

# **Oracle® Revenue Management and Billing**

Version 3.0.0.0.0

## **Upgrade Guide**

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## Oracle Revenue Management and Billing Upgrade Guide

F41861-01

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# 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 2.9.0.1.0 to 3.0.0.0.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 2.9.0.1.0 to 3.0.0.0.0.
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 3.0.0.0.0	Lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 3.0.0.0.0 database.
Appendix D	Existing Tables Modified in 3.0.0.0.0	Lists the existing tables and their columns that are modified in the Oracle Revenue Management and Billing Version 3.0.0.0.0 database.

Section No.	Section Name	Description
Appendix E	Algorithms and Algorithm Types Dropped in 3.0.0.0.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 3.0.0.0.0.
Appendix F	Parameters Added or Removed from Algorithm Types in 3.0.0.0.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 3.0.0.0.0.
Appendix G	Option Types Added or Removed from Feature Configurations in 3.0.0.0.0	Lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 3.0.0.0.0.
Appendix H	Characteristic Types Dropped in 3.0.0.0.0	Lists the characteristic types which are dropped in Oracle Revenue Management and Billing Version 3.0.0.0.0.
Appendix I	Changing the DB User Password	Explains how to change the database user password.
Appendix J	ORMB V3.0.0.0.0 Rollup Packs	Lists the rollup packs available for Oracle Revenue Management and Billing Version 3.0.0.0.0. It also explains how to apply a rollup pack on the application environment and database.
Appendix K	SQL Statements for 2.9.0.1.0 to 3.0.0.0.0 Data Migration	Lists and describes the SQL query which is used for migrating data from Oracle Revenue Management and Billing Version 2.9.0.1.0 to 3.0.0.0.0.

## Related Documents

You can refer to the following documents for more information:

Document	Description
<i>Oracle Revenue Management and Billing Version 3.0.0.0.0 Release Notes</i>	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.
<i>Oracle Revenue Management and Billing Upgrade Path Guide</i>	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.

## Conventions

The following conventions are used across the document:

Convention	Meaning
<b>boldface</b>	Boldface indicates graphical user interface elements associated with an action, or terms defined in the text.
<i>italic</i>	Italic indicates a document or book title.
<code>monospace</code>	Monospace indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or information that an end-user needs to enter in the application.

## Change Log

Revision	Last Update	Updated Section	Comments
19.1	31-May-2021	Section 2.3: Upgrading Framework on the Database	Updated Information
		Section 2.4: Installing Framework on the Application Environment	Updated Information
		Section 2.5: Installing the ORMB Application	Updated Information
		Section 2.5.2: Applying the Release-Specific Patches	Updated Information
		Section 2.6: Upgrading the ORMB Database	Updated Information
		Section 2.6.1: Applying the 32905246 Patch	Updated Information
		Section 2.6.3: Applying the Release-Specific Patches	Updated Information
		Section 2.7: Migrating Data	Updated Information
19.2	09-Jun-2021	Section 2.5.2: Applying the Release-Specific Patches	Updated Information
		Section 2.6: Upgrading the ORMB Database	Updated Information
		Section 2.6.3: Applying the Release-Specific Patches	Updated Information
		Appendix J: ORMB V3.0.0.0.0 Rollup Packs	Updated Information
19.3	17-Jan-2022	-	Added Bookmarks in PDF

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# 1. Preparing for Upgrade

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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.

