

Oracle® Revenue Management and Billing

Version 2.8.0.0.0

Upgrade Guide

Revision 16.4

F17816-01

June, 2019

Oracle Revenue Management and Billing Upgrade Guide

F17816-01

Copyright Notice

Copyright © 2019, Oracle and/or its affiliates. All rights reserved.

Trademark Notice

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

License Restrictions Warranty/Consequential Damages Disclaimer

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure, and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or de-compilation of this software, unless required by law for interoperability, is prohibited.

Warranty Disclaimer

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

Restricted Rights Notice

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Oracle programs, including any operating system, integrated software, any programs installed on the hardware and/or documentation delivered to U.S. Government end users are “commercial computer software” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware and/or documentation shall be subject to license terms and restrictions applicable to the programs. No other rights are granted to the U.S. Government.

Hazardous Applications Notice

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Third Party Content, Products, and Services Disclaimer

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products, or services.

Preface

About This Document

This document will help you to understand how to upgrade the Oracle Revenue Management and Billing application and its database. It also explains how to upgrade the application framework.

Intended Audience

This document is intended for the following audience:

- End-Users
- System Administrators
- Consulting Team
- Implementation Team

Organization of the Document

The information in this document is organized into the following sections:

Section No.	Section Name	Description
Section 1	Preparing for Upgrade	Provides an overview of the upgrade process. It also lists the prerequisites for upgrading the application.
Section 2	Upgrading from ORMB Version 2.7.0.1.0 to 2.8.0.0.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 2.7.0.1.0 to 2.8.0.0.0.
Section 3	Additional Tasks	Lists and describes the additional tasks that you need to perform after upgrading the application.
Appendix A	Known Issues	Lists the known issues in the current release of the Oracle Revenue Management and Billing application.
Appendix B	Third Party Software Upgrade	Provides a list of third party software that you need to upgrade before upgrading the application.
Appendix C	New Tables Added in 2.8.0.0.0	Lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 2.8.0.0.0 database.
Appendix D	Existing Tables Modified in 2.8.0.0.0	Lists the existing tables and their columns that are modified in the Oracle Revenue Management and Billing Version 2.8.0.0.0 database.

Section No.	Section Name	Description
Appendix E	Algorithms and Algorithm Types Dropped in 2.8.0.0.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.8.0.0.0.
Appendix F	Parameters Added or Removed from Algorithm Types in 2.8.0.0.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 2.8.0.0.0.
Appendix G	Option Types Added or Removed from Feature Configurations in 2.8.0.0.0	Lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 2.8.0.0.0.
Appendix H	Characteristic Types Dropped in 2.8.0.0.0	Lists the characteristic types which are dropped in Oracle Revenue Management and Billing Version 2.8.0.0.0.
Appendix I	Changing the DB User Password	Explains how to change the database user password.

Related Documents

You can refer to the following documents for more information:

Document	Description
Oracle Revenue Management and Billing Version 2.8.0.0.0 Release Notes	Provides a brief description about the new features, enhancements, UI and database level changes, supported platforms, framework upgrade, supported upgrades, and technology upgrade made in this release. It also highlights the discontinued features, bug fixes, and known issues in this release.
Oracle Revenue Management and Billing Upgrade Path Guide	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.

Change Log

Revision	Last Update	Updated Section	Comments
16.1	19-July-2019	Section 2.7: Migrating Data	Updated Information
		Appendix F: Parameters Added or Removed from Algorithm Types in 2.8.0.0.0	Updated Information
16.2	24-July-2019	All Sections	Corrected Formatting Issue

Revision	Last Update	Updated Section	Comments
16.3	20-Aug-2019	Section 2: Upgrading from ORMB Version 2.7.0.1.0 to 2.8.0.0.0	Added Information about the Single-Step Utility
16.4	01-Jul-2021	Section 2.5.2: Post Installation Tasks	Added Information
		Section 2.6: Upgrading the ORMB Database	Added Information

Contents

1.	Preparing for Upgrade	1
1.1	Upgrade Overview.....	1
1.2	Upgrade Pre-requisites.....	3
1.3	Supported Upgrades	3
2.	Upgrading from ORMB Version 2.7.0.1.0 to 2.8.0.0.0	4
2.1	Prerequisites.....	4
2.2	Downloading the ORMB Packages and Patches	5
2.3	Upgrading Framework on the Database	5
2.3.1	Installing Rollup Pack for OUAF Version 4.3.0.6.0	5
2.4	Installing Framework on the Application Environment.....	8
2.4.1	Installing OUAF Version 4.3.0.6.0	8
2.4.2	Installing Rollup Pack for OUAF Version 4.3.0.6.0	13
2.5	Installing the ORMB Application.....	14
2.5.1	Installing ORMB Version 2.8.0.0.0	14
2.5.2	Post Installation Tasks	16
2.5.3	Accessing the ORMB Application.....	17
2.6	Upgrading the ORMB Database.....	18
2.6.1	Installing ORMB Version 2.8.0.0.0	19
2.6.2	Applying the 29889611 Patch.....	23
2.7	Migrating Data.....	24
3.	Additional Tasks.....	26
3.1	Generating the Application Viewer	26
3.2	Starting the Thread Pool Worker	27
3.3	Building Javadoc Index	27
Appendix A :	Known Issues	28
Appendix B :	Third Party Software Upgrade	29
Appendix C :	New Tables Added in 2.8.0.0.0	30
C.1	C1_CUST_REG.....	30
C.2	C1_CUST_REG_CHAR.....	31
C.3	C1_CUST_REG_K.....	32
C.4	C1_CUST_REG_LOG	33
C.5	C1_CUST_REG_LOG_PARM	34
C.6	C1_CUST_REG_REL.....	35
C.7	C1_CUST_REG_TMPL.....	36
C.8	C1_CUST_REG_TMPL_L.....	36
C.9	C1_CUST_REG_TMPL_PAGE.....	37
C.10	C1_CUST_REG_TMPL_PAGE_FLD.....	38
C.11	C1_CUST_REG_TMPL_PAGE_SECTION	39
C.12	C1_CUST_REG_TYPE.....	40
C.13	C1_CUST_REG_TYPE_CHAR.....	41

C.14	C1_CUST_REG_TYPE_L	42
C.15	C1_CUST_REG_TYPE_TMPL	42
C.16	C1_ACCRUAL_DSTCD_CALC	43
C.17	C1_AUDIT_EVENT	44
C.18	C1_AUDIT_EVENT_CHAR	45
C.19	C1_AUDIT_EVENT_K	46
C.20	C1_AUDIT_EVENT_LOG	47
C.21	C1_AUDIT_EVENT_LOG_PARM	48
C.22	C1_AUDIT_EVENT_TYPE	49
C.23	C1_AUDIT_EVENT_TYPE_CHAR	49
C.24	C1_AUDIT_EVENT_TYPE_ELEMENTS	50
C.25	C1_AUDIT_EVENT_TYPE_L	51
C.26	C1_AUDIT_EVENT_TYPE_ALG	52
C.27	C1_CUST_REG_SEC_FLD	53
C.28	CI_POLICY_PLAN_PRC_RUL_TYPE	53
C.29	C1_PRC_RULE_ENTITY	54
C.30	C1_PRC_RULE_TYPE_AUDIT_EVENT	55
C.31	CI_STATE_CHAR	56
Appendix D : Existing Tables Modified in 2.8.0.0.0		57
D.1	C1_ACCR_TYPE	57
D.2	C1_ACCRUAL_CALC_LINE	57
D.3	C1_ACCRUAL_DTLS	58
D.4	C1_ADDRESS	58
D.5	C1_FT_EXT	58
D.6	CI_ACCT	59
D.7	CI_ACCT_PER_ROUTING	59
D.8	CI_ADJ	59
D.9	CI_BCHG_TEMP	60
D.10	CI_BILL_ACH	60
D.11	CI_BSEG_EXT	60
D.12	CI_CONSTRUCT	61
D.13	CI_DATA_EX_REQ	61
D.14	CI_DATA_EX_REQ_TYPE	61
D.15	CI_DIV_PRICEITEM	61
D.16	CI_PER	62
D.17	C1_POLICY_PLAN	62
D.18	CI_POLICY_TYPE	62
D.19	CI_PRCE_CALC	63
D.20	CI_PRCE_CALC_LN	63
D.21	CI_REPRC_ENTITY_DTL	64
D.22	CI_REPRC_REQ_DTL	64
D.23	C1_UPLPAY_LOG	65
Appendix E : Algorithms and Algorithm Types Dropped in 2.8.0.0.0		66
E.1	Algorithm Type	66

E.2	Algorithm.....	66
Appendix F :	Parameters Added or Removed from Algorithm Types in 2.8.0.0.0.....	67
Appendix G :	Option Types Added or Removed from Feature Configurations in 2.8.0.0.0	68
Appendix H :	Characteristic Types Dropped in 2.8.0.0.0	69
Appendix I :	Changing the DB User Password.....	70

1. Preparing for Upgrade

This section provides an overview of the upgrade process. It also lists the pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.

1.1 Upgrade Overview

The following figure provides an overview of the steps that need to be taken for upgrading Oracle Revenue Management and Billing.

