

Oracle Utilities Customer Care and Billing

Installation Guide

Release 2.6.0.1.0

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Oracle Utilities Customer Care and Billing Installation Guide, Release 2.6.0.1.0

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Preface

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

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

To complete installation you should have:

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

Related Documents

For more information, refer to these Oracle documents:

Installation Guides and Release Notes

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

Administrative and Business User Guides

- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Administrative User Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Business User Guide*

Supplemental Documents

- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Server Administration Guide*

Updates to Documentation

Additional and updated information about the product is available from the Knowledge Base section of My Oracle Support (<http://support.oracle.com>). Please refer to My Oracle Support for more information.

Documentation updates are also posted on the Oracle Technology Network documentation page as they become available (http://docs.oracle.com/cd/E72219_01/documentation.html).

Conventions

The following text conventions are used in this document:

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

Acronyms

The following acronyms and terms are used in this document:

Acronym	Definition
CCB	Oracle Utilities Customer Care and Billing
C2M	Oracle Utilities Customer To Meter
WLS	WebLogic Server
FW	Framework
OAAF	Oracle Utilities Application Framework

Additional Resources

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

Chapter 1

Overview

This chapter provides an overview of the Oracle Utilities Customer Care and Billing installation.

Installation Overview

Installing Oracle Utilities Customer Care and Billing involves the following steps:

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

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

3. Install the database as described in the document *Oracle Utilities Customer Care and Billing 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 Care and Billing as described in [Chapter 7: Installing the Application Server Component of Oracle Utilities Customer Care and Billing](#).
8. Follow the installation guidelines described in [Chapter 8: Additional Tasks](#).

Chapter 2

Application Architecture Overview

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

Application Architecture

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

Refer to the *Oracle Utilities Customer Care and Billing 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 Care and Billing application. Note also that a desktop machine running Microsoft Windows and the Oracle client is required to perform some of the Oracle Utilities Customer Care and Billing 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 Care and Billing application. More specifically, the database tier contains the data server files and database executables that physically store the tables, indexes, and other database objects for your system.

Chapter 3

Supported Platforms and Hardware Requirements

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

- [Software and Hardware Considerations](#)
- [Requirements by Tier](#)
- [Supported Platforms](#)
- [Application Server Memory Requirements](#)
- [Support for Software Patches and Upgrades](#)

Software and Hardware Considerations

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

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

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

Requirements by Tier

The application is deployed on multiple Tiers:

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

Tier 1, Desktop: Software and Hardware Requirements

Configuration	Processor	Memory (RAM)	Monitor Display
Minimum	Pentium IV - 2.0 GHz	1024 MB	1024X768** 16-bit Color
Recommended*	Pentium IV - 3.0+ GHz or any Core 2 Duo or any Athlon X2	2048 MB	1280X1024* 32-bit Color

* The recommended configuration improves client performance.

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

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

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

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

Tier 3, Database Server: Software and Hardware Requirements

See the section [Supported Platforms](#) for supported database servers.

Supported Platforms

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

Operating Systems and Application Servers

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

Application Server Operating Systems

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

Prerequisite Application Server Software

- Oracle Database Client 12.1.0.x
- Oracle Java SE Development Kit 1.8.0_121+ (Oracle platforms only)
- IBM 64-bit SDK for AIX 8.0.0.x (IBM platforms only)
- Hibernate ORM 4.1.0 and Hibernate 5.2.3 jars
- Oracle WebLogic 12c (v12.2.1.1+) 64-bit

Notes

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

Refer to the [Product Support Matrix \(Doc ID 1454143.1\)](#) on Oracle Support to determine if support for newer versions of the listed products have been added.

Please note the following:

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

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

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

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

Windows Server

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

WebLogic Server

- Oracle WebLogic Server (Fusion Middleware Infrastructure) 12.2.1.1+

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

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

Oracle Database Server

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

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

Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are not mandatory but are recommended. Standard Edition should only be considered suitable for very small, pilot projects or development environments where scalability, performance, and database size-on-disk are not important considerations. Oracle Database Enterprise Edition, including the Advanced Compression and Partitioning options, is strongly recommended in all other situations.

Oracle VM Support

This version of Oracle Utilities Customer Care and Billing is supported on Oracle VM Server for x86 for supported releases of Oracle Linux and Microsoft Windows operating systems.

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

Application Server Memory Requirements

For each application server environment a minimum of 4 GB of real memory is required, plus 6 GB of swap space. The approximate disk space requirements in a standard installation are as follows (the size represents the MINIMUM required):

Location	Size	Usage
\$SPLEBASE	minimum	This is the location where the application and Framework get installed. Startup, shutdown and other online log files are stored here. The size and space that is used should be monitored because various debugging options can significantly affect the size of log files. Note: This does not include the size of the edge product.
\$SPLAPP	minimum	This location is used for storing batch log files and output from batch jobs. The size of this space should be influenced by which batches are run and how often, and the amount of debugging information that is collected.
Location of the application web work files on the web servers	minimum	This location is used by various web server vendors to expand the application. It should be considered when installing these products. Refer to the individual web server documentation to determine the location of the temporary files.
Installation Temporary Area	4 GB	The application gets installed from this location. You need enough space to un-compress the files and install the application.
Oracle Data Area	4 GB minimum	This location is where the Oracle database data files are stored. The size of this space should be based on the requirements of the production environment. For an initial or demo database install 4 GB should be sufficient.