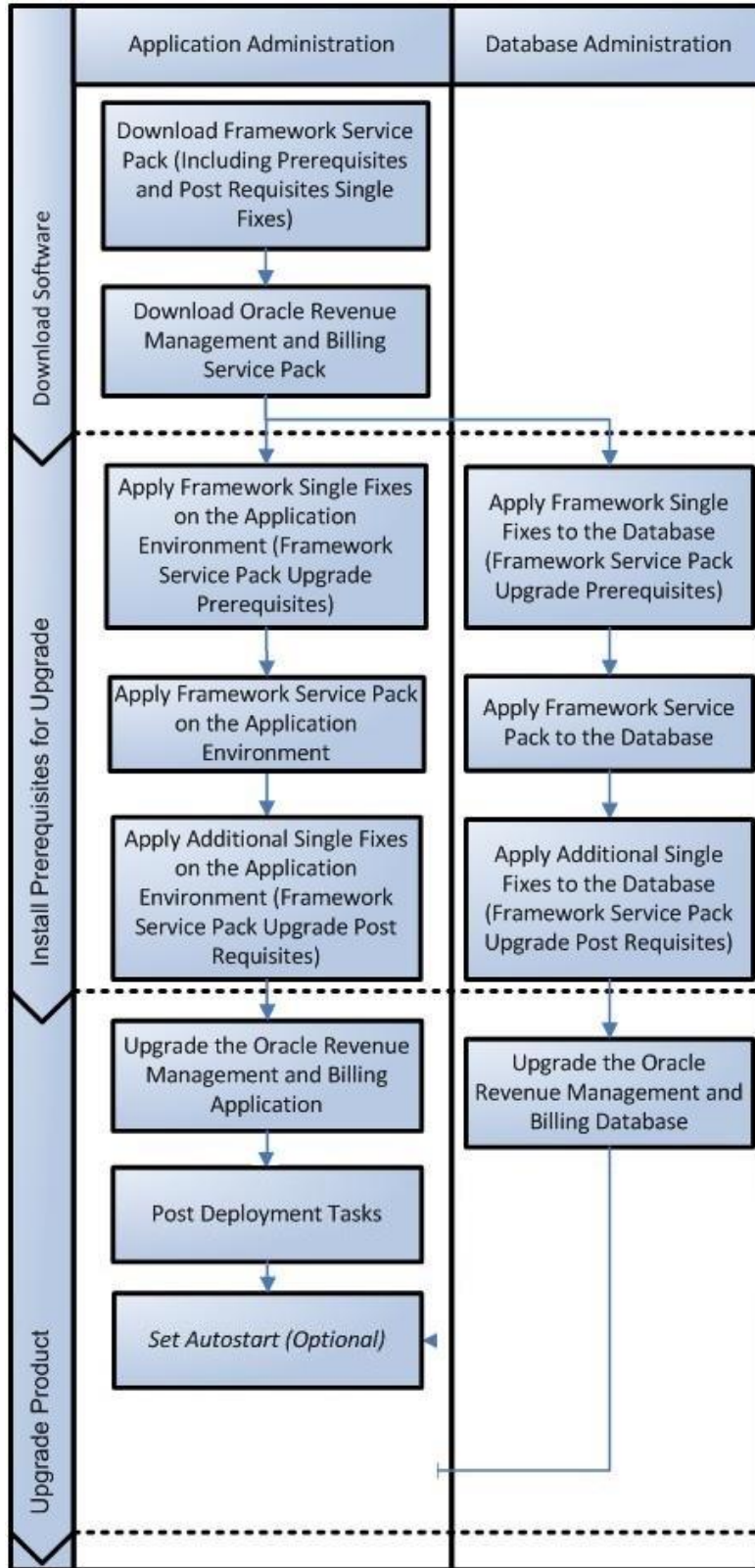


Figure 1: Upgrade Process

## 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 2.9.0.1.0 to 3.0.0.0.0

## 2. Upgrading from ORMB Version 2.9.0.1.0 to 3.0.0.0.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 2.9.0.1.0 to 3.0.0.0.0. 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.

### 2.1 Prerequisites

If you are already using the Transaction Feed Management feature and want to upgrade to Oracle Revenue Management and Billing Version 3.0.0.0.0, 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 2.9.0.1.0 will not happen successfully.
- Transactions which are uploaded using 2.9.0.1.0 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.

Also, ensure that no data exists in the CI\_BCHG\_TEMP table before you start the upgrade process. If there is data in the CI\_BCHG\_TEMP table, it means all billing batches are not yet executed for a set of bills. We recommend you to either complete the billing process for such bills by executing all the billing batches or delete the data from the CI\_BCHG\_TEMP table. Otherwise erroneous results might occur when you execute the billing batches after the upgrade.

### 2.2 Downloading the ORMB Packages and Patches

For upgrading from Oracle Revenue Management and Billing Version 2.9.0.1.0 to 3.0.0.0.0, you must download the following packages from the Oracle Revenue Management and Billing 3.0.0.0.0 media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework V4.4.0.2.0 Single Fix Prerequisite Rollup for RMB V3.0.0.0.0
- Oracle Revenue Management and Billing V3.0.0.0.0 Multiplatform
- Oracle Revenue Management and Billing V3.0.0.0.0 Oracle Database

You must also download the following package from the Oracle Utilities Customer Care and Billing 2.7.0.3.0 media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework 4.4.0.2.0

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

- PRE BLUEPRINT SCRIPT TO BE APPLIED BEFORE UPGRADING TO 3.0.0.0.0 (Patch Number: 32905246)
- UPGRADE FROM 2.9.0.1.0 TO 3.0.0.0.0 (Patch Number: 32866190)

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 2.9.0.1.0 to 3.0.0.0.0, you need to install the following on the database:

1. [Rollup Pack for Oracle Utilities Application Framework \(OUAF\) Version 4.4.0.2.0](#)

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 4.4.0.2.0

You can install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.2.0 from a Windows machine or UNIX Standalone server. To install the rollup pack for Oracle Utilities Application Framework (OUAF) Version 4.4.0.2.0 on the database:

1. Login to the database server using the administrator's credentials.
2. Copy the **Oracle Utilities Application Framework V4.4.0.2.0 Single Fix Prerequisite Rollup for RMB V3.0.0.0.0** 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 V4.4.0.2.0 Single Fix Prerequisite Rollup for RMB V3.0.0.0.0** 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-V30000-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-V30000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V4.4.0.2.0-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 folder 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=/TMPDIR/dbpatch_tools/bin
```

**Windows:**

```
SET TOOLS_BIN=TMPDIR\dbpatch_tools\bin
```

13. Change to the `Database` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_1>/FW-V4.4.0.2.0-Rollup/Database
```