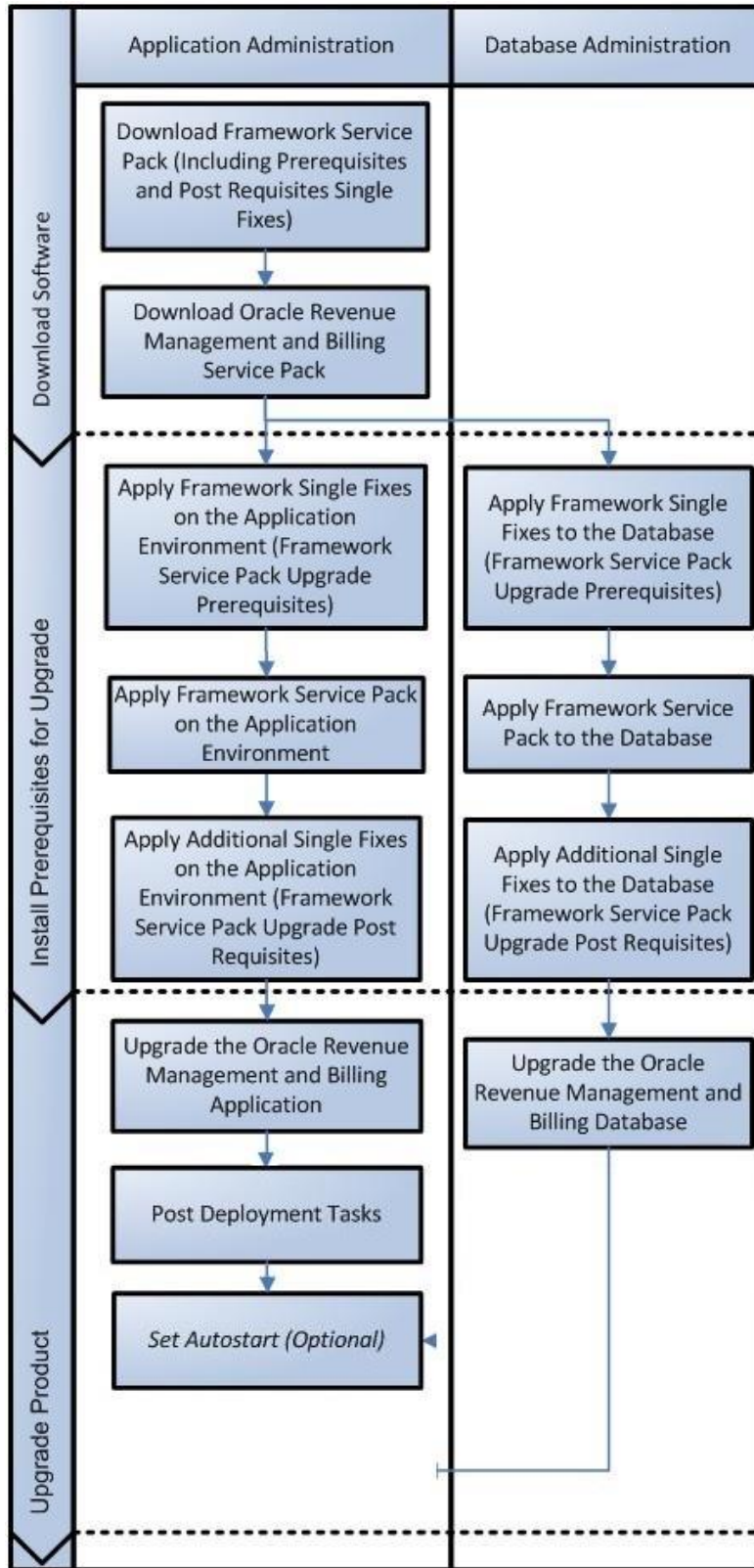


Figure 1: Upgrade Process

1.2 Upgrade Pre-requisites

Before you upgrade Oracle Revenue Management and Billing, you need to upgrade the application framework as mentioned in the *Oracle Revenue Management and Billing Upgrade Path Guide*. While upgrading the application framework, you might have to apply some patches (additional single fixes) as pre-requisites or post-requisites.

Also, before you upgrade the application framework, you might have to upgrade some of the third party software. For more information, refer to the **Upgrade Prerequisites** section in the *Oracle Revenue Management and Billing Upgrade Path Guide*.

1.3 Supported Upgrades

In this release, we support the following upgrades:

- Upgrade from Oracle Revenue Management and Billing Version 2.7.0.1.0 to 2.8.0.0.0

2. Upgrading from ORMB Version 2.7.0.1.0 to 2.8.0.0.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 2.7.0.1.0 to 2.8.0.0.0. The high-level steps include:

1. Downloading the ORMB Packages and Patches
2. Upgrading Framework on the Database
3. Installing Framework on the Application Environment
4. Installing the Oracle Revenue Management and Billing Application
5. Upgrading the Oracle Revenue Management and Billing Database
6. Migrating Data

Note: Before you upgrade the application, you must take a backup of the application and the database.

You can upgrade the database either manually by following the steps listed in this document or automatically using the single-step utility. Oracle Revenue Management and Billing provides the single-step utility which helps to upgrade the database from any previous version (not older than V2.3.0.2.0) to the current version. You can download the single-step utility from the UTILITIES PROVIDING A SINGLE STEP PROCESS FOR DATABASE UPGRADE patch (Patch Number: 25895460) which is available on [My Oracle Support](#). To understand how to execute the single-step utility, refer to the documentation available in the patch. At present, the single-step utility is only supported on the Windows environment.

To improve the performance of the SQL queries executed for data migration, you can execute a Java utility for setting degree of parallelism. This Java utility must be used in conjunction with the single-step utility. It must be executed before executing the single-step utility. You can download this utility from the JAVA UTILITY FOR SETTING DEGREE OF PARALLELISM IN DATA MIGRATIONS SQLS patch (Patch Number: 28226772) which is available on [My Oracle Support](#). To understand how to execute this Java utility, refer to the documentation available in the patch. At present, this utility is only supported on the Windows environment.

2.1 Prerequisites

If you are already using the Transaction Feed Management feature and want to upgrade to Oracle Revenue Management and Billing Version 2.8.0.0.0, then you need to ensure the following (before upgrading):

- All bills generated in the system are in the **Complete** status. In other words, there should not be any bills in the **Pending** status. If there are any bills in the **Pending** status or if any billable charge (generated through TFM) is not yet billed, disaggregation and cancellation of transactions which are uploaded using 2.7.0.1.0 will not happen successfully.
- Transactions which are uploaded using 2.7.0.1.0 must not be in the **Initial Product Determined (INPD)** status. They can be in the **Uploaded (UPLD)**, **Invalid (INVL)**, **Error (EROR)**, **Completed (COMP)**, or **Cancelled (CNCL)** status.
- Equal to (=) or tilde (~) symbol is not used in any existing price item parameter code or value. Otherwise, erroneous results might occur.

2.2 Downloading the ORMB Packages and Patches

For upgrading from Oracle Revenue Management and Billing Version 2.7.0.1.0 to 2.8.0.0.0, you must download the following packages from the Oracle Revenue Management and Billing V2.8.0.0.0 media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework V4.3.0.6.0 Single Fix Prerequisite Rollup for RMB V2.8.0.0.0
- Oracle Revenue Management and Billing V2.8.0.0.0 Multiplatform
- Oracle Revenue Management and Billing V2.8.0.0.0 Oracle Database

You must also download the following package from the Oracle Utilities Customer Care and Billing 2.7.0.0.0 media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Customer Care and Billing 2.7.0.0.0 - Oracle Utilities Application Framework (4.3.0.6.0) Installation Package

In addition, you must download the following patch from [My Oracle Support](#):

- ROLLUP PACK 1 FOR 2.8.0.0.0 (Patch Number: 29889611)

The downloaded files will be in the ZIP format.

2.3 Upgrading Framework on the Database

While upgrading from Oracle Revenue Management and Billing Version 2.7.0.1.0 to 2.8.0.0.0, you need to install the following on the database:

1. Rollup Pack for Oracle Utilities Application Framework (OUAF) Version 4.3.0.6.0

To install the framework service pack on the database, you must have ability to connect to the database.

2.3.1 Installing Rollup Pack for OUAF Version 4.3.0.6.0

You can install the rollup pack for Oracle Utilities Application Framework Version 4.3.0.6.0 from a Windows machine or UNIX Standalone server. To install the rollup pack for Oracle Utilities Application Framework (OUAF) Version 4.3.0.6.0 on the database:

1. Login to the database server using the administrator's credentials.
2. Copy the Oracle Utilities Application Framework V4.3.0.6.0 Single Fix Prerequisite Rollup for RMB V2.8.0.0.0 package to the TEMPDIR folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

3. Change to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

4. Unzip the Oracle Utilities Application Framework V4.3.0.6.0 Single Fix Prerequisite Rollup for RMB V2.8.0.0.0 package using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_1>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_1>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_1>` folder. The contents include the `ORMB-V28000-FW-PREREQ-MultiPlatform.jar` file.

5. Change to the `<DESTINATION_FOLDER_1>` folder using the following command:

AIX, Linux:

```
cd <PATH>/<DESTINATION_FOLDER_1>
```

Windows:

```
cd <PATH>\<DESTINATION_FOLDER_1>
```

6. Decompress the JAR file using the following command:

```
jar -xvf ORMB-V28000-FW-PREREQ-MultiPlatform.jar
```

A sub-directory named `FW-V4.3.0.6.0-Rollup` is extracted. It contains the following two sub-folders:

- Application
- Database

7. Change to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

8. Create a directory named `dbpatch_tools` using the following command:

```
mkdir dbpatch_tools
```

9. Copy the `db_patch_standalone.jar` file to the `dbpatch_tools` folder.

10. Change to the `dbpatch_tools` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR/dbpatch_tools
```

Windows:

```
cd <PATH>\TEMPDIR\dbpatch_tools
```

11. Decompress the JAR file using the following command:

```
jar -xvf db_patch_standalone.jar
```

The contents are extracted in the `dbpatch_tools` folder. The contents include the following three sub-folders:

- bin
- config
- lib

12. Set the `TOOLS_BIN` environment variable using the following command:

AIX, Linux:

```
export TOOLS_BIN=/TEMPDIR/dbpatch_tools/bin
```

Windows:

```
SET TOOLS_BIN=TEMPDIR\dbpatch_tools\bin
```

13. Change to the Database directory using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/FW-V4.3.0.6.0-Rollup/Database
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW-V4.3.0.6.0-Rollup\Database
```

Note: The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `ORMB-V28000-FW-PREREQ-MultiPlatform.jar` file.