Support for Software Patches and Upgrades

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

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

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

Chapter 4

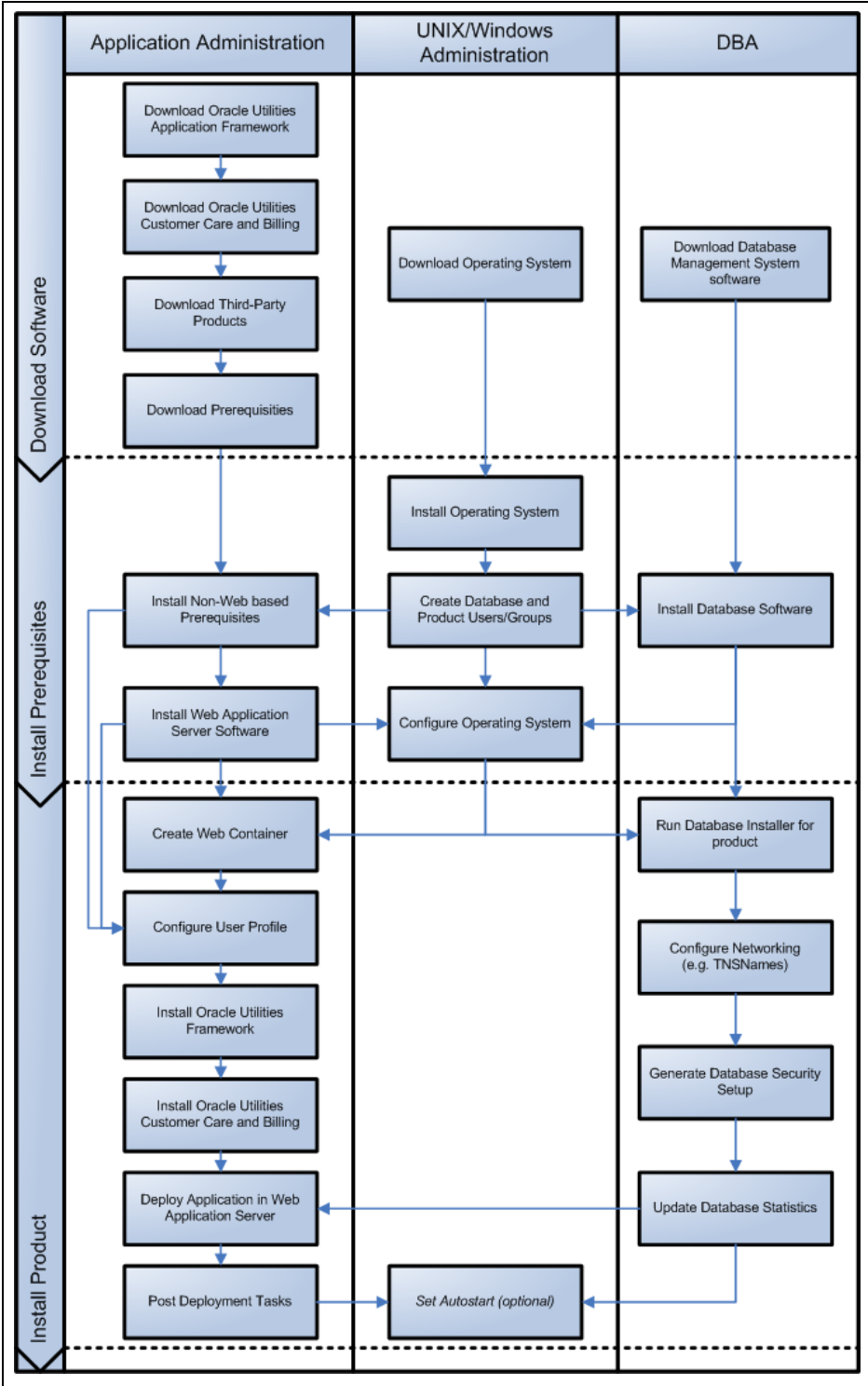
Planning the Installation

This chapter provides information for planning an Oracle Utilities Customer Care and Billing 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 Care and Billing:



Before You Install

Refer to My Oracle Support for up-to-date additional information on installing Oracle Utilities Customer Care and Billing.

Prerequisite Oracle Utilities Application Framework Patches

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

WebLogic Native Installation

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

Application Server Clustering

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

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

Directory Names

Directory cannot contain whitespace characters.

Installation Checklist

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

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

4. Install optional software.
5. Install the Oracle WebLogic 12.2.1+ web server.
Note: If you are upgrading and you are currently running Oracle Application Server please contact your Global Support Representative.
6. Verify that the software installed.
7. Set up environment variables.
8. Install Oracle Utilities Application Framework.
9. Install Oracle Utilities Application Framework prerequisite single fixes.
10. Install Oracle Utilities Customer Care and Billing.
11. Deploy Oracle Utilities Customer Care and Billing application.
12. Complete the post-installation tasks.
13. Optional third-party product integration (such as web self service or reporting tools).

Installation Menu Functionality Overview

The main configuration menu is structured so that related variables and/or options are grouped together and are associated by a menu item number. To access a particular group of variables and options, enter the menu item number associated with that group. Each option is displayed in turn on the screen, along with a prompt so that you can type the desired value for the option, if it is not the same as the default or current value.

When performing the initial installation you need to go through all menu options. The menu options may have a default value, a list of valid values and a validation check.

On each option prompt you can keep the current value by simply leaving the input line empty. In order to erase a variable value you need to enter one dot (“.”). The leading spaces will be trimmed out on each values entered. The menu includes the following:

- **Valid Values: [ALFANUM].** This indicates you will need to enter an alphanumeric value in the prompt.
- **Valid Values: [NUM].** This indicates you will need to enter an numeric value in the prompt.

Please also note the following:

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

Installation Menu Functionality Details

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

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

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

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

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

The following prompt will appear when executing the installation utility:

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

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

Encryption Methods

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

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

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

Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework, as described in the [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#).

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

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

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

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

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

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

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

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

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

*** See [How to use and setup the “Additional JAR Directory”](#) for more information.

Menu Block 2: Keystore Options

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

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

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

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

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

Keystore options include:

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

Menu Block 50: Environment Installation Options

Environment installation options include:

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

Menu Block 1: Environment Description

The environment description menu option includes:

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

Menu Block 2: [WebLogic] Business Application Server Configuration

WebLogic Business Application Server configuration options include:

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

Menu Block 3: [WebLogic] Web Application Server Configuration

WebLogic Web Application Server configuration options include:

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

Menu Block 4 - Database Configuration

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

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

Menu Block 5 - General Configuration Options

The general configuration options include:

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

Menu Option	Name Used in Documentation	Customer Install Value
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMANCE	
JMX Enablement System User ID	BSN_JMX_SYSDUSER	
JMX Enablement System Password	BSN_JMX_SYSPASS	
Coherence Cluster Name	COHERENCE_CLUSTER_NAME	
Coherence Cluster Address	COHERENCE_CLUSTER_ADDRESS	
Coherence Cluster Port	COHERENCE_CLUSTER_PORT	
Coherence Cluster Mode	COHERENCE_CLUSTER_MODE	

Menu Block 6 - OUAF TrustStore Options

The OUAF truststore configuration is required for IWS.