**Windows:**

```
cd <DESTINATION_FOLDER_1>\FW-V4.4.0.2.0-Rollup\Database
```

**Note:** The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `ORMB-V30000-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 4.4.0.2.0. 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 rollup pack on the database, you need to install the following on the application environment:

1. [Oracle Utilities Application Framework \(OUAF\) Version 4.4.0.2.0](#)
2. [Rollup Pack for Oracle Utilities Application Framework \(OUAF\) Version 4.4.0.2.0](#)

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 4.4.0.2.0

To install Oracle Utilities Application Framework (OUAF) Version 4.4.0.2.0 on the application environment:

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

```
mkdir TEMPDIR
```

3. Copy the **Oracle Utilities Application Framework 4.4.0.2.0** 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.

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

**AIX, Linux:**

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

**Windows:**

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

- Unzip the **Oracle Utilities Application Framework 4.4.0.2.0** 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 `FW-V4.4.0.2.0-MultiPlatform.jar` file.

- Decompress the `FW-V4.4.0.2.0-MultiPlatform.jar` file using the following command:

```
jar -xvf FW-V4.4.0.2.0-MultiPlatform.jar
```

The contents of the JAR file include a folder named `FW-V4.4.0.2.0-SP2`.

- 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.

- Change to the `FW-V4.4.0.2.0-SP2` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_1>/FW-V4.4.0.2.0-SP2
```

**Windows:**

```
cd <DESTINATION_FOLDER_1>\FW-V4.4.0.2.0-SP2
```

**Note:** The <DESTINATION\_FOLDER\_1> folder is the location where you have extracted the contents of the `FW-V4.4.0.2.0-MultiPlatform.jar` file.

- 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 Folder (<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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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 folder named Log File Mount Point. If this output folder 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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

**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 4.4.0.2.0 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 the required menu options. Otherwise, the installation process will not be completed successfully.

You will be warned if you did not edit a section. You may proceed if you want to keep the default settings.

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` folder. And, on the Windows machine, this utility is available in the `%SPLEBASE%\bin` folder.

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` folder. And, on the Windows machine, this utility is available in the `%SPLEBASE%\bin` folder. The following are some of the key environment variables that are set using the `splenviron` utility:

- `$PATH`
- `$SPLEBASE (%SPLEBASE%)` – Indicates the `<SPLEBASE>/<SPLENVIRON>` folder
- `$SPLOUTPUT (%SPLOUTPUT%)` - Indicates the `<SPLEBASE>/<SPLENVIRON>` folder
- `$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 4.4.0.2.0

To install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.2.0 on the application environment:

1. Copy the **Oracle Utilities Application Framework V4.4.0.2.0 Single Fix Prerequisite Rollup for RMB V3.0.0.0.0** 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 V4.4.0.2.0 Single Fix Prerequisite Rollup for RMB V3.0.0.0.0** 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-V30000-FW-PREREQ-MultiPlatform.jar` file.

4. Decompress the JAR file using the following command:

```
jar -xvf ORMB-V30000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V4.4.0.2.0-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:**

```
$(SPL)BASE/bin/splenv.sh -e $(SPL)ENVIRON
```

**Windows:**

```
$(SPL)BASE%\bin\splenv.cmd -e $(SPL)ENVIRON%
```

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

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_2>/FW-V4.4.0.2.0-Rollup/Application
```

**Windows:**

```
cd <DESTINATION_FOLDER_2>\FW-V4.4.0.2.0-Rollup\Application
```

**Note:** The `<DESTINATION_FOLDER_2>` folder is the location where you have extracted the contents of the `ORMB-V30000-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 3.0.0.0.0](#)
2. [Oracle Revenue Management and Billing \(ORMB\) Version 3.0.0.0.0 Post Requisite Patches](#)

**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.

Once you install the application, you can access the application. For more information on how to access the application, refer to the [Accessing the ORMB Application](#) section.

### 2.5.1 Installing ORMB Version 3.0.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 3.0.0.0.0 on the application environment:

1. Login to the application server using the administrator's credentials.
2. Copy the **Oracle Revenue Management and Billing V3.0.0.0.0 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 V3.0.0.0.0 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.V3.0.0.0.0` 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.V3.0.0.0.0` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_3>/ORMB.V3.0.0.0.0
```

**Windows:**

```
cd <DESTINATION_FOLDER_3>\ORMB.V3.0.0.0.0
```

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 Applying the Release-Specific Patches

Once you install Oracle Revenue Management and Billing (ORMB) Version 3.0.0.0.0, you need to apply the release-specific patches on the application environment. To view the list of patches that you need to apply on the application environment, refer to *ORMB V3.0.0.0.0 Patch Guide (Doc ID: 2782229.1)* on [My Oracle Support](#).

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to [Appendix J: ORMB V3.0.0.0.0 Rollup Packs](#).

To apply a patch:

1. Download the patch from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the downloaded file 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 three files - `README.txt`, `MultiPlatform.zip`, and `Bug_<PATCH_NUMBER>_Product_Fix_Design.pdf`.

