as a convenience rollup inside the C2M-V2.8.0.0.0-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: Post-release Patches](#).

To install the application and database patches on top of Oracle Utilities Customer To Meter 2.8.0.0.0:

1. Copy the C2M-V28000-Rollup-MultiPlatform.jar file in the delivered package to a <TEMPDIR>.
2. Unjar the file.

```
jar -xvf C2M-V28080-Rollup-MultiPlatform.jar
```

3. Initialize the Oracle Utilities Customer To Meter environment where the Oracle Utilities Customer To Meter patch rollup has to be installed.

UNIX

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

Windows

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

4. Install application patches.
 - a. Navigate to the <temp location>/C2M-V2.8.0.0-Rollup/Application folder.
 - b. Run the group installation script.

UNIX/Linux

```
chmod a+x installSFgroup.sh  
chmod a+x C2M*/*.sh  
./installSFgroup.sh
```

Windows

```
installSFgroup.cmd
```

5. Start up the environment.

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

To enable Oracle Utilities Operational Device Management:

1. Run 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, then 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

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

For example:

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

Windows

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

For example:

```
D:\ouaf\TEST_ENVIRON1\bin\splenviron.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 IWS in the next release. The duplicated services are designed to work seamlessly in this release, and customers providing custom services are encouraged to migrate to IWS to take full advantage of the new, more efficient Web service technology.

For more information about 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.

To deploy IWS:

UNIX

1. Enable the Web Services Functionality.

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

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

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

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

3. Set the classpath.

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

4. Run the following command:

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

Select **y**.

5. Execute the below step in `$SPLEBASE/bin`. Make sure that the application server is up and running.

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


Windows

1. Enable the Web Services Functionality.

```
cd %SPLEBASE%\bin
```
2. Execute `configureEnv.cmd -a`.
 Select option **50** and set the option “Enable Web Services Functionality” to true.
 Enter **P** to process.
3. Execute `initialSetup.cmd`.

```
cd %SPLEBASE%\bin initialSetup.cmd
```
4. Set the classpath.

```
set CLASSPATH=%WL_HOME%\server\lib\weblogic.jar;%CLASSPATH%
```
5. Execute the following command:

```
java weblogic.Admin -username system -password ouafadmin
STOREUSERCONFIG -userconfigfile %SPLEBASE%\etc\wlsuserconfig -
userkeyfile %SPLEBASE%\etc\wlsuserkey
Select y
```
6. Execute the following command in `%SPLEBASE%\bin`. Make sure the application server is up and running.

```
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.

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

```
=====
```

4. 02. Configuration Option: Domain Home Location
 Current Value <ENTER>:

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

Enter Value: <Enter your domain home location>

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

Database Patching

The database patching utility is delivered under SPLEBASE and is Java-based so you are able to create a standalone package to be able to install database patches on a separate server that has Java 8 installed. You can also install database patches using the components that are delivered under SPLEBASE without the need to move the database patching utility to a different server.

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

To generate the jar file:

1. Initialize a command shell:

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

UNIX

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

In the following example, replace the variables:

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

To initialize the environment enter:

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

For example:

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

Windows

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

In the below example you should replace the following variables:

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

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

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

For example:

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

- Execute the following script to generate the jar file.

UNIX

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

Windows

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

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

- Transfer the generated jar (`db_patch_standalone.jar`) to the Windows/Unix machine where you want to run the database patching utility.
- 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_43030_BLD001,slc04lds:1522:Z143Q12C"
```

- Sample Execution – Prompting for a Password

```
./ouafDatabasePatch.sh -p "-t O -d
CISADM_Z1_12C_43030_BLD001,slc04lds:1522:Z143Q12C"
```

- Sample Execution - passing in the tools bin location

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

WINDOWS Example

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

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

Windows Sample - Database Patch Application (ouafDatabasePatch.cmd)

- Sample Execution – Passing a Password

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

- Sample Execution – Prompting for a Password

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

- Sample Execution - passing in the tools bin location

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

Windows Sample Usage:

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

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

For information about implementation scenarios, refer to the *Oracle Utilities Customer to Meter Solution Implementation Guidelines* document at <https://www.oracle.com/partners/en/products/industries/utilities/customer-solution/secure/implementation-guidelines-4024252.pdf>.

Upgrade Paths

The following upgrade paths are applicable to this release:

- From V2.6.0.0.0, V2.6.0.1.0, V2.7.0.0.0, V2.7.0.1.0 or V2.7.0.3.0 to V2.8.0.0.0

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.

Copying and Decompressing Install Media for the Oracle Utilities Customer To Meter Database and Application Components

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 Customer To Meter 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.

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 Oracle Utilities Customer Care and Billing to Oracle Utilities Customer To Meter V2.8.0.0.0](#)
- [Upgrading Oracle Utilities Meter Data Management to Oracle Utilities Customer To Meter V2.8.0.0.0](#)
- [Upgrading Oracle Utilities Operational Device Management to Oracle Utilities Customer To Meter V2.8.0.0.0](#)
- [Upgrading Oracle Utilities Customer To Meter to Oracle Utilities Customer To Meter V2.8.0.0.0](#)

Upgrading Oracle Utilities Customer Care and Billing to Oracle Utilities Customer To Meter V2.8.0.0.0

This section assumes that only Oracle Utilities Customer Care and Billing exists on top of Oracle Utilities Application Framework. Make sure to perform the following for upgrade.

Upgrading Oracle Utilities Application Framework

For instructions, refer to [Installing Oracle Utilities Application Framework](#).

To upgrade, use the following command:

```
Unix: ksh ./install.sh -u
Windows: install.cmd -u
```

Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes

For instructions, refer to [Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes](#).

Upgrading Oracle Utilities Customer Care and Billing V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0](#).

Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches](#).

Installing Oracle Utilities Meter Data Management V2.4.0.0.0

For instructions, refer to [Installing Oracle Utilities Meter Data Management V2.4.0.0.0](#).

Installing Oracle Utilities Operational Device Management V2.3.0.0.0

For instructions, refer to [Installing Oracle Utilities Operational Device Management V2.3.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches](#).

Upgrading Oracle Utilities Meter Data Management to Oracle Utilities Customer To Meter V2.8.0.0.0

This section assumes that only Oracle Utilities Meter Data Management exists on top of Oracle Utilities Application Framework.

Perform the following to upgrade Oracle Utilities Meter Data Management to Oracle Utilities Customer To Meter.

Upgrading Oracle Utilities Application Framework

For instructions, refer to [Installing Oracle Utilities Application Framework](#).

To upgrade, follow the command:

```
Unix: ksh ./install.sh -u
Windows: install.cmd -u
```

Note: The upgrade install does not clean files of libraries that were removed from the latest version:

Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes

For instructions, refer to [Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes](#).

Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0](#).

Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches](#).

Upgrading Oracle Utilities Meter Data Management V2.4.0.0.0

For instructions, refer to [Installing Oracle Utilities Meter Data Management V2.4.0.0.0](#).

Installing Oracle Utilities Operational Device Management V2.3.0.0.0

For instructions, refer to [Installing Oracle Utilities Operational Device Management V2.3.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches](#).

Upgrading Oracle Utilities Operational Device Management to Oracle Utilities Customer To Meter V2.8.0.0.0

This section assumes that only Oracle Utilities Operational Device Management exists on top of Oracle Utilities Application Framework.

Perform the following to upgrade Oracle Utilities Operational Device Management to Oracle Utilities Customer To Meter.

Upgrading Oracle Utilities Application Framework

For instructions, refer to [Installing Oracle Utilities Application Framework](#).

To upgrade, use the following command:

```
Unix: ksh ./install.sh -u
Windows: install.cmd -u
```

Note: The upgrade install does not clean files of libraries that were removed from the latest version.

Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes

For instructions, refer to [Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes](#).

Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0](#).

Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches](#).

Installing the Oracle Utilities Meter Data Management V2.4.0.0.0

For instructions, refer to [Installing Oracle Utilities Meter Data Management V2.4.0.0.0](#).

Upgrading Oracle Utilities Operational Device Management V2.3.0.0.0

For instructions, refer to [Installing Oracle Utilities Operational Device Management V2.3.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches](#).

Upgrading Oracle Utilities Customer To Meter to Oracle Utilities Customer To Meter V2.8.0.0.0

This section assumes that only Oracle Utilities Customer To Meter exists on top of Oracle Utilities Application Framework.

Perform the following to upgrade Oracle Utilities Customer To Meter to Oracle Utilities Customer To Meter.

Upgrading Oracle Utilities Application Framework

For instructions, refer to [Installing Oracle Utilities Application Framework](#).

To upgrade, use the following command:

```
Unix: ksh ./install.sh -u
Windows: install.cmd -u
```

Note: The upgrade install does not clean files of libraries that were removed from the latest version.

Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes

For instructions, refer to [Installing Oracle Utilities Application Framework V4.4.0.3.0 Prerequisite Single Fixes](#).

Upgrading Oracle Utilities Customer Care and Billing V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0](#).

Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer Care and Billing V2.8.0.0.0 Post-release Patches](#).

Upgrading Oracle Utilities Meter Data Management V2.4.0.0.0

For instructions, refer to [Installing Oracle Utilities Meter Data Management V2.4.0.0.0](#).

Upgrading Oracle Utilities Operational Device Management V2.3.0.0.0

For instructions, refer to [Installing Oracle Utilities Operational Device Management V2.3.0.0.0](#).

Upgrading Oracle Utilities Customer To Meter V2.8.0.0.0

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0](#).

Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches

For instructions, refer to [Installing Oracle Utilities Customer To Meter V2.8.0.0.0 Post-release Patches](#).

Creating WebLogic Domain

With Oracle Utilities Application Framework V4.4.0.3.0 a WebLogic native installation is required. Refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities Application Framework (Doc ID 2413918.1)* document 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 Work and Asset Management or Oracle Utilities Operational Device Management 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 on [My Oracle Support](#).

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-V2.8.0.0-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
30089702	C2M ADMIN/MAIN MENU SUPPRESSION ISSUE
32401509	COPY OF 32378579 - IN 20C AFTER PATCH 32302799 APPLIED, RAW NODE IN DATA AREA ST
32469950	COPY OF BUG: 32468664 TPW THREAD HANGS FOR D1 SGG BATCH SGGFILEUPLOADPROCESS
32488532	SLP MODE - ERROR 400 IN POP UP DURING BILL GENERATION IN CCB
32495665	NULLPOINTEREXCEPTION IN PREPARETREENODESERVICE FOR INSIGHT TYPE WITH NO INSIGHTS
32497991	WHEN RETRIEVE ICON SET TO TRUE DESCRIPTION IS NOT DISPLAYED
32498722	COPY OF 32348186 - CANNOT LOAD SPS GETTING ORA-00904: "D1_SP"."D1_SP_ID": INVALID IDENTIFIER FOR JOB D1SP000I
32498812	INTERNAL (NO-OP) CHANGE ORIGINALLY TARGETED FOR AIX
32500759	COPY OF BUG 32130188 - CX REST API- ISSUES ON REST SERVICE QUERY PARAMETER USAGE
32501159	COPY OF 32489069 - COPY OF 32206090 - ENABLE BUSINESS SERVICE C1-CONVERTXMLTOSTR
32509537	COPY OF 32300976 - JMXRMI LOGIN ISSUE
32511902	GDE INITIATOR BATCH SHOULD DISTRIBUTE COPYTOORACLE PARAMTER TO CONFIGURED GDE BATCHES

Bug Fix	Description
32512199	COPY OF BUG 32156596 - ERROR "ECHILDREN IS UNDEFINED" IS ENCOUNTERED IN CONTROL CENTRAL SEARCH
32523813	BACKPORT 32523659 - GROOVY COMPATIBILITY - DEPRECATE TEMPORARY WORKAROUNDS API ME
32525163	BACKPORT OF OUAF-23554 - CLEAR SINGLESEARCH BOX AFTER NAVIGATION
32525190	BACKPORT OF BUG 32499211 - ICONS ARE RENDERING AS DESCRIPTIONS ON THE TREE
32525254	BACKPORT OF OUAF-23535 - LIST INSIGHT NO POSITIVE NO LIST DISPLAYED
32525297	BACKPORT OF BUG 32176160 - POST-PROCESSING SCRIPT HAS NO KNOWLEDGE OF PREVIOUS VS NEXT COMMAND
32525322	BACKPORT OF OUAF-23071 - SEVERAL PAGES ARE NOT USING THE FULL VERTICAL SPACE
32528119	COPY OF 32501845 - SET TIMEZONE ON DBMS SCHEDULER CALLS IN SP
32529904	COPY OF 32411083 - MATERIALIZE HINT REMOVED FROM QUERY IN GROOVY
32529985	COPY OF 32458558 - 20C - MARKET MESSAGE PORTAL ISSUE - UNION ALL
32530087	COPY OF 31947930 - THREADS REMAIN IN PENDING WHEN A SINGLE THREAD SUBMISSION IS
32535205	COPY OF BUG 32331611 - INTERMITTENT JAVA ERROR ENCOUNTERED AGAIN AFTER RUNNING F1-FLUSH (4.4.0.3.0)
32549752	COPY OF BUG 32402295 - F1-MGDPR HAS FAILED WITH: SEVERE - JAVA - THREAD HAS EXCEEDED MAXIMUM RETRY LIMIT IN 20C