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

Advanced Menu Options

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

Unix:

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

Windows

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

Menu Block 50 - WebLogic Advanced Environment Miscellaneous Configuration

WebLogic advanced environment miscellaneous configurations include:

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

Menu Block 51 - WebLogic Advanced Environment Memory Configuration

WebLogic advanced environment memory configurations include:

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

Menu Block 52 - Advanced Web Application Configuration

Advanced web application configurations include:

Menu Option	Name Used in Documentation	Customer Install Value
Web Application Cache Settings	WEB_I2_CACHE_MODE	
Web Server Port Number	WEB_WLPORT	
CSRF Protection For REST Services	CSRF_PROTECTION	
OWSM Protection For REST Services	OWSM_PROTECTION_FOR_REST_SERVICES	
Domain Home Location	WLS_DOMAIN_HOME	
Batch Cluster URL	WEB_BATCH_CLUSTER_URL	
Strip HTML Comments	STRIP_HTML_COMMENTS	
Authentication Login Page Type	WEB_WLAUTHMETHOD	
Web Form Login Page	WEB_FORM_LOGIN_PAGE	
Web Form Login Error Page	WEB_FORM_LOGIN_ERROR_PAGE	
Application Viewer Form Login Page	WEB_APPVIEWER_FORM_LOGIN_PAGE	

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

Menu Block 53 - OIM Configuration Settings

OIM configurations include:

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

Menu Block 54 - WebLogic Diagnostics

WebLogic diagnostic options include:

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

Menu Block 55 - URI, File and URL Related Options

URI, File and URL Related Options include:

Menu Option	Name Used in Documentation	Customer Install Value
Restriction URLs Enable	CLOUD_RESTRICTION_URLS_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	
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	

Menu Option	Name Used in Documentation	Customer Install Value
Force Http Connection	FORCE_HTTP	
Web Mobile Form Login Page	WEB_MOBILE_FORM_LOGIN_ PAGE	
Web Mobile Form Login Error Page	WEB_MOBILE_FORM_LOGIN_ ERROR_PAGE	

Chapter 5

Installing Application Server Prerequisite Software

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

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

AIX Application Server

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

Supported Application Servers

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

Web/Application Server Tier

AIX 7.2 TL0 Operating System Running on Power5 and Power6 Architecture

UNIX Administrator Userid

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

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

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

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

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

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

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

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

```
set +o noclobber
```

Security Configuration

Various options exist to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and

group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 077 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files

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

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

Oracle 12.1.0.2+ Client - Runtime Option

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

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

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

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

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

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

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

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

Hibernate 4.1.0

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

Oracle WebLogic Server 12.2.1+ (64-bit)

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

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

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

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

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

Supported Application Servers

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

Web/Application Server Tier

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

UNIX Administrator UserID

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

Description	Default Value	Customer Defined Value
CCB Administrator UserID	cissys	

Description	Default Value	Customer Defined Value
CCB User Group	cisusr	

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

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

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

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

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

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

```
set +o noclobber
```

Security Configuration

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 077 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files

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

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

Oracle 12.1.0.2+ Client - Runtime Option

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

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

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

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

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

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

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

Hibernate 4.1.0

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

Oracle WebLogic Server 12.2.1+ (64-bit)

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

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

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

Solaris 11 Application Server

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

Supported Application Servers

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

Web/Application Server Tier

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

UNIX Administrator UserID

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

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

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

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

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

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

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

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

```
set +o noclobber
```

Security Configuration

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

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 077 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files

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

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

Oracle 12.1.0.2+ Client - Runtime Option

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

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

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

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

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

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

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

Hibernate 4.1.0

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

Oracle WebLogic Server 12.2.1+ (64-bit)

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

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

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

Windows 2012 Application Server

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

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

Supported Application Servers

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

Web/Application Server Tier

File and Directory Names Limitations

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

Oracle Client 12.1.0.2+ - Runtime Option

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

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

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

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

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

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

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

Hibernate 4.1.0

You must install Hibernate 4.1.0 before installing Oracle Utilities Customer Care and Billing. For installation instructions, refer to the [Installing Hibernate 4.1.0](#) section.

Oracle WebLogic Server 12.2.1+ (64-bit)

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

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

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

HP-UX 11.31 Application Server

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

Supported Application Servers

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

Web/Application Server Tier

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

UNIX Administrator UserID

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

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

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

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

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

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

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

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

```
set +o noclobber
```

Security Configuration

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

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 077 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files

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

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

Oracle 12.1.0.2+ Client - Runtime Option

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

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

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

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

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

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

Hibernate 4.1.0

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

Oracle WebLogic Server 12.2.1+ (64-bit)

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

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

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

Additional Prerequisite Software Information

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

- [How to use and setup the “Additional JAR Directory”](#)
- [Special Note for Upgrading from a WebLogic 12.1.3.x Environment](#)

How to use and setup the “Additional JAR Directory”

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

In this scenario the “Additional JAR Directory” must be created prior the installation and the following list of WebLogic JARs need to be copied there (full path from original WebLogic location, which must be installed in the Web Server):

```
<Web Application Server Home Directory>/server/lib/
wlthint3client.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.codehaus.woodstox.woodstox-core-asl.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.codehaus.woodstox.stax2-api.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.core.jersey-client.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.core.jersey-common.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.bundles.repackaged.jersey-guava.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.core.jersey-server.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.media.jersey-media-jaxb.jar
<Web Application Server Home Directory>/../oracle_common/modules/
org.glassfish.jersey.media.jersey-media-multipart.jar
```

If the “Additional JAR Directory” is configured, the initialSetup process will pull those JARs from that directory.

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

Special Note for Upgrading from a WebLogic 12.1.3.x Environment

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

1. Install Oracle WebLogic Server (Fusion Middleware Infrastructure) 12.2.1.x.
2. Install Oracle Java SE Development Kit 1.8.0_121+ (if not installed yet).
3. Shutdown the Application Server Environment.
4. Take a full backup of the application \$SPLEBASE.
5. Set the environment: splenviron.sh -e <ENV NAME>.
6. Reconfigure the environment in order to point to the new WebLogic and Java (if upgrade Java as well):
Execute: configureEnv.sh -i
Update: “Web Java Home Directory” and “Web Application Server Home Directory”
Type <P> to process (no need to rerun initialSetup.sh).
7. Set the environment again: splenviron.sh -e <ENV NAME>.
8. Upgrade the Oracle Utilities Application Framework to version 4.3.0.5.0 using the installSP.sh script.