3. Unzip the `MultiPlatform.zip` file using the following command:

**AIX, Linux:**

```
unzip <DESTINATION_FOLDER_4>/MultiPlatform.zip -d  
<PATH>/<DESTINATION_FOLDER_5>
```

**Windows:**

```
unzip <DESTINATION_FOLDER_4>\MultiPlatform.zip -d  
<PATH>\<DESTINATION_FOLDER_5>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_5>` folder. The contents include the `V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder.

4. Change to the `V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_5>/V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

**Windows:**

```
cd <DESTINATION_FOLDER_5>\V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

**Note:** The `<DESTINATION_FOLDER_5>` folder is the location where you have extracted the contents of the `MultiPlatform.zip` file.

The contents include a file named `CCB.V3.0.0.0.0-<PATCH_NUMBER>.jar` and a directory named `database`.

5. Decompress the `CCB.V3.0.0.0.0-<PATCH_NUMBER>.jar` file using the following command:

```
jar -xvf CCB.V3.0.0.0.0-<PATCH_NUMBER>.jar
```

The contents include two sub-folders - `META-INF` and `CCB.V3.0.0.0.0-<PATCH_NUMBER>`.

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

**AIX, Linux:**

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

**Windows:**

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

Where,

`$(SPLBASE)` or `%SPLBASE%` is the path where the application environment is installed and `$(SPLENVIRON)` or `%SPLENVIRON%` is the name of the application environment.

7. Change to the `CCB.V3.0.0.0.0-<PATCH_NUMBER>` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_5>/V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform/CCB.V3.0.0.0.0-<PATCH_NUMBER>
```

**Windows:**

```
cd <DESTINATION_FOLDER_5>/V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform\CCB.V3.0.0.0.0-<PATCH_NUMBER>
```

8. Install the patch using the following command:

**AIX, Linux:**

```
./installSF.sh
```

**Windows:**

```
installSF.cmd
```

9. 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 2.9.0.1.0 to 3.0.0.0.0, you need to install the following on the database:

1. [32905246 Pre-requisite Patch](#)
2. [Oracle Revenue Management and Billing \(ORMB\) Version 3.0.0.0.0](#)
3. [Oracle Revenue Management and Billing \(ORMB\) Version 3.0.0.0.0 Post Requisite Patches](#)

### Note:

To view the list of patches that you need to apply on the database, refer to *ORMB V3.0.0.0.0 Patch Guide (Doc ID: 2782229.1)* on [My Oracle Support](#).

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to [Appendix J: ORMB V3.0.0.0.0 Rollup Packs](#).

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 3.0.0.0.0 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 Applying the 32905246 Patch

Before you upgrade the ORMB database from 2.9.0.1.0 to 3.0.0.0.0, you need to apply the PRE BLUEPRINT SCRIPT TO BE APPLIED BE BEFORE UPGRADING TO 3.0.0.0.0 patch.

To apply the 32905246 patch:

1. Copy the **PRE BLUEPRINT SCRIPT TO BE APPLIED BEFORE UPGRADING TO 3.0.0.0.0** 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 **PRE BLUEPRINT SCRIPT TO BE APPLIED BEFORE UPGRADING TO 3.0.0.0.0** patch 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 two files - `README.txt` and `deploy.zip`.

4. Unzip the `deploy.zip` file using the following command:

**AIX, Linux:**

```
unzip <DESTINATION_FOLDER_2>/deploy.zip -d  
<PATH>/<DESTINATION_FOLDER_3>
```

**Windows:**

```
unzip <DESTINATION_FOLDER_2>\deploy.zip -d  
<PATH>\<DESTINATION_FOLDER_3>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_3>` folder. The contents include a folder named `Migration_From_V2.9.0.1.0_To_V3.0.0.0.0`.

5. Change to the `Migration_From_V2.9.0.1.0_To_V3.0.0.0.0` folder using the following command:

```
cd <DESTINATION_FOLDER_3>\Migration_From_V2.9.0.1.0_To_V3.0.0.0.0
```

The contents include one file named `preBlueprint_30000.sql`.

6. Connect to the ORMB database using a utility named SQL\*Plus and the administrator's (for example, `CISADM`) credentials.
7. Execute the following query from the `Migration_From_V2.9.0.1.0_To_V3.0.0.0.0` folder:

```
preBlueprint_30000.sql
```

This SQL script drops the following unwanted tables which were created in 2.9.0.0.0:

- C1\_BSEG\_DEAL
- C1\_BSEG\_DEAL\_CALC
- C1\_BSEG\_DEAL\_CALC\_LN
- C1\_BSEG\_DEAL\_CL\_CHA
- C1\_BSEG\_DEAL\_EXCP
- C1\_BSEG\_DEAL\_ITEM
- C1\_BSEG\_DEAL\_MSG
- C1\_BSEG\_DEAL\_READ
- C1\_BSEG\_DEAL\_SQ
- C1\_BSEG\_DEAL\_EX
- C1\_BSEG\_DEAL\_K