32558923	COPY OF 32484228 - AFTER 32302799 AND 32378579 PATCHES, DATA FOR RAW NODE NOT BE
32567576	COPY OF 32567103 - NULLPOINTEREXCEPTION WHEN TPW IS STOPPED
32582692	COPY OF 32520055 - READ END DEAD ERROR ON K1-CNVLD BATCH
32587651	SHORT INFO AND DETAILED GROUP ELEMENTS SHOULD POPULATE WHEN THE RETRIEVE ICON IS SET TO FALSE IN INPUT
32588367	TREE NODES ZONE SHOWS INCORRECT NODES
32588440	BACKPORT OF OUAF-23845 SLP - ADJUST REDWOOD FOR BANNER AND TOOLBAR
32592152	BACKPORT - CUBE VIEW FAILS ON JAVASCRIPT ERROR

Bug Fix	Description
32592629	BACKPORT OF OUAF-23753 SUPPORT A WORK BUTTON ON TO DO ENTRY
32597861	NULLPOINTEREXCEPTION AT AT COM.SPLWG.BASE.API.BATCH.ABSTRACTBASEEXECUTIONSTRATEGY.UPDATEBATCHINSTANCEENDDATETIME
32691418	COPY OF 32688170 - COPY OF 32680026 - ADDED ADDITIONAL LOGGER STATEMENT TO KNOW
32704801	BACKPORT OF OUAF-24601 - SLP - HIDE THE BANNER WHEN NECESSARY
32609105	BACKPORT OF OUAF-23031 PROCESS FLOW - CANNOT CLOSE ERROR BOX IN THE PANEL
32609758	BACKPORT OF OUAF-23825 INCOMPLETE CONTEXT FIELDS ON INSIGHT NAVIGATION
32610156	COPY OF BUG 32551499 - CMA EXPORT EXCEPTION BINDING STRINGID XIAOPTION_ID(SCDR) AFTER BUG 32402295
32616961	BACKPORT - BATCH RUN TREE - START AND END DATE/TIME SQUISHED TO THE RIGHT
32633193	BACKPORT OF BUG 32176102 - ALIGNMENT ISSUE OF ELEMENT FOR DA EXTENSION
32642918	BACKPORT OF OUAF-23749 - GLOBAL CONTEXT FIELDS NOT BEING SET IN SLP MODE
32653495	COPY OF 32648555 - COPY OF 32572080 - SUBMITTER ABRUPTLY ENDED. THREAD CANCELLED
32669068	COPY OF 32668869 - POSSIBLE EXCEPTION HANDLING AFTER TIMEOUT, PARSING XML ERROR
32677186	BACKPORT - CX4U: IMPLEMENT GBU IFRAME MESSENGER
32694365	BACKPORT OF BUG 32694344 - FIELDS MISSING IN GLOBAL CONTEXT WHEN NAVIGATING FROM URL
32606099	COPY OF BUG 31986149 - THE C2M FIELD ACTIVITY SEARCH DOES NOT INDICATE THAT THE SEARCH TRANSACTION HAS COMPLETED

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	
31607528	COPY OF 31041868 - SEVERANCE EVENT SPOT - POST CANCEL-ERROR WITH BASE ALGORITHM
31607810	COPY OF 31122098 - ADDRESS SEARCHING WITH WILDCARD FROM CONTROL CENTRAL HAS MISS
31607834	COPY OF 31561275 - AUTO STOP RECURRING CHARGE ALGORITHM C1-BSBS-RA POPULATES PAY
31960636	COPY OF 31688776 - PAYMENT CANCELLATION DOES NOT REINSTATE ARREARS CORRECTLY IF THERE IS A PAYMENT ARRANGEMENT
32004296	COPY OF 31736413 - REQ TO INCREASE PERSON CONTACT - START/STOP CONTACT MAPPING COLLECTION LIMIT TO MORE THAN 200
32018669	COPY OF 31118855 - {INFO} ISSUE OF POWER FACTOR
32064736	COPY OF 32064693 - INCREASE CONTROL CENTRAL SEARCH FACTOR
32067943	COPY OF 31884753 - FINANCIAL ALGORITHM - BSBF-BA-DFT NOT WORKING CORRECTLY
32067993	COPY OF 31739140 - ERROR WHEN ADDING A MESSAGE TO THE CASE LOG
32068217	COPY OF 31613858 - STARTING SERVICE FROM DSS-T, MAILING ADDRESS IN SERVICE TASK
32089142	COPY OF 31975894 - FA'S SHOULD NOT BE CREATED FROM DSS-T START SERVICE
32103581	COPY OF 32053036 - DSS-T STOP DATE AND PREMISE NOT DISPLAYED IN SERVICE TASK

Bug Number	Description
32114848	COPY OF 32111143 - NOTARGETSEGMENTBYNAMEEXCEPTION ENCOUNTERED WHEN STARTING AN
32114937	COPY OF 31943169 - %D IN CALCULATION RULE CAUSES "BASE DAYS FIELD INVALID" ERROR
32114954	COPY OF 32047477 - WRITE DOWN LINE IS DOUBLED IN EXTRACT CAUSING UNBALANCED BILL
32121900	COPY OF 32102687 - ZONE C1-CNTPERDET IS RETRIEVING ALL PRIMARY PERSON NAMES OF A
32156007	COPY OF 31932407 - BILL SEARCH NOT WORKING AS EXPECTED
32156859	COPY OF 32133287 - STOPPING FROM DSS-T, START STOP ADDRESS OVERRIDE INCORRECT
32167111	COPY OF 32133241 - "SEND LETTER" CUSTOMER CONTACTS CREATED FOR PERSONS
32174590	COPY OF 30283513 - BCGNEW IS USING BUSINESS DATE/TIME INSTEAD OF SYSTEM DATE/TIME TO CREATE BALANCE CONTROL
32177854	COPY OF 31901087 - TAX EXEMPTION NOT BEING APPLIED DUE TO BILL FACTOR USING ACCOUNTING DATE
32193209	COPY OF 31996807 - AUTO CANCEL REBILL FUNCTIONALITY IS NOT WORKING
32226853	COPY OF 32201016 - CI_ACCT_APAY TABLE STORES MASKED VALUES WHEN ENCRYPTION IS TURNED ON