Chapter 6

Installing the Application Server Component of Oracle Utilities Application Framework

Installing the Oracle Utilities Application Framework (“the framework”) is the prerequisite and foundation for installing a framework-based application such as Oracle Utilities Customer Care and Billing. This section describes the process for installing the 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.

Before you proceed with the installation process:

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

Once the Oracle Utilities Application Framework installation is successfully completed and the framework application environment is created, Oracle Utilities Customer Care and Billing 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 the section [Supported Platforms](#)).

Pre-Installation Tasks

Hardware and Software Version Prerequisites

The section [Supported Platforms](#) 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 Care and Billing 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.

Copying and Decompressing Install Media

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

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

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

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

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

4. Copy the file `FW-V4.3.0.5.0-MultiPlatform.jar` from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the `BINARY` option for the FTP transfer.
5. Decompress the file:

```
cd <TEMPDIR>
```

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

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

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

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

Set Permissions for the cistab File in UNIX

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

The `install` utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the `<TEMPDIR>/FW-V4.3.0.5.0-SP5` directory named `cistab_<SPLENVIRON>.sh`. Run the generated script using the root account before continuing with the installation process. The script initializes the `cistab` file in `/etc` directory (if it is the first Oracle Utilities Application Framework application environment on the server) and registers a new environment.

The generated script also changes the owner of `/etc/cistab` file to the Oracle Utilities Application Framework administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Framework administrator user ID, you do not need

to run the generated script with the root user ID. Instead the install utility itself proceeds with the registration.

Installing Oracle Utilities Application Framework

This section outlines the steps for installing the Application Framework.

Installation Process (Brief Description)

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

4. Set the following path:

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

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

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

For initial install:

Unix: ksh ./install.sh

Windows: install.cmd

For Upgrade Install (set the environment to be upgraded first using splenviron.sh|.cmd -e <ENV NAME>):

Unix: ksh ./installSP.sh

Windows: installSP.cmd

6. Follow the messages and instructions that are produced by the application installation utility. Use the completed worksheets in the section [Installation Menu Functionality Overview](#) 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 [Installing Application Server Prerequisite Software](#). You will need to obtain specific information for the install.

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

Unix: `ksh ./install.sh`

Windows: `install.cmd`

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

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

5. Select menu item 2: Keystore Options.

Use the completed Keystore Options Worksheet to complete this step. See [Installation Menu Functionality Overview](#).

6. Select menu item 50: Environment Installation Options.

Use the completed Environment Installation Options Worksheet to complete this step. See [Installation Menu Functionality Overview](#).

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

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

7. Configure 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 `splenvron.sh` (on UNIX) or `splenvron.cmd` (on Windows) script, located in `$$SPLEBASE/bin` (or `%SPLEBASE%\etc for Windows`) directory. This script sets up all the necessary environment variables and shell settings for the application server to function correctly.

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

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

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

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

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

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

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

See [Chapter 4: Planning the Installation](#) for settings and configuration.

Configuring the OUAF Keystore (Detailed Description)

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

OUAF Keystore

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

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

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

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

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

Determining Keystore in Use

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

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

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

Configuring the Keystore Options

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

```
2. Keystore options
   Import Keystore Directory:
   Store Type: JCEKS
   Alias: ouaf.system
   Alias Key Algorithm: AES
   Alias Key Size: 128
   HMAC Alias: ouaf.system.hmac
   Padding: PKCS5Padding
   Mode: CBC
```

Importing an Existing Keystore

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

Follow these steps:

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

5. Run the following:

```
perl $SPLEBASE/bin/run_java_standalone.plx
com.splwg.shared.common.ChangeCryptographyKeyRun $SPLEBASE/bin/
invokeDBUpdatePatch.sh|cmd
```

6. Follow the prompts.

You can use the `-h` option to obtain help.

Upgrading from the Legacy Keystore

This will:

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

Follow these steps:

1. Run:

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

2. Run `$SPLEBASE/bin/nvokeDBUpdatePatch.sh|cmd`.

3. Follow the prompts.

You can use the `-h` option to obtain help.

Forcing the Environment to Use the Current Keystore

This process will:

- Prompt for and encrypt application server-stored passwords
- Synchronize the keystore to the database
- Regenerate the user hashes
- Invalidate any database-stored passwords
- Use this option when, for example, a keystore has been lost, and thus, the system will not be able to decrypt the passwords stored in the configuration files or database. All passwords will need to be reentered.

Follow these steps:

1. Using `configureEnv.sh|cmd`, re-enter the menu passwords to encrypt the data.

2. Run `initialSetup.sh|cmd` to update property files with the encrypted data.

3. Run:

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

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

5. Re-enter stored password information using the application (Example: passwords for reports).

Synchronizing the Keystore

This 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 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:

```
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

You must install Hibernate before installing the product. Follow these steps to install Hibernate:

1. Create a Hibernate jar external depot:

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

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

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

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

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

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

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

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

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

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

```
cp hibernate-release-4.1.0.Final/lib/required/jboss-logging-
3.1.0.CR2.jar $HIBERNATE_JAR_DIR
```

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

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

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

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

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

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

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


Chapter 7

Installing the Application Server Component of Oracle Utilities Customer Care and Billing

This section describes the procedure for installing Oracle Utilities Customer Care and Billing on top of the previously created Oracle Utilities Application Framework environment. This section includes:

- [Pre-installation Tasks](#)
- [Installing the Application](#)
- [Integrating Customer Modifications into This Release](#)
- [Operating the Application](#)
- [Installing Service Packs and Patches](#)

You can download the installation package from the Oracle Software Delivery Cloud. If the Framework installation was processed on previously existing Oracle Utilities Customer Care and Billing environment, then customer modifications relevant for this version and compliant with the proper naming conventions (as described in the *Oracle Utilities Customer Care and Billing Database Administrator's Guide*) have been preserved in the new environment by the Framework installation process.

To proceed with the Oracle Utilities Customer Care and Billing installation you need to be connected to the target framework application environment. See the detailed installation instructions in the following section.

You *must* initialize the Framework environment along with the required Patch Set prior to proceeding with Oracle Utilities Customer Care and Billing Application product installation. For detailed instructions see [Preparing for the Installation](#).

Pre-installation Tasks

This section describes the steps that should be taken before installing Oracle Utilities Customer Care and Billing.

Installing Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Customer Care and Billing.

The patches are available as a convenience rollup inside the zip file, CCB-V2.6.0.1.0-FW-PREREQ-MultiPlatform.zip, which is part of the downloaded Media Pack.

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

Follow these steps for installing the application and database patches on top of Oracle Utilities Application Framework 4.3.0.5.0:

1. Copy the file CCB-V26010-FW-PREREQ-MultiPlatform.jar in the delivered package to a <TEMPDIR>. Unjar using below command:

```
jar -xvf CCB-V26010-FW-PREREQ-MultiPlatform.jar
```

2. Initialize the Framework environment that you want to install the Framework patch rollup into:

UNIX

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

Windows

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

3. Install application patches:
 - a. Navigate to the <temp location>/FW-V4.3.0.5.0-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
```

Copying and Decompressing Install Media

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

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

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

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Customer Care and Billing application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file CCB-V2.6.0.1.0-MultiPlatform.jar in the delivered package to a <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

```
cd <TEMPDIR>
```

```
jar -xvf CCB-V2.6.0.1.0-MultiPlatform.jar
```

Note: You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages: <http://java.sun.com/products/archive/index.html>.

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

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

Preparing for the Installation

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

UNIX:

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

Windows:

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

3. Stop the environment if running.

Installing the Application

1. Change to the <TEMPDIR>/CCB.V2.6.0.1.0 directory.
2. Set the following path:

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

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

3. Execute the script:

UNIX

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

Windows

```
install.cmd
```

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

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

UNIX

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

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

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

Windows

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

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

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

Note: If you are using demo certificates, please execute the below command before starting the environment.

```
cd $SPLEBASE/bin
perl demo_gen_cert.plx
```

7. Start up the environment.

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

start up the environment manually while you are connected to the new environment in your online session.

Integrating Customer Modifications into This Release

In order to integrate customer modifications from previous releases into this version of the Oracle Utilities Customer Care and Billing, the customer modifications have to be re-applied to a new environment using the source code and database utilities provided with the software development kit. Please refer to the Oracle Utilities Customer Care and Billing Software Development Kit product documentation for instructions on this process.

Operating the Application

At this point your installation and custom integration process is complete.

Be sure to read the *Oracle Utilities Customer Care and Billing Server Administration Guide* for more information on further configuring and operating the Oracle Utilities Customer Care and Billing 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 on installing patches, see knowledge base article ID 974985.1 on My Oracle Support.

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

Chapter 8

Additional Tasks

This section describes tasks that should be completed after installing Oracle Utilities Customer Care and Billing, including:

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

Importing Self-Signed Certificates

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

Perform the following commands:

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

UNIX

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

For example:

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

Windows

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

For example:

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

3. Execute the following script to generate all information:

UNIX

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

Windows

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

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

Customizing Configuration Files

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

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

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

Unix:

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

Windows:

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

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

Centralized Properties Customization

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

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

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

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

```
UNIX
$SPLEBASE/bin/splenvienv.sh -e $SPLENVIRON
```

For example:

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

Windows

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

For example:

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

3. Execute the following script to generate all information.

UNIX

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

Windows

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

4. Restart your application.

Building Javadocs Indexes

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

Perform the following to rebuild the Javadoc indexes.

Windows

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

UNIX

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

Configuring the Environment for Batch Processing

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

Customizing the Logo

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

Windows:

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

UNIX:

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

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

Deploying Inbound WebServices (IWS)

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

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

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

For deploying IWS, please follow the steps below:

UNIX

1. Enable the Web Services Functionality as shown below:

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

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

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

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

3. Set the classpath as shown below:

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

4. Execute the following command:

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

Select y.

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

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

Windows

1. Enable the Web Services Functionality as shown below:

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

2. Execute `configureEnv.cmd -a`

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

3. Execute `initialSetup.cmd` as shown below:

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

4. Set the classpath as shown below:

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

5. Execute the following command:

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

Select y.

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

```
iwsdeploy.cmd
```

Domain Templates (Linux WebLogic 12.2.1+)

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

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

Note: Environment will need to be configuring to deploy in ear format.

- Review domain templates (Simple /Complex)
- Execute `config.sh`
- Configure domain
- Complete domain configuration

Note: Configure `nodemanager.properties` and `setDomainEnv.sh`.

- Update SPLEBASE (ENVIRON.INI)

Detailed Description

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

\$SPLEBASE/tools/domaintemplates

- Oracle-Utilities-Complex-Linux-12.2.1.1.00.jar
- Oracle-Utilities-Simple-Unix-12.2.1.1.0.jar (Unix generic)

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

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

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

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

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

Note: For 12.2.1:

- The Users and Groups match the delivered values delivered with the embedded domain.
- Set the password of SYSUSER and ouafjndi through the WebLogic console.
 - JTA Settings
 - Node Manager Settings
 - WebLogic Server
 - JRF Restricted (Oracle-Utilities-Simple-Unix-12.2.1.1.0.jar only)
 - JMS Global Flush Queues (Oracle-Utilities-Simple-Unix-12.2.1.1.0.jar only)

Configure setUserOverrides.sh (12.2.1 template only)

Change environmental variables here, if needed.

Update Domain Home Location

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

1. Initialize the Environment: `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> Process

Database Patching

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

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

To generate the jar file:

1. Initialize a command shell:

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

UNIX

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/splenvron.sh -e $SPLENVIRON
```

For example:

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

Windows

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

In the below example you should replace the following variables:

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

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

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

For example:

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

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

UNIX

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

Windows

```
%SPLEBASE%\bin\createDBstandalone.cmd
```

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

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