14. Execute the `ouafDatabasePatch` utility using the following command:

AIX, Linux:

```
ouafDatabasePatch.sh
```

Windows:

```
ouafDatabasePatch.cmd
```

This utility prompts you to enter values for the following parameters:

Parameter	Value
Enter the target database type (O/M/D) [O]	O (if you have Oracle database) OR M (if you have MySQL database)
Enter the username that owns the schema	<DB_USER> Example: CISADM
Enter the password for the <DB_USER> user	<DB_USER_PASSWORD>
Enter the name of the Oracle Database Connection String	<DB_Server:DBPORT:ORACLE_SID>

Note: If you have changed the database user password, you will not be able to install the rollup pack for Oracle Utilities Application Framework Version 4.3.0.6.0. You will have to first change the database user password. For more information on how to change the database user password, refer to [Appendix I: Changing the DB User Password](#).

15. Enter the required parameter values. The following message appears in the command line:

```
Ready to process patches, Do you want to continue? (Y/N)
```

16. Type **Y** and then press **Enter**. A message appears indicating that the patches are applied successfully.

2.4 Installing Framework on the Application Environment

Once you install the framework and its rollup pack on the database, you need to install the following on the application environment:

1. Oracle Utilities Application Framework (OUAF) Version 4.3.0.6.0
2. Rollup Pack for Oracle Utilities Application Framework (OUAF) Version 4.3.0.6.0

You must not perform these steps on the existing environments. Instead, you must create new development and production/UAT environments on the application server and then perform the steps listed in this section.

2.4.1 Installing OUAF Version 4.3.0.6.0

To install Oracle Utilities Application Framework (OUAF) Version 4.3.0.6.0 on the application environment:

1. Login to the application server using the administrator's credentials.
2. Create a temporary folder or directory (for example, `TEMPDIR`) on the application server using the following command:

```
mkdir TEMPDIR
```

- Copy the Oracle Utilities Customer Care and Billing 2.7.0.0.0 - Oracle Utilities Application Framework (4.3.0.6.0) Installation package to the TEMPDIR folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

- Change to the TEMPDIR folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

- Unzip the Oracle Utilities Customer Care and Billing 2.7.0.0.0 - Oracle Utilities Application Framework (4.3.0.6.0) Installation package using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_1>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_1>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. The contents include FW-V4.3.0.6.0-MultiPlatform.jar file.

- Decompress the FW-V4.3.0.6.0-MultiPlatform.jar file using the following command:

```
jar -xvf FW-V4.3.0.6.0-MultiPlatform.jar
```

The contents of the JAR file include a folder named FW.V4.3.0.6.0.

- Install and configure the required third-party software for the application server.

Note: You must install the prerequisite third party software depending on the platform on which you want to install Oracle Utilities Application Framework. For more details, refer to the **Installing Application Server Prerequisite Software** section in the *Oracle Revenue Management and Billing Installation Guide*.

- Set the Java Home path using the following command:

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

Note:

The <Java_Home> is the location where you have installed Java 1.8.

The above command is applicable only for AIX and Linux platforms.

9. Change to the `FW.V4.3.0.6.0` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/FW.V4.3.0.6.0
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW.V4.3.0.6.0
```

Note: The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `FW-V4.3.0.6.0-MultiPlatform.jar` file.

10. Execute the `install` utility using the following command:

AIX, Linux:

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

Windows:

```
install.cmd
```

The following message appears in the command line:

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

11. Type `<ORACLE_CLIENT_HOME>`, and then press **Enter**. The following environment installation menus appear in the command line:

- 1. Environment ID, Roles, Third Party Software Configuration
- 2. Keystore Options
- 50. Environment Installation Options

Note:

The `<ORACLE_CLIENT_HOME>` is the location where Oracle Database Client is installed. This is required to execute the Perl installation utilities.

If the `ORACLE_CLIENT_HOME` environment variable is set, the installation utility will not request you to provide this information.

12. Type **1** to define values for the third party software configuration, and then press **Enter**. The utility prompts you to enter values for a list of menu options.

13. Specify the required value for menu options, and then press **Enter**.

Note: For more details about these menu options, refer to the **Environment ID, Roles, Third Party Software Configuration** section in *Oracle Revenue Management and Billing Installation Guide*.

14. Type **2** to define values for the keystore options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.

15. Specify the required value for menu options, and then press **Enter**.

Note: For more details about these menu options, refer to the **Keystore Options** section in *Oracle Revenue Management and Billing Installation Guide*.

16. Type **50** to define values for the environment installation options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.

17. Specify the required value for menu options, and then press **Enter**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

Note:

`$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed. Before you specify the environment installation options, ensure that you have created an output directory named Log File Mount Point. If this output directory does not exist, the installation will not be successfully executed.

For more details about these menu options, refer to the **Environment Installation Options** section in *Oracle Revenue Management and Billing Installation Guide*.

18. Type **P** to proceed with the installation. The following environment configuration menus appear in the command line:
- 1. Environment Description
 - 2. Business Application Server Configuration
 - 3. Web Application Server Configuration
 - 4. Database Configuration
 - 5. General Configuration Options
 - 6. OUAF TrustStore Options
19. Type **1**, and then press **Enter**. The utility prompts you to enter the environment description.
20. Specify the environment description, and then press **Enter**.

Note: For more details, refer to the **Environment Description** section in *Oracle Revenue Management and Billing Installation Guide*.

21. Type **2** to define values for the business application server configuration, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
22. Specify the required value for menu options, and then press **Enter**.

Note: For more details, refer to the **Business Application Server Configuration** section in *Oracle Revenue Management and Billing Installation Guide*.

23. Type **3** to define values for the web application server configuration, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
24. Specify the required value for menu options, and then press **Enter**.

Note: For more details, refer to the **Web Application Server Configuration** section in *Oracle Revenue Management and Billing Installation Guide*.

25. Type **4** to define values for the database configuration, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
26. Specify the required value for menu options, and then press **Enter**.

Note: For more details about these menu options, refer to the **Database Configuration** section in *Oracle Revenue Management and Billing Installation Guide*.

27. Type **5** to define values for the general configuration options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
28. Specify the required value for menu options, and then press **Enter**.

Note: For more details about these menu options, refer to the **General Configuration Options** section in *Oracle Revenue Management and Billing Installation Guide*.

29. Type **6** to define values for the OUAF TrustStore Options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
30. Specify the required value for menu options, and then press **Enter**.

Note: For more details about these menu options, refer to the **OUAF TrustStore Options** section in *Oracle Revenue Management and Billing Installation Guide*.

31. Type **P** to proceed with the installation. The Oracle Utilities Application Framework Version 4.3.0.6.0 is installed on the application server.

Note:

The utility contains default values for some of the menu options. If required, you can change their values. While executing the `install` utility, you must set the value for all menu options. Otherwise, the installation process will not be completed successfully. The values that you specify for the menu options are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

Once the installation process is completed, the following utilities are automatically executed in the specified order:

1. `initialSetup` - The `initialSetup` utility updates the configuration files including the WAR files on the system. On the UNIX machine, this utility is available in the `$SPLEBASE/bin` directory. And, on the Windows machine, this utility is available in the `%SPLEBASE%\bin` directory.
2. `splenviron` - The `splenviron` utility sets the environment variables using the `ENVIRON.INI` file. On the UNIX machine, this utility is available in the `$SPLEBASE/bin` directory. And, on the Windows machine, this utility is available in the `%SPLEBASE%\bin` directory. The following are some of the key environment variables that are set using the `splenviron` utility:

- `$PATH`
- `$SPLEBASE (%SPLEBASE%)` - Indicates the `<SPLDIR>/<SPLENVIRON>` directory
- `$SPLOUTPUT (%SPLOUTPUT%)` - Indicates the `<SPLDIROUT>/<SPLENVIRON>` directory
- `$SPLENVIRON (%SPLENVIRON%)` - Indicates the environment name

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

AIX, Linux:

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

Windows:

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

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

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

2.4.2 Installing Rollup Pack for OUAF Version 4.3.0.6.0

To install the rollup pack for Oracle Utilities Application Framework Version 4.3.0.6.0 on the application environment:

1. Copy the Oracle Utilities Application Framework V4.3.0.6.0 Single Fix Prerequisite Rollup for RMB V2.8.0.0.0 package to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

2. Change to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

3. Unzip the Oracle Utilities Application Framework V4.3.0.6.0 Single Fix Prerequisite Rollup for RMB V2.8.0.0.0 package using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_2>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_2>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include the `ORMB-V28000-FW-PREREQ-MultiPlatform.jar` file.

4. Decompress the JAR file using the following command:

```
jar -xvf ORMB-V28000-FW-PREREQ-MultiPlatform.jar
```

A sub-directory named `FW-V4.3.0.6.0-Rollup` is extracted. It contains the following two sub-folders:

- Application
- Database

5. Initialize the application environment where you want to install the rollup pack using the following command:

AIX, Linux:

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

Windows:

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

6. Change to the `Application` directory using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_2>/FW-V4.3.0.6.0-Rollup/Application
```

Windows:

```
cd <DESTINATION_FOLDER_2>\FW-V4.3.0.6.0-Rollup\Application
```

Note: The `<DESTINATION_FOLDER_2>` folder is the location where you have extracted the contents of the `ORMB-V28000-FW-PREREQ-MultiPlatform.jar` file.

7. Execute the `installSFgroup` utility using the following command:

AIX, Linux:

```
chmod a+x installSFgroup.sh
```

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

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

The following message appears in the command line:

```
Ready to process patches, Do you want to continue? (Y/N)
```

8. Type **Y** in the command line, and then press **Enter**. A message appears indicating that the process has been completed successfully.

2.5 Installing the ORMB Application

This section explains how to install the application. You need to install the following on the application environment:

1. Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0

Note: If you have updated the template files in the `$SPLEBASE/etc` folder, you must also take a backup of these files. Once the application is installed on the new application environment, you need to copy the latest template files in the `$SPLEBASE/etc` folder.

2.5.1 Installing ORMB Version 2.8.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0 on the application environment:

1. Login to the application server using the administrator's credentials.
2. Copy the Oracle Revenue Management and Billing V2.8.0.0.0 Multiplatform package to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```


Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

3. Change to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

4. Unzip the Oracle Revenue Management and Billing V2.8.0.0.0 Multiplatform package using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_3>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_3>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_3>` folder. The contents include `ORMB.V2.8.0.0.0` folder.