32255497	COPY OF 30595482 - ERROR IN RESPONSE WHEN CALLING D1-EXTERNALSPDEVICEDETAILS FROM CCB TO MDM
32260461	COPY OF 32213109 - CSRS LAND ON SST INSTEAD OF LANDING PAGE WHEN MASQUERADING
32264422	COPY OF ENH 32240206 - ENHANCE CXACCOUNTCHARGESSUMMARYRETRIEVER TO RETURN UNBILLED CHARGES
32279704	COPY OF 31784057 - DEVICE BADGE NUMBER SOMETIMES DOESN'T POPULATE IN THE BILL EXTRACT
32287284	COPY OF 32081123 - C2M - NEW RATE ENGINE ITEM TYPE CALC RULE SUBSTITUTION CHARACTER %B
32369050	COPY OF 32146619 - APPLICATION EXECUTES SLOW PERFORMING QUERY ACCESSING CUSTOMER INFORMATION
32376175	COPY OF 32119866 - REDSAAMT SETTING AN FT AS REDUNDANT RESULTS IN INCORRECT CALCULATION OF THE CASH ACCOUNTING GL AMOUNT
32378590	PLUG-IN SCRIPT CALLING JAVA CONVERTED COBOL PROGRAM CIPBTARX - SYSTEM ERROR ISSUE

Bug Number	Description
32428166	COPY OF 32398425 - WEB USER SUMMARY ACTION DROPDOWN DOES NOT DISPLAY SELECTABLE OPTIONS
Oracle Utilities Meter Data Management	
31200357	SENSUS ON-PREMISE CONNECT/DISCONNECT COMMAND FAILS DUE TO INVALID SCHEMA
31776670	UNABLE TO CALCULATE MEASUREMENT VALUES IN ALGORITHM D1-DERIVAQTY, DUE TO INVALID MNEMONIC
31949232	SUBTRACTIVE INTERVAL INITIAL MEASUREMENT LENS SHOWS FOR NON-SUBTRACTIVE
31995941	IMD CONTROL RECORD STATUS IS NOT UPDATED WHEN IMD GOES IN TO HOLD4BATHC
32010605	IMD MONITOR - UNATTACHED MC PERFORMANCE
32045412	{INFO}X1-GLBL-CTX IN MSCS
32051707	COPY OF BUG 31990108 - POSTINSTALLCOMMISSION/ POSTREMOVALDECOMMISSION TRIGGERED FOR MANUAL METERS
32054203	COPY OF BUG 32032762 - EXCHANGE METER ORCHESTRATOR FIELD ACTIVITY - NO METER FOUND FOR BADGE NUMBER
32070022	COPY OF 32018347 - MEASUREMENT REPROCESSING ACTIVITY PASSING IN UNCONVERTED DATE/TIMES TO LOOK FOR MEASUREMENTS
32072863	UNABLE TO COMPLETE FIELD ACTIVITY INBOUND
32078322	COPY OF BUG 31991800 - SA_ID MISSING FROM EXTRACT AFTER APPLYING PATCH 31035648
32079833	COPY OF BUG 32052472 - ACTIVITIES IN WAIT FOR MEASUREMENT STATE NOT DISCARDED
32079886	COPY OF BUG 32043512 - STATISTICS CONTROL SNAPSHOT IS FETCHING INCORRECT DESCRIPTION FOR INCOMPLETE IMD AND UT
32081973	UGBUPD-7654 PREVENT TO DOS FROM CLOSING WITH EVERY RETRY (COMM IN/OUT)
32086393	COPY OF BUG 31985560 - ENABLE SERVICE DOES NOT PRORATE TO SERVICE DATE FOR SMART METER
32091445	COPY OF BUG 31722264 - D1-STMCM GETTING NULLPOINTEREXCEPTION
32102490	COPY OF BUG 32102481 - D2-SUMSCLRDT IS NOT WORKING AS EXPECTED
32124651	ON-PREM COMMISSION O/B COMM FAILS WITH DATE TIME FORMAT ERROR

Bug Number	Description
32129903	SIO BEING DISCARDED WHEN THERE IS AN EXISTING PREVIOUS PROCESSED SIO THAT IS BEYOND THE DISCARD RULE
32133055	COPY OF BUG 32131367 - INSTALLATION CONSTANT UPDATED FROM 1 TO 1.000000. MEASUREMENTS WILL BE EXAMINED FOR REPROCESSING
32133590	ADK ON-PREMISE COMMISSION GETS SCHEMA ERROR
32134743	COPY OF 31952599 USAGE TRANSACTION ESTIMATES ESTIMATE AFTER THE ESTIMATE DATE
32134765	COPY OF 31859582 MISSING-CHECK VEE RULE MAY NOT BE GENERATING TO DOS CORRECTLY
32135141	COPY OF BUG 32072083 - VEE RULE SCALAR CALCULATION FROM INTERVAL IS FAILING EVEN WITH COMPLETE READS ON INTERVAL MC
32139025	COPY OF 32132994 - MC 360 VIEW - SCALAR INITIAL MEASUREMENT OVERLAY - QUICK EDIT
32139785	COPY OF 31923865 - EXCEPTION IS NOT RAISED FOR NEGATIVE CONSUMPTION
32139869	COPY OF 32139860 - COPY OF 32068171 - INTERVAL ADJUSTMENT FROM SCALAR VEE RULE I
32146916	ADK ON-PREMISE COMMISSION DATETIME SCHEMA ERROR WHEN ERROROBJECT IS RETURNED
32147546	ITRON ON-PREMISE SCHEMA ERROR IN STARTING DETECTLOADSIDEVOLTAGEBYMETER
32148569	COMPLETED REMOTE CONNECT ACTIVITY DOES NOT MOVE PARENT ORCHESTRATOR TO COMPLETED
32148972	"OUTBOUND COMMUNICATION NOT RELATED TO ACTIVITY" UNEXPECTED ERROR IN FIELD ACTIVITY LOG
32152164	ON-PREM GETDETECTLOADSIDEVOLTAGERESULT SCHEMA ERROR
32153716	ON-PREM ADK DATE TIME CONVERSION ERRORS
32157363	COPY OF BUG 32105061 - PRORATION IMD END DATE TIME DURING DST SHIFT 1 HOUR