## 2.6.2 Installing ORMB Version 3.0.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 3.0.0.0.0:

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

```
mkdir TEMPDIR
```

3. Copy the **Oracle Revenue Management and Billing V3.0.0.0.0 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.

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

**AIX, Linux:**

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

**Windows:**

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

5. Unzip the **Oracle Revenue Management and Billing V3.0.0.0.0 Oracle Database** package 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 the following sub-folders:

- FW
- RMB

**Note:**

There might be situations when you do not want to recreate one or more table indexes. You can skip the recreation process of one or more table indexes by adding the following line in the <DESTINATION\_FOLDER\_1>/RMB/Upgrade/Oracle/Install-Upgrade/CDXSchUpg.inp file:

```
-INDEX: 'INDEX1', 'INDEX2', 'INDEX3'
```

For example, -INDEX: 'XXT033P0', 'XXT034P0', 'XXT035P0'

7. 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.

8. Set the JAR\_PATH environment variable using the following command:

**AIX, Linux:**

```
export JAR_PATH=<DESTINATION_FOLDER_4>/RMB/jarfiles
```

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

9. 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}/jackson-annotations-2.8.5.jar:${JAR_PATH}/jackson-core-2.8.5.jar:${JAR_PATH}/jackson-databind-2.8.5.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-4.4.0.2.0.jar
```

**Windows:**

```
SET CLASS_PATH=<DESTINATION_FOLDER_4>\RMB\jarfiles\*
```



10. Change to the `Install-Upgrade` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_4>/RMB/Upgrade/Oracle/Install-Upgrade
```

**Windows:**

```
cd <DESTINATION_FOLDER_4>\RMB\Upgrade\Oracle\Install-Upgrade
```

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

**AIX, Linux:**

```
java -cp ${CLASS_PATH} com.oracle.ouaf.oem.install.OraDBI -d
jdbc:oracle:thin:@<DB_SERVER_NAME>:<DB_PORT>/<DB_NAME>,
<SCHEMA_NAME>, <SCHEMA_PASSWORD>, <READWRITE_USER>,
<READONLY_USER>, <READWRITE_ROLE>, <READONLY_ROLE>, <SCHEMA_NAME>
-p <READWRITE_USER_PASSWORD>, <READONLY_USER_PASSWORD> -l 1,2 -q
true
```

**Windows:**

```
java -cp %CLASS_PATH% com.oracle.ouaf.oem.install.OraDBI -d
jdbc:oracle:thin:@<DB_SERVER_NAME>:<DB_PORT>/<DB_NAME>,
<SCHEMA_NAME>, <SCHEMA_PASSWORD>, <READWRITE_USER>,
<READONLY_USER>, <READWRITE_ROLE>, <READONLY_ROLE>, <SCHEMA_NAME>
-p <READWRITE_USER_PASSWORD>, <READONLY_USER_PASSWORD> -l 1,2 -q
true
```

The following message appears in the command line:

```
Ready to upgrade the target database from V2.9.0.1.0 to
V3.0.0.0.0, do you want to continue (Y/N)?
```

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

### 2.6.3 Applying the Release-Specific Patches

Once you install Oracle Revenue Management and Billing Version 3.0.0.0.0, you need to apply all patches listed in *ORMB V3.0.0.0.0 Patch Guide (Doc ID: 2782229.1)*. You can apply a patch from a Windows machine or UNIX Standalone server.

To apply a patch:

1. Download the patch from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the downloaded file using the following command:

**AIX, Linux:**

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_5>
```

**Windows:**

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_5>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_5>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug_<PATCH_NUMBER>_Product_Fix_Design.pdf`.

- Unzip the `MultiPlatform.zip` file using the following command:

**AIX, Linux:**

```
unzip <DESTINATION_FOLDER_5>/MultiPlatform.zip -d  
<PATH>/<DESTINATION_FOLDER_6>
```

**Windows:**

```
unzip <DESTINATION_FOLDER_5>\MultiPlatform.zip -d  
<PATH>\<DESTINATION_FOLDER_6>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_6>` folder. The contents include the `V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder.

- Change to the `V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_6>/V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

**Windows:**

```
cd <DESTINATION_FOLDER_6>\V3.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

**Note:** The `<DESTINATION_FOLDER_6>` folder is the location where you have extracted the contents of the `MultiPlatform.zip` file.

The contents include a file named `CCB.V3.0.0.0.0-<PATCH_NUMBER>.jar` and a folder named `database`.

- Change to the `ORACLE` folder using the following command:

**AIX, Linux:**

```
cd database/ORACLE
```

**Windows:**

```
cd database\ORACLE
```

The contents include a zip file named `CDXPatch`.

- Unzip the `CDXPatch.zip` file using the following command:

**AIX, Linux:**

```
unzip CDXPatch.zip -d <PATH>/<DESTINATION_FOLDER_7>
```

**Windows:**

```
unzip CDXPatch.zip -d <PATH>\<DESTINATION_FOLDER_7>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_7>` folder. The contents include utility files and a folder named `<PATCH_NUMBER>`.