5. Initialize the application environment (on which you want to install the application) using the following command:

AIX, Linux:

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

Windows:

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

6. Stop the managed server where the application is hosted using the WebLogic Console.
7. Change to the `ORMB.V2.8.0.0.0` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_3>/ORMB.V2.8.0.0.0
```

Windows:

```
cd <DESTINATION_FOLDER_3>\ORMB.V2.8.0.0.0
```

8. Execute the `install` utility using the following command:

AIX, Linux:

```
./install.sh
```

Windows:

```
install.cmd
```

The following message appears in the command line:

```
Do you wish to proceed with the installation? Y/N:
```

9. Type **Y** and then press **Enter**. A message appears informing you to type **P** if you want to proceed with the installation.

10. Type **P**, and then press **Enter**.

Note:

If you want to set the advanced menu options, execute the `configureEnv` utility using the following command:

AIX, Linux:

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

Windows:

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

You cannot set the advanced menu options during the installation process. These options can be set only after the application is installed. For more information, refer to the **Advanced Menu Options** section in the *Oracle Revenue Management and Billing Installation Guide*.

2.5.2 Post Installation Tasks

Once you install Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0, you need to apply the following patch on the application environment:

- ROLLUP PACK 1 FOR 2.8.0.0.0 (Patch Number: 29889611)

Note: In addition, you need to apply all patches released for 2.8.0.0.0 on [My Oracle Support](#) which are not included in the above rollup pack.

2.5.2.1 Applying the 29889611 Patch

Once you install ORMB, you need to apply the ROLLUP PACK 1 FOR 2.8.0.0.0 patch (Patch Number: 29889611). To apply the ROLLUP PACK 1 FOR 2.8.0.0.0 patch:

1. Copy the ROLLUP PACK 1 FOR 2.8.0.0.0 patch to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

2. Change to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

- Unzip the ROLLUP PACK 1 FOR 2.8.0.0.0 patch using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_4>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_4>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_4> folder. The contents include README.txt and three folders named RMB_V2.8.0.0.0_App_Rollup, RMB_V2.8.0.0.0_DB_Rollup, and RMB_V2.8.0.0.0_PFDs.

- Initialize the application environment (on which you want to install the patch) using the following command:

AIX, Linux:

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

Windows:

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

Where,

\$\$PLEBASE or %SPLEBASE% is the path where the application environment is installed and \$\$PLENVIRON or %SPLENVIRON% is the name of the application environment.

- Change to the RMB_V2.8.0.0.0_App_Rollup folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_4>/RMB_V2.8.0.0.0_App_Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_4>\RMB_V2.8.0.0.0_App_Rollup
```

- Install the patch using the following command:

AIX, Linux:

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

- Start the managed server using the WebLogic Console.

2.5.3 Accessing the ORMB Application

The following table lists the URLs that you can use to access the application on various application servers:

Application Server	URL
WebLogic	https://<hostname>:<WebLogic_Port_Number>/ouaf/loginPage.jsp

2.6 Upgrading the ORMB Database

This section explains how to upgrade the database. When you upgrade the database, the system overwrites the database schema and the metadata present in the database. However, the transactional data is not affected.

While upgrading from Oracle Revenue Management and Billing Version 2.7.0.1.0 to 2.8.0.0.0, you need to install the following on the database:

1. Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0
2. ROLLUP PACK 1 FOR 2.8.0.0.0 (Patch Number: 29889611)

Note:

In addition, you need to apply all patches released for 2.8.0.0.0 on [My Oracle Support](#) which are not included in the above rollup pack.

Before you upgrade the database, you must take a backup of the existing database.

When you upgrade the database, any metadata with the Owner flag set to CM is not overridden during the upgrade process.

Pre-requisites:

Before installing Oracle Revenue Management and Billing Version 2.8.0.0.0 on the database, you need to set the MAX_STRING_SIZE parameter to EXTENDED. If you have a non-container database, you need to perform the following steps to set the MAX_STRING_SIZE parameter to EXTENDED:

1. Set the ORACLE_HOME and ORACLE_SID environment variables.

Note: You need to connect as system administrator while executing the below steps.

2. Shutdown the target database using the following command:

```
shutdown immediate
```

3. Start the database in the Upgrade mode using the following command:

```
startup upgrade
```

4. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:

```
alter system set max_string_size=extended scope=both;
```

5. Execute the utl32k.sql file using the following command:

```
@?/rdbms/admin/utl32k.sql;
```

6. Restart the database in the Normal mode using the following commands:

```
shutdown immediate
```

```
startup
```

However, if you have a container database, you need to perform the following steps to set the MAX_STRING_SIZE parameter to EXTENDED:

1. Set the ORACLE_HOME and ORACLE_SID environment variables.

Note: You need to connect as system administrator while executing the below steps.

2. Set the `MAX_STRING_SIZE` parameter to `EXTENDED` using the following command:

```
alter system set max_string_size=extended scope=spfile;
```
3. Start all pluggable databases in the Upgrade mode using the following command:

```
shutdown immediate  
startup upgrade  
alter pluggable database all open upgrade;  
exit
```
4. Create the `utl32k_cdb_pdb_output` folder to store the log files using the following command:

```
mkdir /scratch/mydir/utl32k_cdb_pdb_output
```
5. Execute the `utl32k.sql` from the `catcon.pl` file for all pluggable databases using the following command:

```
cd $ORACLE_HOME/rdbms/admin  
$ORACLE_HOME/perl/bin/perl $ORACLE_HOME/rdbms/admin/catcon.pl -u  
SYS -d $ORACLE_HOME/rdbms/admin -l  
'/scratch/mydir/utl32k_cdb_pdb_output' -b  
utl32k_cdb_pdb_output utl32k.sql
```
6. Restart the database in the Normal mode using the following commands:

```
shutdown immediate  
startup  
alter pluggable database all open read write;
```

2.6.1 Installing ORMB Version 2.8.0.0.0

You can install Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0 either using the Interactive or Command Line mode of the OraDBI (Java) utility. To install Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0 using the Interactive mode of the utility:

1. Copy the Oracle Revenue Management and Billing V2.8.0.0.0 Oracle Database package to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

2. Change to the `TEMPDIR` folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

- Unzip the Oracle Revenue Management and Billing V2.8.0.0.0 Oracle Database package using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_2>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_2>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_2> folder. The contents include the following sub-folders:

- FW
- RMB

- Set the JAVA_HOME environment variable using the following command:

AIX, Linux:

```
export JAVA_HOME=<JAVA_HOME_PATH>
```

Windows:

```
SET JAVA_HOME=<JAVA_HOME_PATH>
```

Note: The <JAVA_HOME_PATH> is the location where Java Development Kit Version 8.0 is installed.

- Set the JAR_PATH environment variable using the following command:

AIX, Linux:

```
export JAR_PATH=<DESTINATION_FOLDER_2>/RMB/jarfiles
```

Note: The above command is applicable only for AIX and Linux platforms.

- Set the CLASS_PATH environment variable using the following command:

AIX, Linux:

```
export CLASS_PATH=${JAR_PATH}/commons-cli-1.3.1.jar:${JAR_PATH}/commons-codec-1.9.jar:${JAR_PATH}/commons-collections-3.2.2.jar:${JAR_PATH}/log4j-api-2.11.0.jar:${JAR_PATH}/log4j-core-2.11.0.jar:${JAR_PATH}/ojdbc8-12.2.0.1.jar:${JAR_PATH}/oradbi.jar:${JAR_PATH}/spl-shared-4.3.0.6.0.jar
```

Windows:

```
SET CLASS_PATH=<DESTINATION_FOLDER_2>\RMB\jarfiles\*
```

- Change to the Install-Upgrade directory using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_2>/RMB/Upgrade/Oracle/Install-Upgrade
```

Windows:

```
cd <DESTINATION_FOLDER_2>\RMB\Upgrade\Oracle\Install-Upgrade
```

8. Execute the OraDBI (Java) utility using the following command:

AIX, Linux:

```
{JAVA_HOME}/bin/java -Xmx1500M -cp ${CLASS_PATH}
com.oracle.ouaf.oem.install.OraDBI
```

Windows:

```
<Java_Home>\bin\java -Xmx1500M -cp
<DESTINATION_FOLDER_2>\RMB\jarfiles\*
com.oracle.ouaf.oem.install.OraDBI
```

This utility prompts you to enter values for the following parameters:

Parameter	Value
Enter the database server hostname	<DB_SERVER>
Enter the database port number(e.g. 1521)	<DB_PORT>
Enter the database name/SID	<DB_NAME>
Enter your database username	<DB_USER> Example: CISADM
Enter your password for username <DB_USER>	<DB_USER_PASSWORD>
Enter the Oracle user with read-write privileges to Database Schema(e.g. CISUSER)	<DB_USER> Example: CISUSER
Enter the Oracle user with read-only privileges to Database Schema(e.g. CISREAD)	<DB_USER> Example: CISREAD
Enter the database role with read-write privileges to Database Schema(e.g. CIS_USER)	<DB_USER_ROLE> Example: CIS_USER
Enter the database role with read-only privileges to Database Schema(e.g. CIS_READ)	<DB_USER_ROLE> Example: CIS_READ
Enter the name of the target Schema where you want to install or upgrade	<Schema_Name>

9. Enter the required parameter values. The following message appears in the command line:

```
Ready to upgrade the target database from V2.7.0.1.0 to
V2.8.0.0.0, do you want to continue (Y/N)?
```

10. Type **Y** and then press **Enter**. A message appears indicating that the process is completed successfully.

To install Oracle Revenue Management and Billing (ORMB) Version 2.8.0.0.0 using the Command Line mode of the utility:

- Copy the Oracle Revenue Management and Billing V2.8.0.0.0 Oracle Database package to the TEMPDIR folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

2. Change to the TEMPDIR folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

3. Unzip the Oracle Revenue Management and Billing V2.8.0.0 Oracle Database package using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_2>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_2>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_2> folder. The contents include the following sub-folders:

- FW
- RMB

4. Set the JAVA_HOME environment variable using the following command:

AIX, Linux:

```
export JAVA_HOME=<JAVA_HOME_PATH>
```

Windows:

```
SET JAVA_HOME=<JAVA_HOME_PATH>
```

Note: The <JAVA_HOME_PATH> is the location where Java Development Kit Version 8.0 is installed.

5. Set the JAR_PATH environment variable using the following command:

AIX, Linux:

```
export JAR_PATH=<DESTINATION_FOLDER_2>/RMB/jarfiles
```

Note: The above command is applicable only for AIX and Linux platforms.

6. Set the CLASS_PATH environment variable using the following command:

AIX, Linux:

```
export CLASS_PATH=${JAR_PATH}/commons-cli-1.3.1.jar:${JAR_PATH}/commons-codec-1.9.jar:${JAR_PATH}/commons-collections-3.2.2.jar:${JAR_PATH}/log4j-api-2.11.0.jar:${JAR_PATH}/log4j-core-2.11.0.jar:${JAR_PATH}/ojdbc8-12.2.0.1.jar:${JAR_PATH}/oradbi.jar:${JAR_PATH}/spl-shared-4.3.0.6.0.jar
```

Windows:

```
SET CLASS_PATH=<DESTINATION_FOLDER_2>\RMB\jarfiles\*
```

7. Create the detail.txt file with the following details:

```
-d jdbc:oracle:thin:@<Database-host>:<port>/<DB-SID>,<schema-user>,<schema-password>,<read-write-user>,<read-user>,<read-write-role>,<read-role>,<schema-user> -l 1,2 -j <JAVA_HOME> -q true
```

8. Change to the Install-Upgrade directory using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_2>/RMB/Upgrade/Oracle/Install-Upgrade
```

Windows:

```
cd <DESTINATION_FOLDER_2>\RMB\Upgrade\Oracle\Install-Upgrade
```

9. Execute the OraDBI (Java) utility using the following command:

AIX, Linux:

```
${JAVA_HOME}/bin/java -Xmx1500M -cp ${CLASS_PATH} com.oracle.ouaf.oem.install.OraDBI -f detail.txt
```

Windows:

```
<Java_Home>\bin\java -Xmx1500M -cp <DESTINATION_FOLDER_2>\RMB\jarfiles\* com.oracle.ouaf.oem.install.OraDBI -f detail.txt
```

A message appears indicating that the process is completed successfully.

2.6.2 Applying the 29889611 Patch

Once you install ORMB, you need to apply the ROLLUP PACK 1 FOR 2.8.0.0.0 patch (Patch Number: 29889611). You can apply this patch from a Windows machine or UNIX Standalone server.

To apply the ROLLUP PACK 1 FOR 2.8.0.0.0 patch:

1. Copy the ROLLUP PACK 1 FOR 2.8.0.0.0 patch to the TEMPDIR folder using the following command:

AIX, Linux:

```
cp <PATH>/<filename>.zip <PATH>/TEMPDIR
```

Windows:

```
copy <PATH>\<filename>.zip <PATH>\TEMPDIR
```

Note: You can also use File Transfer Protocol (FTP) to transfer the downloaded file from one host to another. You must use the binary mode while copying files through FTP.

2. Change to the TEMPDIR folder using the following command:

AIX, Linux:

```
cd <PATH>/TEMPDIR
```

Windows:

```
cd <PATH>\TEMPDIR
```

3. Unzip the ROLLUP PACK 1 FOR 2.8.0.0.0 patch using the following command:

AIX, Linux:

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_3>
```

Windows:

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_3>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_3> folder. The contents include README.txt and three folders named RMB_V2.8.0.0.0_App_Rollup, RMB_V2.8.0.0.0_DB_Rollup, and RMB_V2.8.0.0.0_PFDs.

4. Change to the RMB_V2.8.0.0.0_DB_Rollup folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_3>/RMB_V2.8.0.0.0_DB_Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_3>\RMB_V2.8.0.0.0_DB_Rollup
```

5. Execute the ouafDatabasePatch utility using the following command:

Windows:

```
ouafDatabasePatch.cmd
```

AIX, Linux:

```
ouafDatabasePatch.sh
```

2.7 Migrating Data

A new column named **POLICY_CAT_FLG** is added in the **CI_POLICY_TYPE** table. Once you apply the patch, you need to manually define policy category for each policy type from the user interface. Otherwise, erroneous results might occur.

Points to Note:

- The **PRICEITEM_CD** column in the **CI_POLICY_PLAN** table is made optional (i.e. **NULLABLE**). This is because, now, either the price item or pricing rule type is required while creating a policy plan. This may impact the custom implementation when the **CI_POLICY_PLAN** table is used in the hibernate queries.

- Now, in all base screens except the **Account** screen, the system is storing and/or fetching address details from the **C1_ADDRESS** table and not from the **CI_PER** or **CI_PER_ADDR_SEAS** table. In all custom implementation wherever you are using the **CI_PER** or **CI_PER_ADDR_SEAS** table, you need to ensure that the address is fetched either from the **C1_ADDRESS** table or using the **C1-GetEffectiveDatedAddress** business service. Otherwise, erroneous results might occur.

3. Additional Tasks

This section describes the following tasks that you need to perform after upgrading the application:

- Generating the Application Viewer
- Starting the Thread Pool Worker
- Building Javadoc Index

3.1 Generating the Application Viewer

Once you upgrade the application, you need to regenerate the application viewer. To regenerate the application viewer:

1. Login to the application server using the administrator's credentials.
2. Initialize the application environment (on which you want to regenerate the application viewer) using the following command:

AIX, Linux:

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

Windows:

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

Where, \$SPLEBASE or %SPLEBASE% is the path where the application environment is installed, and \$SPLENVIRON or %SPLEBASE% is the name of the application environment for which you want to set the environment variables.

3. Set the ANT_OPTS environment variable using the following command:

Windows:

```
Set ANT_OPTS= -Xms512m -Xmx1024m -XX:PermSize=256M
```

Note: This command helps to process some tasks which require more memory. This command is only applicable for Windows and not for Linux machine.

4. Execute the genappvieweritems utility using the following command:

AIX, Linux:

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

Windows:

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

If the application viewer is generated successfully, the response code is set to 0. However, if you get any other response code other than 0, it means an error has occurred while generating the application viewer. A log file is created in the \$SPLEBASE/logs folder.

5. Execute the `initialSetup` utility using the following command:

AIX, Linux:

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

Windows:

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

Where, `$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed.

The `initialSetup` utility updates the configuration files including the WAR files on the system.

3.2 Starting the Thread Pool Worker

Once you upgrade the application, you need to start the thread pool worker. The thread pool worker is required when you execute batches either online or through batch scheduler.

You can use the **Distributed Thread Pool** property of the thread pool worker to set the number of threads that can run concurrently. By default, 5 threads run concurrently. You can change the default value by editing the following line in the `threadpoolworker.properties` file:

```
com.splwg.grid.distThreadPool.threads.DEFAULT=5
```

To start the thread pool worker, use the following command once you initialize the application environment:

AIX, Linux:

```
$SPLEBASE/bin/threadpoolworker.sh
```

Windows:

```
%SPLEBASE%\bin\threadpoolworker.cmd
```

Where, `$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed.

3.3 Building Javadoc Index

Once you upgrade the application, you may want to regenerate the index file of Javadoc documentation. You must regenerate the Javadoc index file only when some modifications are made to the Java code.

To regenerate the Javadoc index file, use the following command:

AIX, Linux:

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

Windows:

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

Where, `$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed.

Appendix A : Known Issues

To view a list of known issues in the current release, refer to *Oracle Revenue Management and Billing Version 2.8.0.0.0 Release Notes*.

Appendix B : Third Party Software Upgrade

To view a list of third party software that you need to upgrade before upgrading the application, refer to the Upgrade Prerequisites section in the *Oracle Revenue Management and Billing Upgrade Path Guide*.

Appendix C : New Tables Added in 2.8.0.0.0

This section lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 2.8.0.0.0 database.

C.1 C1_CUST_REG

Purpose:	Used to store the details of a customer registration object.
Total Number of Columns:	21

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_ID	CHAR(14)	No	-
CUST_REG_TYPE_CD	CHAR(30)	No	''
BUS_OBJ_CD	CHAR(30)	No	''
BO_STATUS_CD	CHAR(12)	No	''
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	-
BO_DATA_AREA	CLOB	Yes	-
PERSON_DATA	CLOB	Yes	-
ACCOUNT_DATA	CLOB	Yes	-
POLICY_DATA	CLOB	Yes	-
PRICING_DATA	CLOB	Yes	-
CRE_DTTM	DATE	Yes	-
STATUS_UPD_DTTM	DATE	Yes	-
PER_ID	CHAR(10)	No	-
ILM_ARCH_SW	CHAR(1)	Yes	-
ILM_DT	DATE	Yes	-
REG_SOURCE_FLG	CHAR(4)	No	-
VERSION	NUMBER(5)	No	1
COMMENTS	VARCHAR2(254)	Yes	''
REG_SOURCE_ID	VARCHAR2(20)	No	''
ID_TYPE_CD	CHAR(8)	No	''
PER_ID_NBR	VARCHAR2(90)	No	''

Primary Key:

Key Type	Column Name
Simple	CUST_REG_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF960P0	Unique	CUST_REG_ID

C.2 C1_CUST_REG_CHAR

Purpose:	Used to store characteristics defined for a customer registration object.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_ID	CHAR(14)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
EFFDT	DATE	No	-
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	CUST_REG_ID
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF962P0	Unique	CUST_REG_ID
			CHAR_TYPE_CD
			EFFDT
2.	XF962S1	Non Unique	SRCH_CHAR_VAL

C.3 C1_CUST_REG_K

Purpose:	Used to store the customer registration ID.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_ID	CHAR(14)	No	
ENV_ID	NUMBER(6)	No	