32166472	COMPLETED WAIT FOR MEASUREMENT ACTIVITY DOES NOT COMPLETE PARENT ORCHESTRATOR
32166710	COPY OF BUG 31891849 - PAYLOAD SUMMARY ACTIVITY IS NOT DISCARDED AFTER MAXIMUM RETRY IS REACHED AND INSTEAD ERROR IS LOGGED.
32171058	COPY OF 32148873 - D2-IMDLENS ZONE IN MDM DOES NOT LOAD IMD'S ON DST FALL CROSSO

Bug Number	Description
32171260	INDEX D1T304S3 NEEDS TO BE CREATED TO HELP PAYLOAD STATISTICS FUNCTIONALITY PERFORMANCE
32172482	ON-PREM ADK COMMISSION DOESN'T DETECT ERRORS
32174062	COPY OF 32151613 - ISSUES WITH DYNAMIC AGGREGATION AROUND HORIZON DAYS AND REAGGREGATION
32175927	ON-PREM SENSUS ERRORS IN CONNECT FLOW
32176403	TO DO SQLS IN IMD AND COMMON MODULES NEED OPTIMIZATION
32182297	COPY OF 32152882 - SERVICE TASK TYPE EVALUATION CRITERIA CONDITIONS "AND" / "OR" NOT WORKING
32185641	COPY OF 32046338 - PERFORMANCE ISSUE FOR CONSUMPTION EXTRACTS FOR HISTORICAL CORRECTIONS.
32190177	COPY OF BUG 32187542 - SA START/STOP GIVING ERROR UNABLE TO GET INTERIM STATUS.
32190672	COPY OF BUG 32053382 - D1-DVCEQTVL - CANNOT ATTACH EQUIPMENT TO A METER AFTER THE DEVICE CONFIG REMOVE AND INSTALL
32197006	ON-PREM LG - SCHEMA VALIDATION ERROR ON CONNECT CALLBACK
32198148	COPY OF BUG 32111634 - ALLOW UNBADGED DEVICES/ITEMS WHEN CONFIGURING THE FTT WHEN SOURCE IS 'TABLE'
32199568	COPY OF 31460828 - HISTORICAL CORRECTIONS CONSUMPTION EXTRACT MISSING RECORDS EXPECTED IN EXTRACT
32206322	COPY OF 32045943 VALIDATION TRIGGER ISSUE ON SP AND DVC ATTACHMENTS.
32206335	COPY OF 32134782 RETRYING ACTIVITY COMPLETION FAILS DUE TO 'PARENT OUTBOUND COMMUNICATION NOT FOUND'
32215551	COPY OF BUG 32077836 - DISCONNECT DEVICE COMPLETION EVENT ON D1-EXCHANGEMETER FIELD TASK TYPE IS STILL MISSING AND IT NEEDS A MANUAL CONFIGURATIO
32218492	ADD PAYLOAD CHUNKING TO SGG ADK
32219759	COPY OF BUG 32219757 - FIX NOT WORKING AS EXPECTED FOR BUG 32085718 - D2-SUMSCLRDT
32223349	ON PREM - ADD TODO FIELDS TO SOA XSDS
32223474	COPY OF BUG 31570772 - CCS APPOINTMENTS FAIL WHEN CONSUMING THE RESPONSE FROM OFSC
32227145	COPY OF 32168765 THE SCRIPTING OR LOGIC THAT RETRIEVES THE SP ID FROM THE ACTIVITY IS NOT MAPPING THIS BACK TO THE 2ND IB COMMUNICATION.

Bug Number	Description
32229019	COPY OF BUG 32229013 - DEPRECATE MDM BATCH CONTROLS THAT REFRESH REMOVED MATERIALIZED VIEWS
32240570	COPY OF 32168107 - ISSUE ON VECTOR AND SERVICE QUANTITY MATH USAGE RULE
32248641	COPY OF 32248628 - [24000] TIMESTAMP FIELDS LOSE TIMEZONE OFFSET INFORMATION
32258205	COPY OF 32115010 D1-MC JOB FAILING WITH JAVA.LANG.OUTOFMEMORYERROR: JAVA HEAP SPACE.
32259976	COPY OF 32219497 - GO TO CCB NAVIGATES TO CONTROL CENTRAL CUSTOMER INFORMATION T
32264186	COPY OF 32264066 - USAGE CALCULATION HIGH/LOW RULE VALUES ARE BEING CALCULATED INCORRECTLY
32267467	COPY OF 32267407 - [24000] D8- EXCEPTIONSUBSCRIBERSERVICE ENCOUNTERS LIST ERROR
32279398	COPY OF BUG 32249849 - ACTIVITY HIERARCHY IN MDM HAVE SOME PERFORMANCE ISSUES
32281075	COPY OF BUG 32122521 - USER GROUP IS SETUP WITH INQUIRE ONLY YET USER CAN STILL ADD/EDIT/DELETE - US, DEVICE, DC AND IEVENT
32281524	COPY OF 32281517 - COPY OF 32157812 - MISSING INTERVALS ARE NOT ESTIMATED BA
32284915	COPY OF BUG 32223086 - NON DISPATCHABLE ACTIVITY UPDATES ARE GETTING STUCK
32285343	COPY OF 32368790 - IMD QUERY TIMEOUT WITHOUT RETURNING RESULTS
32287427	COPY OF BUG 31077943 - ASSET MANAGEMENT: ERROR MESSAGE NOT RETURNED TO UI; INSTEAD BURIED IN LOGS:
32288845	COPY OF 31868507 - [MAIN] SURGE OF OPENWAY VOLTAGE DATA IS CAUSING OW PROCESSING TO BACK UP
32290293	IMPLEMENT FW BUG 31953407 - AT TIME ZONE CLAUSE SYNTAX SUPPORT FOR CONFIGURABLE CONSUMPTION EXTRACT
32297433	COPY OF BUG 32297426 - D2-BLDSUMSQ ALGORITHM USES THE HIGHEST SPI IN THE SUMMARY
32300601	MDM IDENTIFIER TABLE INDEXES NOT USED BY QUERIES FOR EXTERNAL IDS
32302922	COPY OF 31452102 - FACTOR IN THE DERIVATION ALGORITHM NOT GETTING ENOUGH VALUES TO MATCH THE MEASUREMENTS