```
jar xvf db_patch_standalone.jar
```

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

Overview of Database Patching Application

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

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

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

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

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

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

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

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

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

Unix Example:

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

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

Unix Sample - Database Patch Application (ouafDatabasePatch.sh)

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

- Sample Execution – Passing a Password

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

- Sample Execution – Prompting for a Password

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

- Sample Execution - Passing in the tools bin location

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

WINDOWS Example:

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

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

Windows Sample - Database Patch Application (ouafDatabasePatch.cmd)

- Sample Execution – Passing a Password

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

- Sample Execution – Prompting for a Password

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

- Sample Execution - passing in the tools bin location

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


Windows Sample Usage:

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

Chapter 9

Upgrading Oracle Utilities Customer Care and Billing

This section provides instructions for upgrading Oracle Utilities Customer Care and Billing, including:

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

Upgrade Paths

The following upgrade paths are applicable to this release:

- From v2.6.0.0 to v2.6.0.1

Note: Before you can upgrade you must have a prior version installed. Otherwise, you should follow the procedures described in [Chapter 6: Installing the Application Server Component of Oracle Utilities Application Framework](#) and [Chapter 7: Installing the Application Server Component of Oracle Utilities Customer Care and Billing](#) 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 Care and Billing in the [Supported Platforms](#) section.

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

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

Upgrade Procedure

The upgrade installation procedure consists of:

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

Database Component Upgrade

Upgrade of the database component of Oracle Utilities Customer Care and Billing must be complete before you can proceed with the following sections. Refer to the “Upgrade Install” section in the *Oracle Utilities Customer Care and Billing Database Administrator’s Guide*, which provides instructions on upgrading the database component.

Application Component Upgrade

A successful upgrade consists of the following steps:

- [Upgrading the Oracle Utilities Application Framework Application Component](#)
- [Installing Oracle Utilities Application Framework v4.3.0.5.0 Single Fix PreRequisite Rollup](#)
- [Upgrading the Oracle Utilities Customer Care and Billing Application Component](#)

Upgrading the Oracle Utilities Application Framework Application Component

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

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

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

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

Refer to the [Copying and Decompressing Install Media](#) section for instructions on copying and decompressing install media.

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

Refer to the [Set Permissions for the cistab File in UNIX](#) section for instructions.

Upgrading the Oracle Utilities Application Framework Application Component

This section outlines the steps for upgrading the application component of Oracle Utilities Application Framework.

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

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

where <install_dir> is the location where the Oracle Utilities Application Framework v4.3.0.5.0 base application component is installed.

3. Initialize the environment by running the appropriate command:

UNIX

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

Windows

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

4. Change directory to the <TEMP_DIR>/FWV4.3.0.5.0-SP5 directory.

NOTE: While installing the FW v4.3.0.5.0 from the previous environment to Oracle Utilities Customer Care and Billing v2.2.0 the install utility removes the existing environment and re-creates the environment. Take a backup before you proceed with installing FW v4.3.0.5.0 to retain any configurations for future reference.

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

UNIX

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

Windows Server