Primary Key:

Key Type	Column Name
Composite	CUST_REG_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF961P0	Unique	CUST_REG_ID
			ENV_ID

C.4 C1_CUST_REG_LOG

Purpose:	Used to store logs of a customer registration object.
Total Number of Columns:	20

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_ID	CHAR(14)	No	-
SEQNO	NUMBER(5)	No	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	''
LOG_DTTM	DATE	No	-
USER_ID	CHAR(8)	No	''
BO_STATUS_CD	CHAR(12)	No	''
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	-
DESCRLONG	VARCHAR2(4000)	No	''
MESSAGE_CAT_NBR	NUMBER(5)	No	-
MESSAGE_NBR	NUMBER(5)	No	-
CHAR_TYPE_CD	CHAR(8)	No	''
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	CUST_REG_ID
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF963P0	Unique	CUST_REG_ID
			SEQNO
2.	XF963S01	Non Unique	CHAR_TYPE_CD
			CHAR_VAL_FK1
3.	XF963S02	Non Unique	CHAR_TYPE_CD
			CHAR_VAL

C.5 C1_CUST_REG_LOG_PARM

Purpose:	Used to store the customer registration log parameters.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_ID	CHAR(14)	No	-
SEQNO	NUMBER(5)	No	-
PARM_SEQ	NUMBER(3)	No	-
MSG_PARM_TYP_FLG	CHAR(4)	No	''
MESSAGE_PARM	VARCHAR2(2000)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	CUST_REG_ID
	SEQNO
	PARM_SEQ

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF964P0	Unique	CUST_REG_ID
			SEQNO
			PARM_SEQ

C.6 C1_CUST_REG_REL

Purpose:	Used to store the details of related customers.
Total Number of Columns:	9

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_ID	CHAR(14)	No	-
REL_PER_ID	CHAR(10)	No	-
PARENT_OR_CHILD_FLG	CHAR(4)	No	-
PER_REL_TYPE_CD	CHAR(8)	No	-
START_DT	DATE	No	-
END_DT	DATE	Yes	-
MAIN_CUST_SW	CHAR(1)	No	-
FINAN_REL_SW	CHAR(1)	No	'N'
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	CUST_REG_ID
	REL_PER_ID
	PER_REL_TYPE_CD
	START_DT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF965P0	Unique	CUST_REG_ID
			REL_PER_ID
			PER_REL_TYPE_CD
			START_DT
2.	XF965S1	Non Unique	REL_PER_ID

C.7 C1_CUST_REG_TMPL

Purpose:	Used to store the details of a customer registration template.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TEMPLATE_CD	CHAR(14)	No	-
TEMPLATE_CAT_FLG	CHAR(4)	No	-
BUS_OBJ_CD	CHAR(30)	No	' '
BO_DATA_AREA	CLOB	Yes	-
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Simple	TEMPLATE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF945P0	Unique	TEMPLATE_CD

C.8 C1_CUST_REG_TMPL_L

Purpose:	Used to store the description of a customer registration template.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TEMPLATE_CD	CHAR(14)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	-
DESCRLONG	VARCHAR2(4000)	No	' '
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	TEMPLATE_CD
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF946P0	Unique	TEMPLATE_CD
			LANGUAGE_CD

C.9 C1_CUST_REG_TMPL_PAGE

Purpose:	Used to store the pages which are included in a customer registration template.
Total Number of Columns:	3

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TEMPLATE_CD	CHAR(14)	No	-
TEMPLATE_PAGE_FLG	CHAR(4)	No	-
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	TEMPLATE_CD
	TEMPLATE_PAGE_FLG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF965P0	Unique	TEMPLATE_CD
			TEMPLATE_PAGE_FLG

C.10 C1_CUST_REG_TMPL_PAGE_FLD

Purpose:	Used to store the fields for which certain attributes are defined in a customer registration template.
Total Number of Columns:	21

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TEMPLATE_CD	CHAR(14)	No	-
TEMPLATE_PAGE_FLG	CHAR(4)	No	-
TEMPLATE_SEC_FLG	CHAR(4)	No	-
FLD_NAME	CHAR(30)	No	-
VERSION	NUMBER(5)	No	1
SEQNO	NUMBER(5)	No	1
REQUIRED_SW	CHAR(1)	No	'N'
EDITABLE_SW_1	CHAR(1)	No	'N'
FLD_VAL	VARCHAR2(4000)	No	' '
CHAR_TYPE_CD	CHAR(8)	No	' '
CHAR_VAL	CHAR(16)	No	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	No	' '
CHAR_VAL_FK1	VARCHAR2(50)	No	' '
CHAR_VAL_FK2	VARCHAR2(50)	No	' '
CHAR_VAL_FK3	VARCHAR2(50)	No	' '
CHAR_VAL_FK4	VARCHAR2(50)	No	' '
CHAR_VAL_FK5	VARCHAR2(50)	No	' '
SRCH_CHAR_VAL	VARCHAR2(254)	No	' '
EDITABLE_SW_2	CHAR(1)	No	'N'
PRIM_SW	CHAR(1)	No	'N'
FLD_TYPE_VAL	VARCHAR2(254)	No	' '

Primary Key:

Key Type	Column Name
Composite	TEMPLATE_CD
	TEMPLATE_PAGE_FLG
	TEMPLATE_SEC_FLG
	FLD_NAME
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF949P0	Unique	TEMPLATE_CD
			TEMPLATE_PAGE_FLG
			TEMPLATE_SEC_FLG
			FLD_NAME
			SEQNO

C.11 C1_CUST_REG_TMPL_PAGE_SECTION

Purpose:	Used to store the sections which are included in a customer registration template page.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TEMPLATE_CD	CHAR(14)	No	-
TEMPLATE_PAGE_FLG	CHAR(4)	No	-
TEMPLATE_SEC_FLG	CHAR(4)	No	-
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	TEMPLATE_CD
	TEMPLATE_PAGE_FLG
	TEMPLATE_SEC_FLG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF948P0	Unique	TEMPLATE_CD
			TEMPLATE_PAGE_FLG
			TEMPLATE_SEC_FLG

C.12 C1_CUST_REG_TYPE

Purpose:	Used to store the details of a customer registration type.
Total Number of Columns:	8

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_TYPE_CD	CHAR(30)	No	-
BUS_OBJ_CD	CHAR(30)	No	-
TRANS_BUS_OBJ_CD	CHAR(30)	No	-
BO_DATA_AREA	CLOB	Yes	-
C1_ACTIVE_INACTIVE_FLG	CHAR(4)	No	-
VERSION	NUMBER(5)	No	1
ACCESS_GRP_CD	CHAR(12)	No	' '
REG_SOURCE_FLG	CHAR(4)	Yes	-

Primary Key:

Key Type	Column Name
Simple	CUST_REG_TYPE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF951P0	Unique	CUST_REG_TYPE_CD

C.13 C1_CUST_REG_TYPE_CHAR

Purpose:	Used to store characteristics defined for a customer registration type.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_TYPE_CD	CHAR(30)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
SEQNO	NUMBER(5)	No	-
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	CUST_REG_TYPE_CD
	CHAR_TYPE_CD
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF954P0	Unique	CUST_REG_TYPE_CD
			CHAR_TYPE_CD
			SEQNO
2.	XF954S1	Non Unique	SRCH_CHAR_VAL

C.14 C1_CUST_REG_TYPE_L

Purpose:	Used to store the description of a customer registration type.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_TYPE_CD	CHAR(30)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	-
DESCRLONG	VARCHAR2(4000)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	CUST_REG_TYPE_CD
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF952P0	Unique	CUST_REG_TYPE_CD
			LANGUAGE_CD

C.15 C1_CUST_REG_TYPE_TMPL

Purpose:	Used to store the customer registration templates which are associated with a customer registration type.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CUST_REG_TYPE_CD	CHAR(30)	No	-
SEQNO	NUMBER(5)	No	1
TEMPLATE_CAT_FLG	CHAR(4)	No	-
TEMPLATE_CD	CHAR(14)	No	-
VERSION	NUMBER(5)	No	1

Column Name	Data Type	Nullable (Yes or No)	Default Value
REFERRED_COUNT	NUMBER(15)	Yes	0

Primary Key:

Key Type	Column Name
Composite	CUST_REG_TYPE_CD
	SEQNO
	TEMPLATE_CAT_FLG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF953P0	Unique	CUST_REG_TYPE_CD
			SEQNO
			TEMPLATE_CAT_FLG

C.16 C1_ACCRUAL_DSTCD_CALC

Purpose:	Used to store accrual calculation lines for each distribution code.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCR_ID	CHAR(19)	No	-
ENTITY_ID	CHAR(12)	Yes	-
SEQNO	NUMBER(5)	No	-
DST_ID	CHAR(10)	No	-
AMOUNT	NUMBER(15,2)	Yes	0
CURRENCY_CD	CHAR(3)	Yes	' '
VERSION	NUMBER(5)	Yes	1

Primary Key:

Key Type	Column Name
Composite	ACCR_ID
	SEQNO
	DST_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT820P0	Unique	ACCR_ID
			SEQNO
			DST_ID

C.17 C1_AUDIT_EVENT

Purpose:	Used to store the details of an audit event.
Total Number of Columns:	19

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_ID	CHAR(12)	No	-
PK_VALUE1	VARCHAR2(254)	No	''
PK_VALUE2	VARCHAR2(254)	No	''
PK_VALUE3	VARCHAR2(254)	No	''
PK_VALUE4	VARCHAR2(254)	No	''
PK_VALUE5	VARCHAR2(254)	No	''
EFFDT	DATE	Yes	-
BUS_OBJ_CD	CHAR(30)	No	''
BO_STATUS_CD	CHAR(12)	No	''
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	-
BO_DATA_AREA	CLOB	Yes	-
AUDIT_ACTION_FLG	CHAR(2)	No	-
CRE_DTTM	DATE	No	-
STATUS_UPD_DTTM	DATE	Yes	-
ILM_ARCH_SW	CHAR(1)	Yes	-
ILM_DT	DATE	Yes	-
VERSION	NUMBER(5)	No	1
MAINT_OBJ_CD	CHAR(12)	No	-
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	-