32305036	COPY OF 32304924 - COPY OF 32171987 - CONTEXT MENU NAVIGATION IS NOT WORKING FOR SERVICE POINTS LISTED ON A SERVICE TASK

Bug Number	Description
32311258	WHEN SEARCH FOR DEVICE IN OUAF IN MENU, ERROR APPEARS AS THE ZONE SQL NUMBER 1 HAS ENCOUNTERED AN EXCEPTION
32312888	COPY OF 32252617 - ERROR RUNNING F1-ILMAD ON 19C INTERNAL ENVIRONMENT CCS 20B - FIX IN 20C FIRST
32315836	COPY OF 32298762 MV90 SGG PAYLOAD PROCESSING CONFIGURATION VALIDATION FOR MV90DATEFORMAT
32316182	COPY OF 32135659 - REPROCESSED MEASUREMENT STILL SHOWS 'COMBINED MULTIPLIER' AS OLD MULTIPLIER VALUE
32316513	COPY OF 32301560 BATCH ENDS IN AN ERROR STATE FROM ACTIVITY ACT
32320742	ERROR APPEARS WHEN RUNNING D1-PLPRM. CAUSED BY: JAVA.LANG.NOCLASSDEFFOUNDEERROR: ORG/APACHE/COMMONS/LANG/STRINGUTILS
32324966	COPY OF 32313095 - COPY OF 32309533 - RECONCILIATION IMDS ARE CREATED WITH UN-SHIFTED LOCAL DATE / TIME DURING DST
32328615	COPY OF 32328585 SYSTEM ERROR/TRANSACTION TIMED OUT WHEN PROCESSING IMD
32341656	COPY OF BUG 32341651 - COPY OF BUG 32323063 - FIELD ACTIVITY INBOUND COMMUNICATION BO USING ALGORITHM THAT CREATES D1-ATVTD TO DO TYPE
32343451	COPY OF BUG 32342825 - COPY OF BUG 31659561 - WHEN I HAVE MORE THAN 50 SERVICES POINTS IN A FACILITY I GET A SERVER ERROR
32353347	COPY OF 32339322 DAILY SCALAR USAGE RULE NOT CONSIDERING USE PERCENT OF US/SP (OR SA/SP)
32357343	COPY OF 32356557 - DATACONNECT AMI EXTRACT THROWS JAVA NULL POINTER ERROR
32360905	COPY OF 32360891 - COPY OF 32355971 - IMD FAILS WITH ERROR - THE SERVER HAS ENCOUNTERED A PROBLEM
32367527	INFO: INDEX FOR THE TABLE D1_USAGE_EXCP
32375333	COPY OF BUG 32375090 - D2-MATH USAGE RULE RENDERS INCORRECT EVALUATION OF THE MSRMTS CONDITION FOR THE CURVE WITH THE METER EXCHANGE FOR QUALITY ASSESSMENT AND HIGHLIGHTS
32378902	COPY OF BUG 32378895 - GRAPHS FOR SCALAR VALUES OVERLAYS SHOW MONTHLY SPIKES THAT DON'T EXIST IN MEASUREMENT DATA
32381794	COPY OF 32370276 ISSUE PERTAINING TO SENSUS SGG ADAPTER IN THE CLOUD
32383213	COPY OF BUG 32383209 - STANDARD AGGREGATORS FOR OUAV OUT OF BOX PROJECTS DO NOT WORK

Bug Number	Description
32383715	RESTRICT SP SEARCH BY DIVISION - US THAT ARE WITHOUT SP AND WITHOUT A MASTER ARE NOT RETRIEVED ON SEARCH
32385035	COPY OF 32287297 - COPY OF 31698018 - PROLONGED ESTIMATION VEE RULE NOT WORKING
32385041	COPY OF 32314905 - NEGATIVE VALUES IN INTERVAL ADJUSTMENT FROM SCALAR VEE RULE
32386701	[24000] IMD SEEDER FAILS DATE VALIDATION FOR ON-PREMISE SOA
32399017	TO DO SQLS IN COMMUNICATION MODULES NEED OPTIMIZATION
32425967	COPY OF 32407268 - MEASURING COMPONENT 360 VIEW - INITIAL MEASUREMENT OVERLAY -
32430202	INCORRECT OUTBOUND MESSAGE BO IN D8-RDSMOBM OUTBOUND MESSAGE TYPE
32437943	RESTRICT SP SEARCH BY DIVISION - UNABLE TO RETRIEVE DEVICE USING HEAD END FILTER WHEN RECORD IS HAVING ONLY FALLBACK HEADEND
32439756	COPY OF BUG 31001585 - UT QUANTITY BASED ON SOME NON-REGULAR DATA IS FLAGGED TO ESTIMATE ON USAGE FOR NON-BILLED DAILY READ
32440193	COPY OF BUG 32436822 - INTELLIHUB ISSUE - MISSING READS IN ADK CHUNKING.
32442625	COPY OF 32436673 - ERROR WHEN NAVIGATING FROM MC CONTEXT MENU TO 360 VIEW
32443609	COPY OF 32398020 CUSTOM SSG FOR ITRON IS FAILING TO SAVE WITH NULLPOINTEREXCEPTION
32448522	COPY OF 32402864 - INITIAL MEASUREMENT DATA ID IS MISSING ERROR WHEN UPDATING CONVERTED MEASUREMENTS DO NOT USE
32461981	COPY OF 32394772 - DEVICE STATUS VS ASSET STATUS; REMOVED DEVICE DISPLAYED WITH STATUS ACTIVE
32465836	UGBUPD-7469 MDM MASTER CONFIGS
32494129	COPY OF 32490871 - D1-INBOUNDADMINSYNCREQUEST ALGORITHM INACTIVATED
32494506	COPY OF BUG 32456196 - PROD - PERFORMANCE FOR DEVICE PAGE TO POPULATE
Oracle Utilities Work and Asset Management	
27446012	TITLE FOR THE ASSET SPECIFICATION WINDOW IS MISSING
29519038	NOT ALLOWING TO CONNECT PLANT ASSET LOCATION TYPE TO LINEAR ASSET LOCATIONS

Bug Number	Description
31176598	TIMEZONE ON ACTIVITY OUTBOUND