- Execute the `ouafDatabasePatch` utility using the following command:

**Windows:**

```
ouafDatabasePatch.cmd
```

**AIX, Linux:**

```
ouafDatabasePatch.sh
```

## 2.7 Migrating Data

Once you upgrade the database, you can migrate the data from Oracle Revenue Management and Billing Version 2.9.0.1.0 to 3.0.0.0.0 using the `PostProcessingScript` query which is available in the **UPGRADE FROM 2.9.0.1.0 TO 3.0.0.0.0** patch.

To migrate the data from ORMB Version 2.9.0.1.0 to 3.0.0.0.0:

1. Copy the **UPGRADE FROM 2.9.0.1.0 TO 3.0.0.0.0** 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 **UPGRADE FROM 2.9.0.1.0 TO 3.0.0.0.0** patch using the following command:

**AIX, Linux:**

```
unzip <filename>.zip -d <PATH>/<DESTINATION_FOLDER_8>
```

**Windows:**

```
unzip <filename>.zip -d <PATH>\<DESTINATION_FOLDER_8>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_8>` folder. The contents include two files - `README.txt` and `deploy.zip`.

4. Unzip the `deploy.zip` file using the following command:

**AIX, Linux:**

```
unzip <DESTINATION_FOLDER_8>/deploy.zip -d  
<PATH>/<DESTINATION_FOLDER_9>
```

**Windows:**

```
unzip <DESTINATION_FOLDER_8>\deploy.zip -d  
<PATH>\<DESTINATION_FOLDER_9>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_9>` folder. The contents include a folder named `deploy`.

5. Change to the `deploy` folder using the following command:

```
cd <DESTINATION_FOLDER_9>\deploy
```

The contents include a folder named `Migration_From_V2.9.0.1.0_To_3.0.0.0.0`. This folder contains one file named `PostProcessingScript.sql`.

6. Change to the `Migration_From_V2.9.0.1.0_To_3.0.0.0.0` folder using the following command:

```
cd
<DESTINATION_FOLDER_9>\deploy\Migration_From_V2.9.0.1.0_To_3.0.0.0.0
```

7. Connect to the ORMB database using a utility named SQL\*Plus and the administrator's (for example, `CISADM`) credentials.
8. Execute the following query from the `Migration_From_V2.9.0.1.0_To_3.0.0.0.0` folder:

```
PostProcessingScript.sql
```

**Note:** For more information about the query, refer to the [PostProcessingScript.sql](#) section in Appendix K: SQL Statements for 2.9.0.1.0 to 3.0.0.0.0 Data Migration.