```
installSP.cmd
```

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

Installing Oracle Utilities Application Framework v4.3.0.5.0 Single Fix PreRequisite Rollup

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Customer Care and Billing. The patches are available as a convenience rollup inside the zip file “CCB-V2.6.-0.1.0-FW-Prereq-MultiPlatform.zip” which is part of the downloaded Media Pack.

Refer to the [Installing Prerequisite Patches](#) section for more details.

Upgrading the Oracle Utilities Customer Care and Billing Application Component

This section describes how to install the application component of Oracle Utilities Customer Care and Billing, including:

- [Copying and Decompressing Oracle Utilities Customer Care and Billing Install Media](#)
- [Upgrading the Oracle Utilities Customer Care and Billing Application Component](#)
- [Creating WebLogic Domain](#)

Copying and Decompressing Oracle Utilities Customer Care and Billing Install Media

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

Refer to the [Copying and Decompressing Install Media](#) section for instructions to copy and decompress the install media.

Upgrading the Oracle Utilities Customer Care and Billing Application Component

Refer to the [Installing the Application](#) section for steps to upgrade the Oracle Utilities Customer Care and Billing application component.

Creating WebLogic Domain

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

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 for details.

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

At this point your installation is complete. Read the *Oracle Utilities Customer Care and Billing Server Administration Guide* for more information on further configuring and operating the system.

Installing Service Packs and Patches

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

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information on installing patches, refer to knowledge base article ID 974985.1 on My Oracle Support.

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

Appendix A

Application Framework Prerequisite Patches

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

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

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

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

Bug Fix	Description
27045649	COPY OF BUG 26920239 - F1_CMA_FILES DIRECTORY FAILED TO BE CREATED IN SPOUTPUT
27053570	COPY OF BUG 26867108 - UPGRADE 2.6 - INCORRECT DISPLAY OF BPA SCRIPT PAGE
27058231	COPY OF BUG 26958743 - DATAMASKINGHELPER OF FW MASKS SENSITIVE DATA ALWAYS IN FU
27063020	SP5 CHANGES TO F1-MAINPROC FOR POST PROCESSING MAP SCHEMA
27063491	COLLAPSED INFO DATA EXPLORER ZONE NOT DISPLAYING DATA WHEN EXPANDED
27064689	COPY OF 27009119 - COPY OF 26869720 - HEIGHT OF REPORT PARAMETER FOR ZONE NOT WO
27070593	COPY OF 27070580 - COPY OF 27053300 - F1-DOESNTITYEXIST BS REFERENCES NON-EXIST
27077859	BACKPORT SCHEMA EDITOR, REMOVE LEGACY ONE AND YUI LIBRARY
27078662	COPY OF 27078636 - MWM - CLOB WITH 8000 BYTES CONTENT CANNOT BE READ
27079815	COPY OF BUG 26847851 - PAGINATION ERROR WHEN THERE ARE TWO BROADCAST PRESENT
27100772	PLUGIN DRIVEN EXTRACT BEHAVIOR WITH EXTENDED DA
27119998	DISPLAY MAPS DO NOT HAVE CORRECT HEIGHT
27120009	DATA EXPLORER RESULTS AREA DOES NOT HAVE CORRECT HEIGHT
27127741	SECURITY RIGHTS ISSUE ON F1-DFLT5 FOR SERVICE CFLZSELL
27135224	BUSY FADE NOT REMOVED ON THE CLOSE OF A SCRIPT INVOKED UI MAP
27144844	COPY OF 26969586 - MWM - PROVIDE NEW URL PARAMETER TO SET DASHBOARD MINIMIZED
27167325	MENU SEARCH INPUT - SMALLER THAN USUAL IN IE
27168124	COPY OF BUG 27067352 - CURRENCY SYMBOL IS NOT DISPLAYED IN BO BASED SCREEN WHEN
27168195	COPY OF BUG 26983791 - COPY OF BUG 26961168 - ON LAUNCHING THE BPA SCRIPT THE SC
27222125	COPY OF BUG 27222114 - COPY OF BUG 27222058 - ADD WEBSERVICES TARGET_FOLDER FOR
27226557	BUG 25885378 - COPY OF BUG 27225808 - COPY OF BUG 27225794 - COPY OF BUG 2722578
27229838	COPY OF BUG 27229834 - COPY OF BUG 27229830 - COPY OF BUG 27229822 - COPY OF BUG

Bug Fix	Description
27268999	CHAR TYPE DROPDOWNS ARE NOT BEING POPULATED

Appendix B

Oracle Utilities Customer Care and Billing Fixes

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

Bug Number	Description
26567237	COPY OF 26305202 - WRONG TRANSFER ADJUSTMENTS - FINAL BILL
25729418	COPY OF 25713561 - SUPPORT MULTIPLE REVENUE/TAX CHARACTERISTIC VALUES TO DETERMI
26319811	COPY OF 25775734 - GL STATISTICS AMOUNT NOT SHOWING WHEN BILL FACTOR VALUE IS PR
26482724	COPY OF 26418578 - 404 ERROR IN HTTP LOGS; IMAGE URL CONTAINS //
26224072	COPY OF 26002694 - CONTINUOUS ISSUE WITH BUG 25607696
26201985	COPY OF 25822721 - INCREASE BILLABLE CHARGE LINE COLLECTION
26966792	COPY OF 26703242 - USAGE REQUESTS UPDATE CAUSING FULL TABLE SCANS AND PERFORMANC
26966839	COPY OF 26835239 - OVERDUE PROCESS FOR CREDIT BILL
27019713	COPY OF 26720660 - CHANGE IN ITEM COUNT IN MIDDLE OF BILL PERIOD HAS 1 MORE DAY
27019719	COPY OF 26920695 - DEFECT 3384: CCB POSTROUT SYSTEM ERROR EXCEPTION TRACED TO BI
27078825	COPY OF 26835344 - SYSTEM ERROR WHILE BILL STOPPED ACCOUNT WITH NEGATIVE CONSUMP
26434075	COPY OF 25538909 - BILL SEGMENT ACTION MENUS ARE DISABLED EXCEPT FOR UNDO
26434098	COPY OF 26259261 - DUPLICATE BILL SEGMENT FOR SUB SA GETTING CREATED WHEN RE-GEN
26434224	COPY OF 26224736 - BATCH BILLING:BILL SEGMENT MOVING TO ERROR STATUS AFTER USAGE

Bug Number	Description
26781198	USAGE REQUEST INFO ALGORITHM SHOWS INCORRECT SA TYPE DESCRIPTION
26498659	COPY OF 26432521 - SUEZ UNABLE TO GET PROPERTY 'TOP' OF UNDEFINED ERROR IN BILL
24478457	COPY OF 24381755 - STEP BOUNDARY OPTION NOT WORKING PROPERLY AFTER PATCH 2429403
24960102	COPY OF 24794165 - JAPANESE LOCALIZATION FUNCTION "GET CONSUMPTION PERIOD" IS NO
26288419	COPY OF 25999349 - REACTIVATED SA DOES NOT SHOW UP IN THE SA DROP DOWN LIST IN O
27304554	COPY OF 27247738 - MUP1 BATCH JOB FAILURE
25955078	ADD 'EXECUTE' ACCESS TO APPLICATION SERVICE C1-INITIATIVE