Primary Key:

Key Type	Column Name
Simple	AUDIT_EVENT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF980P0	Unique	AUDIT_EVENT_ID
2.	XF980S0	Non Unique	PK_VALUE1
3.	XF980S1	Non Unique	AUDIT_EVENT_ID
			BUS_OBJ_CD
			BO_STATUS_CD

C.18 C1_AUDIT_EVENT_CHAR

Purpose:	Used to store characteristics defined for an audit event.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_ID	CHAR(12)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
SEQNO	NUMBER(5)	No	-
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_ID
	CHAR_TYPE_CD
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF980P3	Unique	AUDIT_EVENT_ID
			CHAR_TYPE_CD
			SEQNO
2.	XF980S4	Non Unique	SRCH_CHAR_VAL

C.19 C1_AUDIT_EVENT_K

Purpose:	Used to store the audit event ID.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_ID	CHAR(12)	No	-
ENV_ID	NUMBER(6)	No	-

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF990P1	Unique	AUDIT_EVENT_ID
			ENV_ID

C.20 C1_AUDIT_EVENT_LOG

Purpose:	Used to store logs of an audit event.
Total Number of Columns:	20

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_ID	CHAR(12)	No	-
SEQNO	NUMBER(5)	No	-
BO_STATUS_CD	CHAR(12)	No	' '
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	
CHAR_TYPE_CD	CHAR(8)	No	' '
CHAR_VAL	CHAR(16)	No	' '
CHAR_VAL_FK1	CHAR(50)	No	' '
CHAR_VAL_FK2	CHAR(50)	No	' '
CHAR_VAL_FK3	CHAR(50)	No	' '
CHAR_VAL_FK4	CHAR(50)	No	' '
CHAR_VAL_FK5	CHAR(50)	No	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	No	' '
DESCRLONG	VARCHAR2(4000)	No	' '
LOG_DTTM	DATE	Yes	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	' '
MESSAGE_CAT_NBR	NUMBER(5)	No	0
MESSAGE_NBR	NUMBER(5)	No	0
SRCH_CHAR_VAL	VARCHAR2(254)	No	' '
USER_ID	CHAR(8)	No	' '
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_ID
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF980P1	Unique	AUDIT_EVENT_ID
			SEQNO
2.	XF980S2	Non Unique	CHAR_TYPE_CD
			CHAR_VAL_FK1
3.	XF980S3	Non Unique	CHAR_TYPE_CD
			CHAR_VAL

C.21 C1_AUDIT_EVENT_LOG_PARM

Purpose:	Used to store the audit event log parameters.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_ID	CHAR(12)	No	-
MESSAGE_PARM	VARCHAR2(2000)	No	''
MSG_PARM_TYP_FLG	CHAR(4)	No	''
PARM_SEQ	NUMBER(3)	No	-
SEQNO	NUMBER(5)	No	-
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_ID
	SEQNO
	PARM_SEQ

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF980P2	Unique	AUDIT_EVENT_ID
			SEQNO
			PARM_SEQ

C.22 C1_AUDIT_EVENT_TYPE

Purpose:	Used to store the details of an audit event type.
Total Number of Columns:	10

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	-
BUS_OBJ_CD	CHAR(30)	No	-
ENTITY_BUS_OBJ_CD	CHAR(30)	No	-
BO_DATA_AREA	CLOB	Yes	-
ADD_ACTION_SW	CHAR(1)	No	'N'
UPDATE_ALL_ACTION_SW	CHAR(1)	No	'N'
DELETE_ACTION_SW	CHAR(1)	No	'N'
VERSION	NUMBER(5)	No	1
AUDIT_USAGE_FLG	CHAR(4)	No	' '
AUDIT_EVT_STAT_FLG	CHAR(4)	No	' '

Primary Key:

Key Type	Column Name
Simple	AUDIT_EVENT_TYPE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF970P0	Unique	AUDIT_EVENT_TYPE_CD

C.23 C1_AUDIT_EVENT_TYPE_CHAR

Purpose:	Used to store characteristics defined for an audit event type.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
SEQNO	NUMBER(5)	No	-
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_TYPE_CD
	CHAR_TYPE_CD
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF972P0	Unique	AUDIT_EVENT_TYPE_CD
			CHAR_TYPE_CD
			SEQNO
2.	XF960S1	Non Unique	SRCH_CHAR_VAL

C.24 C1_AUDIT_EVENT_TYPE_ELEMENTS

Purpose:	Used to store the elements added in an audit event type for which auditing is required.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	''
ELEMENT_TYPE_FLG	CHAR(4)	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_ELEMENT_NAME	VARCHAR2(100)	No	''
AUDIT_ELEMENT_VALUE	VARCHAR2(100)	No	''
SEQNO	NUMBER(5)	No	''

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_TYPE_CD
	ELEMENT_TYPE_FLG
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF971P0	Unique	AUDIT_EVENT_TYPE_CD
			ELEMENT_TYPE_FLG
			SEQNO

C.25 C1_AUDIT_EVENT_TYPE_L

Purpose:	Used to store the description of an audit event type.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	
LANGUAGE_CD	CHAR(3)	No	
DESCR	VARCHAR2(60)	No	
DESCRLONG	VARCHAR2(4000)	No	''
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_TYPE_CD
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF973P0	Unique	AUDIT_EVENT_TYPE_CD
			LANGUAGE_CD

C.26 C1_AUDIT_EVENT_TYPE_ALG

Purpose:	Used to store the algorithms associated with an audit event type.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	-
AUDIT_EVTY_ALG_ENTITY_FLG	CHAR(4)	No	-
SEQ_NUM	NUMBER(3)	No	-
ALG_CD	CHAR(12)	No	-
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	AUDIT_EVENT_TYPE_CD
	SEQ_NUM
	AUDIT_EVTY_ALG_ENTITY_FLG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF990P0	Unique	AUDIT_EVENT_TYPE_CD
			SEQ_NUM
			AUDIT_EVTY_ALG_ENTITY_FLG

C.27 C1_CUST_REG_SEC_FLD

Purpose:	Used to store the fields added in a customer registration template section.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TEMPLATE_SEC_FLG	CHAR(4)	No	-
FLD_NAME	CHAR(30)	No	-

Primary Key:

Key Type	Column Name
Composite	TEMPLATE_SEC_FLG
	FLD_NAME

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF966P0	Unique	TEMPLATE_SEC_FLG
			FLD_NAME

C.28 CI_POLICY_PLAN_PRC_RUL_TYPE

Purpose:	Used to store the pricing rule types associated with a policy plan.
Total Number of Columns:	3

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PLAN_ID	CHAR(15)	No	-
PRICING_RULE_TYPE_CD	CHAR(30)	No	-
VERSION	NUMBER(5)	No	1

Primary Key:

Key Type	Column Name
Composite	PLAN_ID
	PRICING_RULE_TYPE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF991P0	Unique	PLAN_ID
			PRICING_RULE_TYPE_CD

C.29 C1_PRC_RULE_ENTITY

Purpose:	Used to store the entity for which a pricing rule is defined.
Total Number of Columns:	3

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRICING_RULE_ID	CHAR(15)	No	-
PRC_RULE_ENTITY_ID	CHAR(30)	No	-
PRC_RULE_ENTITY_TYPE	CHAR(4)	No	-

Primary Key:

Key Type	Column Name
Composite	PRICING_RULE_ID
	PRC_RULE_ENTITY_ID
	PRC_RULE_ENTITY_TYPE

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT822P0	Unique	PRICING_RULE_ID
			PRC_RULE_ENTITY_ID
			PRC_RULE_ENTITY_TYPE

C.30 C1_PRC_RULE_TYPE_AUDIT_EVENT

Purpose:	Used to store the elements which are added in a pricing rule type for which the auditing is required.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRICING_RULE_TYPE_CD	CHAR(30)	No	' '
SEQNO	NUMBER(5)	No	' '
AUDIT_EVENT_TYPE_CD	CHAR(30)	No	' '
ELEMENT_TYPE_FLG	CHAR(4)	No	' '
ELEMENT_NAME	VARCHAR2(100)	No	' '
ELEMENT_VALUE	VARCHAR2(100)	No	' '

Primary Key:

Key Type	Column Name
Composite	PRICING_RULE_TYPE_CD
	AUDIT_EVENT_TYPE_CD
	ELEMENT_TYPE_FLG
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF992P0	Unique	PRICING_RULE_TYPE_CD
			AUDIT_EVENT_TYPE_CD
			ELEMENT_TYPE_FLG
			SEQNO

C.31 CI_STATE_CHAR

Purpose:	Used to store the state characteristic information
Total Number of Columns:	13

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
STATE	CHAR(6)	No	-
COUNTRY	CHAR(3)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
VERSION	NUMBER(5)	No	1
EFFDT	DATE	No	-

Primary Key:

Key Type	Column Name
Composite	STATE
	COUNTRY
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF991P1	Unique	STATE
			COUNTRY
			CHAR_TYPE_CD
			EFFDT
2.	XF991S1	Non Unique	SRCH_CHAR_VAL

Appendix D : Existing Tables Modified in 2.8.0.0.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 2.8.0.0.0. It also indicates the columns that are newly added, dropped, or modified in these tables.