## 3. Additional Tasks

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

1. [Generating the Application Viewer](#)
2. [Starting the Thread Pool Worker](#)
3. [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/splenviron.sh -e $SPLENVIRON
```

**Windows:**

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

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

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To view a list of known issues in the current release, refer to *Oracle Revenue Management and Billing Version 3.0.0.0.0 Release Notes*.

## Appendix B : Third Party Software Upgrade

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



## Appendix C : New Tables Added in 3.0.0.0.0

This section lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 3.0.0.0.0 database.

### C.1 C1\_BENEFIT\_SUB\_TYPE

<b>Purpose:</b>	Used to store the details of a benefit sub type.
<b>Total Number of Columns:</b>	16

#### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BENEFIT_SUB_TYPE_CD	CHAR(30)	No	-
BUS_OBJ_CD	CHAR(30)	No	''
BO_DATA_AREA	CLOB	Yes	-
BENEF_SUB_TYPE_STAT_FLG	CHAR(4)	No	-
APPL_FOR_FLG	CHAR(4)	No	-
RECON_REQD_SW	CHAR(1)	No	-
RECON_PRICE_ITEM_CD	CHAR(30)	No	''
RECON_SQI_CD	CHAR(8)	No	''
VALUE_TYPE_FLG	CHAR(4)	No	-
NEGATE_SW	CHAR(1)	No	-
PRICE_SW	CHAR(1)	No	-
FLAT_VALUE_SQI_CD	CHAR(8)	No	-
VALIDATE_PRC_ITEM_SW	CHAR(1)	No	-
VALIDATE_PRICE_ITEM_CD	CHAR(30)	No	''
VERSION	NUMBER(5,0)	No	1
RECON_ACCT_ID	CHAR(10)	Yes	-

#### Primary Key:

Key Type	Column Name
Simple	BENEFIT_SUB_TYPE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF746P0	Unique	BENEFIT_SUB_TYPE_CD
2.	XF746S1	Non Unique	BENEF_SUB_TYPE_STAT_FLG
3.	XF746S2	Non Unique	PRICE_SW
4.	XF746S3	Non Unique	VALIDATE_PRC_ITEM_SW
5.	XM660S4	Non Unique	RECON_REQD_SW

## C.2 C1\_BENEFIT\_SUB\_TYPE\_CHAR

<b>Purpose:</b>	Used to store the characteristics of a benefit sub type.
<b>Total Number of Columns:</b>	12

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BENEFIT_SUB_TYPE_CD	CHAR(30)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
SEQ_NUM	NUMBER(5,0)	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(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BENEFIT_SUB_TYPE_CD
	CHAR_TYPE_CD
	SEQ_NUM

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF748P0	Unique	BENEFIT_SUB_TYPE_CD
			CHAR_TYPE_CD
			SEQ_NUM
2.	XF748S1	Non Unique	SRCH_CHAR_VAL

**C.3 C1\_BENEFIT\_SUB\_TYPE\_L**

<b>Purpose:</b>	Used to store the description of a benefit sub type.
<b>Total Number of Columns:</b>	5

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BENEFIT_SUB_TYPE_CD	CHAR(30)	No	-
DESCR	VARCHAR2(60)	No	-
DESCRLONG	VARCHAR2(4000)	No	-
LANGUAGE_CD	CHAR(3)	No	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BENEFIT_SUB_TYPE_CD
	LANGUAGE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF747P0	Unique	BENEFIT_SUB_TYPE_CD
			LANGUAGE_CD

## C.4 C1\_BUS\_RULE

<b>Purpose:</b>	Used to store the details of a business rule.
<b>Total Number of Columns:</b>	10

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
BUS_RULE_CAT_FLG	CHAR(4)	No	-
BUS_RULE_DEF_CD	CHAR(30)	No	-
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-
EFFDT	DATE	No	-
BUS_OBJ_CD	CHAR(30)	No	' '
BO_DATA_AREA	CLOB	Yes	-
BO_STATUS_CD	CHAR(12)	No	-
CRE_DTTM	DATE	Yes	-
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Simple	BUS_RULE_ID

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF841P0	Unique	BUS_RULE_ID
2.	XF841S0	Non Unique	BUS_RULE_CAT_FLG
3.	XF841S1	Non Unique	BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ
4.	XF841S2	Non Unique	BUS_OBJ_CD
			BO_STATUS_CD
			BUS_RUL_ID
5.	XF841S3	Non Unique	EFFDT

## C.5 C1\_BUS\_RULE\_BINDER\_PAY

<b>Purpose:</b>	Used to store the business rules created for binder payment.
<b>Total Number of Columns:</b>	10

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
BINDER_PAY_APPL_SW	CHAR(1)	No	-
BINDER_PAY_THRES	NUMBER(3,0)	Yes	-
BINDER_PAY_GRACE_DAYS	NUMBER(3,0)	Yes	-
HOLD_BILLING_SW	CHAR(1)	Yes	-
UDF_1	VARCHAR2(254)	Yes	-
UDF_2	VARCHAR2(254)	Yes	-
UDF_3	VARCHAR2(254)	Yes	-
UDF_4	VARCHAR2(254)	Yes	-
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Simple	BUS_RULE_ID

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF847P0	Unique	BUS_RULE_ID

## C.6 C1\_BUS\_RULE\_CHAR

<b>Purpose:</b>	Used to store the characteristics of a business rule.
<b>Total Number of Columns:</b>	12

### Column Details:

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

Column Name	Data Type	Nullable (Yes or No)	Default Value
SEQ_NUM	NUMBER(5,0)	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(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_ID
	CHAR_TYPE_CD
	SEQ_NUM

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF848P0	Unique	BUS_RULE_ID
			CHAR_TYPE_CD
			SEQ_NUM
2.	XF848S0	Non Unique	SRCH_CHAR_VAL

## C.7 C1\_BUS\_RULE\_DEF

<b>Purpose:</b>	Used to store the details of a business rule type.
<b>Total Number of Columns:</b>	6

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
PRIORITY_NUM	NUMBER(5,0)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_OBJ_CD	CHAR(30)	No	' '
BO_DATA_AREA	CLOB	Yes	-
BO_STATUS_CD	CHAR(12)	No	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Simple	BUS_RULE_DEF_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF758P0	Unique	BUS_RULE_DEF_CD