31406378	MAINTENANCE PORTAL CONTEXT VARIABLES COULD NOT BE ACCESSED THROUGH ZONE VISIBILITY SCRIPT ON THE DASH BOARD PORTAL.
31702148	INVALID APP SVC FOR PROCESS TYPE RELATED BOS
31703435	CHILD LOCATIONS/ORGANIZATIONS ZONE SHOWING NO RESULTS
32041202	RESET OWNING ACCESS GROUP ON W1 OWNED ADMIN OBJECTS
32082148	COPY: ASSET ATTRIBUTES "EDIT " NOT POSSIBLE WITHOUT THE APPLICATION SERVICE W1-RTRLTDATT
32120239	FIX ERROR MESSAGE: %RECORD% IS ARCHIVED
32152005	CONVERSION BATCHES ARE BEING RETURNED WITH NO LOGGING
32158038	MASS ASSET DISPOSITION UPDATE SEARCH BY ASSET IDENTIFIER NOT RETURNING EXPECTED RESULTS
32190490	SHIPPING MEMO REPORT IS NOT AVAILABLE FOR ODM USERS
32222600	COPY BUG OF 32199108 - IWS ATW1INOUTOFSERVICEGENERALASSET IS ALWAYS ASKING FOR NEW NODEID UNDER ASSETDISPOSITIONDETAIL SECT
32225285	DEPRECATE W1-ITEMSERVICEPOINT
32256513	UNABLE TO ADD NEW CHARACTERISTIC TYPE DUE TO FLD_NAME IS NULL ERROR
32341585	WR, SHIPPING MEMO/LINE ARE NOT LISTED AS A CONVERSION ENTITY AND NO JOBS EXIST FOR THE MO
32375597	COPY OF BUG 32367769 - STAGING TO PRODUCTION ID TRANSLATION MISSING FOR TABLES.
Oracle Utilities Customer To Meter	
32108910	COPY OF BUG 32108892 - UT TRANSFORM OUTBOUND ENCOUNTERS ISSUE WHEN USING X1-USAGETRANOUTBOUNDMSG
32139817	COPY OF 31965459 - ADJUSTMENT CAN NOT BE CREATED FROM REMOTE CONNECT FOR RECONNE
32206428	COPY OF BUG 32168655 - "(MDM SP ID) NOT FOUND" ERROR WHEN CONFIRMING DELETION OF SP FROM REPLICATED PREMISE
32299928	COPY OF 32188613 - INSERTING A SP CHAR BLANKS OUT CERTAIN INFORMATION FROM OTHER
32350977	UGBUPD-6387 SYNC ADMIN DATA BETWEEN CCS AND OFSC - CCS CHANGES

Bug Number	Description
32357431	COPY OF BUG 32357428 - DISCARDED USAGE TRANSACTION SEEDER DOES NOT NUDGE USAGE REQUEST STATUS TO ERROR
32390816	COPY OF BUG 31951168 - UNABLE TO DELETE FIELD TASK TYPE FROM EXTENDABLE LOOKUP WHEN ELIGIBLE FOR JOINT MAINTENANCE IS NO
32435896	COPY OF BUG 32414615 - ERROR GENERATING BILL SEGMENTS FOR ACCOUNTS WITH HEAT PUMPS
32532530	COPY OF 31225822 - SLOW PERFORMANCE ACCESSING CUSTOMER INFORMATION IN C2M

Appendix C

Post-release Patches

The following table lists the post-release patches included in this release:

Bug Number	Description
Oracle Utilities Customer Care and Billing	
32433562	SUB BILL SEGMENT IS NOT GETTING GENERATED WITH THE 20C MARKET SERVICE PROVIDER CHANGES
32557066	BACKPORT CCB-29135 SST - PANEL 4 FIXES
32561789	BACKPORT CCB-29217 - ADD 'GO TO' ACTION TO BASE INSIGHT TYPES
32641037	BACKPORT CCB-29653 SST - START - CUSTOMER IDENTIFICATION (PANEL 2) ISSUES
32646240	BACKPORT CCB-28966 - CONVERT CASE TO NEW-STYLE UI: ALERT ISSUE
32647273	YEAR VIEW - SQ ON THE BAR STACK, EVEN IF NOT CONFIGURED IN MASTER CONFIGURATION
32647303	BILL PERIOD VIEW - REMOVE THE DATE RANGE
32650006	BACKPORT OF CCB-29199 - CUSTOMER ZONE INTERMITTENT ISSUE ON ACCOUNT ID FIELD DISPLAY
32665189	TIME SCALE DROPDOWN - DO NOT SHOW BILL PERIOD VIEW OPTION IF ACCOUNT IN CONTEXT DOES NOT HAVE AN AMI METER INSTALLED (CCB)
32670336	BACKPORT CCB-29887 - SST - CSR START SERVICE COMPLETED BUT CSR PREMISE STAYS IN PENDING STATE AND PREMISE NOT UPDATED
32672557	COPY OF 31367391 - BAR GRAPH MISSING DECIMAL PLACES
32675868	ERROR IN GENERICINSERTPROCESS FOR C1_MKT_RP
32677124	USAGE AND BILLING TABLE AND GRAPH VIEW AND DISPLAY ICON CONSISTENCY
32682130	BACKPORT CCB-29201 - C360 FINANCIAL HISTORY

Bug Number	Description
32682928	BACKPORT CCB-29715 CUSTOMER ACTIVITY HISTORY PERFORMANCE ISSUES
32691511	ALERT DASHBOARD ZONE ONLY SUPPORTS PK VALUES UP TO 20 CHARACTERS
32704631	BACKPORT CCB-30067 - SST - ACCOUNT VERSION MISMATCH BETWEEN CSR ACCOUNT AND ACCOUNT
32724451	BACKPORT CCB-29063 - C360 PAYMENT AGREEMENT
Oracle Utilities Customer To Meter	
32647038	ISSUE WITH LOADING BILL PERIOD VIEW IN X1RETUSAGCHD
32647195	BILL PERIOD VIEW - BILL WITH QUARTERLY BILL SEGMENTS
32651697	TIME SCALE DROPDOWN - DO NOT SHOW BILL PERIOD VIEW OPTION IF ACCOUNT IN CONTEXT DOES NOT HAVE AN AMI METER INSTALLED (C2M)