27078808	COPY OF 26673851 - BS C1-RETRIEVESERVICEPROVIDERLIST RETURNS ALL EXISTING RECORD
26669296	COPY OF 26619835 - PAY EVENT INFO SHOWS INCORRECT CURRENCY SIGN
26288435	COPY OF 26130336 - {INFO} VAL-PER (ALGS CI_PER-SSN AND CI_PER-EIN) WRITING SENSI
27321021	COPY OF 27180300 - PAY PLAN NOT ABLE TO INSULATE ACCOUNT'S DEBT FROM WRITE OFF W
25927246	COPY OF 25815410 - ACCOUNT LIST POSTAL SEARCH IS EXACT BUT ADMIN CUSTOMER POSTAL
27163400	COPY OF 26000650 - ISSUES WITH THE PAYMENT RECEIVED NOTIFICATION SELF SERVICE TA
27078796	COPY OF 26620410 - WXMAINTAINPHONEINFO GIVES SYSTEM ERROR FOR PERSON WITH 10 PHO
26917567	COPY OF 26167213 - COLUMN REFERENCE / FK REF CAMPAIGN QMF CAUSES A START/STOP SS
26639883	COPY OF 26107030 - OUCSS FINANCIAL HISTORY DISPLAYS CANCELED BILLS
26639893	COPY OF 26323794 - CSS ACCOUNT ENROLLING VERIFICATION PHONE NUMBER ERROR MESSAGE
26434142	COPY OF 23729739 - 11797 - NO ERROR TO CSS W/ INVALID ROUT. NBR & SAVECURRENTPAY
26434191	COPY OF 26322386 - WXMAINTAINCSSUSERACCOUNT ERROR WHEN ENROLLING A PERSON WITH >
26567209	COPY OF 26352576 - OUCSS - VIEW BILL DOES NOT RETRIEVE LATEST COMPLETED BILL
25292440	MAILING ADDRESS ON NEW CUSTOMER DIALOG NOT CAPTURED IN CCB

Bug Number	Description
26713946	COPY OF 26661128 - WXMAINTAINCSSUSERACCOUNT ERROR WHEN REVOKING A PERSON WITH >
26123434	COPY OF 26123293 - CTRL CENTRAL - CUST INFO - RESTRICTED ACCT ZONE ID NBR CO
26019914	COPY OF 25969453 - AGED DEBT BAR SHOWS DIFF INFO IN CURRENT CONTEXT COMPARED TO
27164064	COPY OF 26732441 - MULTIPLE FINANCIALLY RESPONSIBLE ALERT NAVIGATES TO PREMISE T
26113454	COPY OF 25829782 - PREMISE PORTAL TAB PAGE - UNABLE TO 'START CHANGES' IN A SESS
26190763	PERSON ID - VALIDATION FAILURE
26113470	COPY OF 25296353 - ACCOUNT AND PERSON BEING DISPLAYED FOR A PREMISE IN THE CURRE
27134338	NO SA DETAILS ON ACCOUNT TREE FOR SINGLE NON PREMISE BASED SA
27156888	COPY OF 26834729 - MAIN MENU>CUSTOMER INFORMATION>PERSON>SEARCH - WILDCARD SEARC
26966733	COPY OF 26371974 - FULL TABLE SCANS ONLINE - COBOL PROGRAM 'CIPCSPMS', SQL NAME
27078790	COPY OF 26609296 - ACCOUNT MANAGEMENT PORTAL TAKES LONG TIME TO LOAD
26591677	COPY OF 26535135 - 404 ERROR IN HTTP LOGS; IMAGE WRONG URL
26434181	COPY OF 26001872 - DATA MASKING IS NOT WORKING FOR SELF SERVICE PAYMENT OPTIONS
26567248	COPY OF 26451249 - ADDING INTERVAL PROFILES ON SA MANUALLY - SAVE NOT GETTING EN
26482512	COPY OF 26098230 - PREMISE INFORMATION ZONE NOT FILTER EFFECTIVE PREMISE CHARACT
26445461	ACCOUNT ACTIVITY HISTORY ZONE IS NOT LOADING IF THE ACCOUNT IS LINKED TO A CASE
26375983	COPY OF 25699946 - GO TO CUSTOMER CONTACT > ADD CONTEXT MENU NOT WORKING AS EXPE
26594482	DISPLAY DEVICE CONFIGURATION(S) LINKED TO THE SP IN CCB TREES
26113442	COPY OF 26034188 - 100% TAX EXEMPT CALCULATED WHEN THE AMOUNT IS 0.05 OR LESS
27093013	COPY OF 26289534 - MULTIPLE PAYMENT OPTIONS FOR SAME SOURCE AND ROUTING NUMBER N
26966675	COPY OF 26811506 - MASKING INFORMATION FOR AUTO PAY SOURCE

Bug Number	Description
27019727	COPY OF 26364904 - REBILLING NOT THE LATEST BILL SEGMENT GIVES AN ERROR (USAGE)
26434168	COPY OF 25732384 - RAISING AN ORDER IN 2.5 IS SLOWER THAN IN 2.1
26388129	COPY OF BUG 24520593 - UNABLE TO INVOKE SOM IWS ENDPOINT DIRECTLY FROM CCB
26966776	COPY OF 26441231 - FA COMPLETION SYNC REQUEST ERROR WHEN CC&B BADGE NUMBER DOES
26917617	COPY OF 26478995 - PRE-PROC ALG OF C1-FASYNCREQOUTMSG BO IN CCB 2.6 THROWS CAST
26391718	COPY OF 26246558 - NUMBERFORMATEXCEPTION ENCOUNTERED WHEN UNLINKING A FINANCIAL
25816834	COPY OF 25711848 - WHILE SUBMITTING XAI REQUEST FOR INTERVAL BILLING, WE ARE GET
25926707	COPY OF 25605810 - ESTIMATION TYPE IS INVALID. (8/16505) USING METERREADHIGHLOWL
26639921	COPY OF 26592809 - SERVICE ROUTE SEQUENCES BEING RENUMBERED OUT OF ORDER
27305046	INCORRECT XPATH USED IN C1-UPDMDMUSI TO POPULATE D2-UPDUTMUL ELEMENT
27282421	COPY OF 27131240 - WX-NOTIF BATCH IS UNABLE TO SEND MESSAGE TEXT SPECIFIC TO DEL
27156895	COPY OF 26953177 - NPE WHILE CREATING PAYMENTS USING PAY DISTRIBUTION C1-FTGL-PS
26929949	COPY OF 26388606 - SPLIT PAYMENTS FROM PUPL DO NOT RETAIN PAYMENT CHARACTERISTIC
26113717	19263509 - FR: SORT CALCULATION RULES BY EFFECTIVE DATE ON ASSIGN MEMBERS UI MAP
26113451	COPY OF 25684792 - PREVIOUS QUANTITY FOR SQ RULE IS NOT WORKING AS EXPECTED
26113466	COPY OF 25999008 - UNABLE TO SEARCH AND EDIT INTERVAL BILL FACTORS VALUES
26140710	CALCULATION GROUP FOR PRE-PROCESSING CALCULATION GROUPS SHOULD BE REQUIRED
27282642	COPY OF 27092281 - CURRENT DAY'S INTERVAL PRICE IS APPLIED TO PREVIOUS DAY'S USA
26917396	COPY OF 26663743 - ENCOUNTERED SERVICE QUANTITY NOT FOUND IN SQ COLLECTION 4, 11
26434049	COPY OF 26197866 - "APPLY TO" CALC LINE SKIPPED WHEN CROSS-REFERENCED AMT IS ZER

Bug Number	Description
26434084	COPY OF 25801512 - ORACLE FOR CC&B RATING ENGINE ISSUE ON LEAP YEAR (FEB)
26567270	COPY OF 26398160 - RATE COMPONENT CHARACTERISTIC TYPE DROPDOWN VALUES NOT AVAILA
26713937	COPY OF 26286357 - 'CALCULATION FIELD READING VALUES' CALCULATION RULE WRONG LOG
26844918	POSTAL CODE %1 DOES NOT HAVE A CORRESPONDING RECORD ON THE POSTAL DEFAULTS
26113476	COPY OF 25831084 - CUSTOMER OVER-BILLED TO THE ORIGINAL SERVICE AGREEMENT ACTIVA
26639941	COPY OF 26500317 - PERSON ID FIELD MISSING ERROR WHEN STARTING SERVICE AGREEMENT
26089271	ERROR NAVIGATING TO SAMPLE & SUBMIT REQUEST (SEARCH)
26199869	COPY OF 26126392 - UTA: CCB2600 REQUIREMENT
27282663	COPY OF 27199930 - DISPATCH GROUP CONFIGURATION SCREEN IS LOADING SLOWLY
26991610	C1_NTF_PREF - INDEX ON CONTACT ID AND F1_SVC_TASK_ID
25851944	COPY OF 25600715 - TD-NTUPL RESTART DATA IS INCORRECT
27298912	PSEUDO TRANSLATION ISSUE ON OPERATIONAL DASHBOARDS - PAYMENT TAB
26288392	COPY OF 26050644 - APPOINTMENTS BOOKED IN MWM CLOUD FROM CC&B TIME WINDOWS ARE O
26669276	COPY OF 26492447 - SP SOURCE STATUS NOT SHOWN IN SP SEARCH PAGE
26639873	COPY OF 26539632 - FA CANCELLATION DID NOT CREATE AN NDS RECORD TO BE SENT TO MW
27258884	UNABLE TO SEARCH PREMISE ONLY CUSTOMER CONTACT BY CONTACT TYPE/CONTACT CLASS