D.1 C1_ACCR_TYPE

The following table lists the columns that are either newly added or modified in the C1_ACCR_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CALC_LINE_REQ_SW	Newly Added	-	CHAR(1)	No	-
2.	PI_ACCR_CRT_REQ_SW	Newly Added	-	CHAR(1)	No	-
3.	PRO_REQ_SW	Newly Added	-	CHAR(1)	No	-

D.2 C1_ACCRUAL_CALC_LINE

The following table lists the columns that are either newly added or modified in the C1_ACCRUAL_CALC_LINE table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DST_ID	Newly Added	-	CHAR(10)	No	-

D.3 C1_ACCRUAL_DTLS

The following table lists the columns that are either newly added or modified in the C1_ACCRUAL_DTLS table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DST_ID	Newly Added	-	CHAR(10)	No	-

D.4 C1_ADDRESS

The following table lists the columns that are either newly added or modified in the C1_ADDRESS table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADDRESS5	Newly Added	-	VARCHAR(254)	No	-
2.	ADDRESS6	Newly Added	-	VARCHAR(254)	No	-
3.	EMAIL_ID	Newly Added	-	VARCHAR(120)	No	-

D.5 C1_FT_EXT

The following table lists the columns that are either newly added or modified in the C1_FT_EXT table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EFF_START_DATE	Newly Added	-	DATE	No	-
2.	PRIORITY_NUM	Newly Added	-	NUMBER(5)	No	-
3.	TEMPLATE_CD	Newly Added	-	CHAR(14)	No	-

D.6 CI_ACCT

The following table lists the columns that are either newly added or modified in the CI_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SRC_SYSTEM_CD	Newly Added	-	CHAR(10)	No	-

D.7 CI_ACCT_PER_ROUTING

The following table lists the columns that are either newly added or modified in the CI_ACCT_PER_ROUTING table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DEFAULT_SW	Newly Added	-	CHAR(1)	No	-
2.	LANGUAGE_CD	Newly Added	-	CHAR(3)	No	-

D.8 CI_ADJ

The following table lists the columns that are either newly added or modified in the CI_ADJ table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SET_EFF_START_DATE	Newly Added	-	DATE	No	-
2.	SET_PRIORITY_NUM	Newly Added	-	NUMBER(5)	No	-
3.	SET_TEMPLATE_CD	Newly Added	-	CHAR(14)	No	-

D.9 CI_BCHG_TEMP

The following table lists the columns that are either newly added or modified in the CI_BCHG_TEMP table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EFF_START_DATE	Newly Added	-	DATE	No	-
2.	TEMPLATE_CD	Newly Added	-	CHAR(14)	No	-

D.10 CI_BILL_ACH

The following table lists the columns that are either newly added or modified in the CI_BILL_ACH table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	VERSION	Newly Added	-	NUMBER(5)	No	-

D.11 CI_BSEG_EXT

The following table lists the columns that are either newly added or modified in the CI_BSEG_EXT table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EFF_START_DATE	Newly Added	-	DATE	No	-
2.	SET_EFF_START_DATE	Newly Added	-	DATE	No	-
3.	SET_PRIORITY_NUM	Newly Added	-	NUMBER(5)	No	-
4.	SET_TEMPLATE_CD	Newly Added	-	CHAR(14)	No	-
5.	TEMPLATE_CD	Newly Added	-	CHAR(14)	No	-

D.12 CI_CONSTRUCT

The following table lists the columns that are either newly added or modified in the CI_CONSTRUCT table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	TEMPLATE_SELECT_ALG_CD	Newly Added		CHAR(12)	No	-

D.13 CI_DATA_EX_REQ

The following table lists the columns that are either newly added or modified in the CI_DATA_EX_REQ table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DX_FILENAME	Newly Added	-	CHAR(255)	No	-

D.14 CI_DATA_EX_REQ_TYPE

The following table lists the columns that are either newly added or modified in the CI_DATA_EX_REQ_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DATA_EXTRACT_FLG	Newly Added	-	CHAR(4)	No	-

D.15 CI_DIV_PRICEITEM

The following table lists the columns that are either newly added or modified in the CI_DIV_PRICEITEM table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCR_TYPE_CRT	Newly Added	-	CHAR(4)	No	-

D.16 CI_PER

The following table lists the columns that are either newly added or modified in the CI_PER table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SRC_SYSTEM_CD	Newly Added	-	CHAR(10)	No	-

D.17 C1_POLICY_PLAN

The following table lists the columns that are either newly added or modified in the C1_POLICY_PLAN table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PLAN_NAME	Newly Added	-	VARCHAR2(60)	No	-

D.18 CI_POLICY_TYPE

The following table lists the columns that are either newly added or modified in the CI_POLICY_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	POLICY_CAT_FLG	Newly Added	-	CHAR(4)	No	-

D.19 CI_PRCE_CALC

The following table lists the columns that are either newly added or modified in the CI_PRCE_CALC table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
2.	ENTITY_TYPE	Newly Added	-	CHAR(4)	No	-
3.	PRICING_RULE_ID	Newly Added	-	CHAR(15)	No	-
5.	REPRC_ENTITY_ID	Newly Added	-	VARCHAR2(100)	No	-
6.	REQ_REFERENCE_ID	Newly Added	-	VARCHAR2(50)	No	-
7.	BO_STATUS_CD	Newly Added	-	CHAR(12)	No	-

D.20 CI_PRCE_CALC_LN

The following table lists the columns that are either newly added or modified in the CI_PRCE_CALC_LN table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DESCR_ON_BILL	Newly Added	-	VARCHAR2(80)	No	-
2.	DST_ID	Newly Added	-	CHAR(10)	No	-

D.21 CI_REPRC_ENTITY_DTL

The following table lists the columns that are either newly added or modified in the CI_REPRC_ENTITY_DTL table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EXT_REF_NBR	Newly Added	-	VARCHAR2(256)	No	-
2.	PRICING_RULE_TYPE_CD	Newly Added	-	CHAR(30)	No	-

D.22 CI_REPRC_REQ_DTL

The following table lists the columns that are either newly added or modified in the CI_REPRC_REQ_DTL table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SA_ID	Newly Added	-	CHAR(10)	No	-
2.	ENTITY_TYPE	Newly Added	-	CHAR(4)	No	-
3.	PREPRCS_REQ_ID	Newly Added	-	NUMBER(15)	No	-
4.	PRICING_RULE_ID	Newly Added	-	CHAR(15)	No	-
5.	REPRC_ENTITY_ID	Newly Added	-	VARCHAR2(100)	No	-
6.	REQ_REFERENCE_ID	Newly Added	-	VARCHAR2(50)	No	-

D.23 C1_UPLPAY_LOG

The following table lists the columns that are either newly added, modified, or dropped in the C1_UPLPAY_LOG table:

Sr. No.	Column Name	Modification Type	Data Type in V2.7.0.1.0	Data Type in V2.8.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MESSAGE_PARM1	Format Change	VARCHAR2(30)	VARCHAR2(2000)	No	-
2.	MESSAGE_PARM2	Format Change	VARCHAR2(30)	VARCHAR2(2000)	No	-
3.	MESSAGE_PARM3	Format Change	VARCHAR2(30)	VARCHAR2(2000)	No	-
4.	MESSAGE_PARM4	Format Change	VARCHAR2(30)	VARCHAR2(2000)	No	-
5.	MESSAGE_PARM5	Format Change	VARCHAR2(30)	VARCHAR2(2000)	No	-

Appendix E : Algorithms and Algorithm Types Dropped in 2.8.0.0.0

This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.8.0.0.0.

E.1 Algorithm Type

No algorithm types are dropped in Oracle Revenue Management and Billing Version 2.8.0.0.0.

E.2 Algorithm

No algorithms are dropped in Oracle Revenue Management and Billing Version 2.8.0.0.0.

Appendix F : Parameters Added or Removed from Algorithm Types in 2.8.0.0.0

The following table lists the parameters which are added or removed from algorithm types in Oracle Revenue Management and Billing Version 2.8.0.0.0:

Algorithm Type	Parameters (Removed from 2.8.0.0.0)	Parameters (Added in 2.8.0.0.0)
C1_ACCR_CAL	Do you want to insert detail level calculation?	-
C1-BLDCRDARR	-	Charge Bill Status (Applicable for Match Event Type - BSEG and Valid Values - P,C,A)
C1-FTDCRTCNL	-	Consider Account Closure Date for Expiration (Y/N)
C1-CLSACCT	-	Update Financial Transaction Distribution Expiration Date (Y or N)
	-	Update Recurring Billable Charge End Date (Y or N)
	-	Recurring Billable Charge End Date Type (C - Closing Date or G - Closing Date + Grace days)
C1-OFST-DIST	-	Credit Bill Distribution Algorithm Code

Appendix G : Option Types Added or Removed from Feature Configurations in 2.8.0.0.0

This section lists the option types which are newly added or removed from the existing feature configurations in Oracle Revenue Management and Billing Version 2.8.0.0.0.

Feature Name	Option Type (Removed from 2.8.0.0.0)	Option Type (Added in 2.8.0.0.0)
C1-ASOBLLNG	-	Age Based Parameter
	-	Base Fee Price Component Sequence Characteristic
	-	Customer Registration Characteristic For Inbound Log
	-	Characteristic Type For Membership Id
	-	Membership Characteristic For Inbound Log
	-	Person Characteristic For Inbound Log
	-	Policy Reinstatement Status
	-	Policy Termination Status
	-	Pricing Rule Characteristic For Inbound Log
	-	Proration SQL
	-	Rate Component Base Fee Characteristic
	-	State of Issue Characteristic Type

Appendix H : Characteristic Types Dropped in 2.8.0.0.0

No characteristic types are dropped in Oracle Revenue Management and Billing Version 2.8.0.0.0.

Appendix I : Changing the DB User Password

If you have changed the database user password, you need to execute the following steps before installing the rollup pack for Oracle Utilities Application Framework Version 4.3.0.6.0:

1. Download and apply the single fix available for Bug 22505470 - PATCHES APPEND EXTRA SPACE TO STRINGS AND ADD DB SERVICE CONNECTION SUPPORT on the application and database environments.
2. Perform the following steps on the application environment:
 - a. Change the DB Name using the `configureEnv` command.
 - b. Execute the `initialSetup` utility using the following command:

AIX, Linux:

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

Windows:

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

- c. Execute the `invokeDBUpdatePatch` utility to change the database user name and password using the following command:

AIX, Linux:

```
$SPLEBASE/bin/invokeDBUpdatePatch.sh -b
```

Windows:

```
%SPLEBASE%\bin\invokeDBUpdatePatch.cmd -b
```