## C.8 C1\_BUS\_RULE\_DEF\_CHAR

<b>Purpose:</b>	Used to store the characteristics of a business rule type.
<b>Total Number of Columns:</b>	12

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
SEQ_NUM	NUMBER(5,0)	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(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_ID
	CHAR_TYPE_CD
	SEQ_NUM

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF833P0	Unique	BUS_RULE_DEF_CD
			CHAR_TYPE_CD
			SEQ_NUM
2.	XF833S0	Non Unique	SRCH_CHAR_VAL

## C.9 C1\_BUS\_RULE\_DEF\_L

<b>Purpose:</b>	Used to store the description of a business rule type.
<b>Total Number of Columns:</b>	5

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	-
DESCRLONG	VARCHAR2(4000)	No	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	LANGUAGE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF831P0	Unique	BUS_RULE_DEF_CD
			LANGUAGE_CD



## C.10 C1\_BUS\_RULE\_DEF\_LOG

<b>Purpose:</b>	Used to store the logs of a business rule type.
<b>Total Number of Columns:</b>	19

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
SEQNO	NUMBER(5,0)	No	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	''
BO_STATUS_CD	CHAR(12)	No	''
LOG_DTTM	DATE	No	-
DESCRLONG	VARCHAR2(4000)	No	0
MESSAGE_CAT_NBR	NUMBER(5,0)	No	0
MESSAGE_NBR	NUMBER(5,0)	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_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
USER_ID	CHAR(8)	No	''
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	LANGUAGE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF831P0	Unique	BUS_RULE_DEF_CD
			LANGUAGE_CD

**C.11 C1\_BUS\_RULE\_DEF\_LOG\_PARM**

<b>Purpose:</b>	Used to store the log parameters of a business rule type.
<b>Total Number of Columns:</b>	6

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
SEQNO	NUMBER(5,0)	No	-
PARAM_SEQ	NUMBER(3,0)	No	-
MSG_PARAM_TYP_FLG	CHAR(4)	No	' '
MESSAGE_PARAM	VARCHAR2(2000)	No	' '
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_DEF_ID
	SEQ_NUM
	PARAM_SEQ

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF835P0	Unique	BUS_RULE_ID
			SEQ_NUM
			PARAM_SEQ

## C.12 C1\_BUS\_RULE\_DEF\_PARM

<b>Purpose:</b>	Used to store the parameters associated with a business rule type.
<b>Total Number of Columns:</b>	4

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
SEQ_NUM	NUMBER(5,0)	No	-
PRICE_PARM_CD	VARCHAR2(30)	No	-
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	SEQ_NUM

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF832P0	Unique	BUS_RULE_DEF_CD
			SEQ_NUM
2.	XF832S0	Non Unique	PRICE_PARM_CD

## C.13 C1\_BUS\_RULE\_K

<b>Purpose:</b>	Used to store the business rule ID.
<b>Total Number of Columns:</b>	2

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
ENV_ID	NUMBER(5,0)	No	-

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_ID
	ENV_ID

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF842PO	Unique	BUS_RULE_ID
			ENV_ID

## C.14 C1\_BUS\_RULE\_LOG

<b>Purpose:</b>	Used to store the logs of a business rule.
<b>Total Number of Columns:</b>	19

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
SEQNO	NUMBER(5,0)	No	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	''
BO_STATUS_CD	CHAR(12)	No	''
LOG_DTTM	DATE	No	-
DESCRLONG	VARCHAR2(4000)	No	''
MESSAGE_CAT_NBR	NUMBER(5,0)	No	0
MESSAGE_NBR	NUMBER(5,0)	No	0
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	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
USER_ID	CHAR(8)	No	' '
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_ID
	SEQNO

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF843P0	Unique	EXTRACT_TEMPLATE_CD
			TARGET_FIELD_PATH
2.	XF843S0	Non Unique	CHAR_TYPE_CD
			CHAR_VAL_FK1
3.	XF843S1	Non Unique	SRCH_CHAR_VAL

## C.15 C1\_BUS\_RULE\_LOG\_PARM

<b>Purpose:</b>	Used to store the log parameters of a business rule.
<b>Total Number of Columns:</b>	6

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
SEQNO	NUMBER(5,0)	No	-
PARM_SEQ	NUMBER(3,0)	No	-
MSG_PARM_TYP_FLG	CHAR(4)	No	' '
MESSAGE_PARM	VARCHAR2(2000)	No	' '
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_ID
	SEQNO
	PARM_SEQ

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF844P0	Unique	BUS_RULE_ID
			SEQNO
			PARM_SEQ

**C.16 C1\_BUS\_RULE\_NEW\_BORN**

<b>Purpose:</b>	Used to store the business rules created for new born.
<b>Total Number of Columns:</b>	8

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
GIFT_DAYS_APPL_SW	CHAR(1)	No	-
GIFT_DAYS	NUMBER(3,0)	Yes	-
UDF_1	VARCHAR2(254)	Yes	-
UDF_2	VARCHAR2(254)	Yes	-
UDF_3	VARCHAR2(254)	Yes	-
UDF_4	VARCHAR2(254)	Yes	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Simple	BUS_RULE_ID

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF846P0	Unique	BUS_RULE_ID

## C.17 C1\_BUS\_RULE\_PRC

<b>Purpose:</b>	Used to store the pricing attributes which are set in a business rule.
<b>Total Number of Columns:</b>	18

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15)	No	-
MAX_NUM_OF_DEP	NUMBER(5,0)	No	-
MAX_AGE_LIMIT_OF_DEP	NUMBER(3,0)	No	-
DEP_ORDER_PRIORITY_FLG	CHAR(4)	No	-
AGE_CAL_DT_BASED_ON_FLG	CHAR(4)	No	-
AGE_RECAL_DT_BASED_ON_FLG	CHAR(4)	Yes	-
YOUNG_ADULT_APPL_SW	CHAR(1)	No	-
YOUNG_ADULT_MAX_AGE_LIMIT	NUMBER(3,0)	Yes	-
MEM_ROLE_DERV_DT_BASED_ON_FLG	CHAR(4)	No	-
UDF_1	VARCHAR2(254)	Yes	-
UDF_2	VARCHAR2(254)	Yes	-
UDF_3	VARCHAR2(254)	Yes	-
UDF_4	VARCHAR2(254)	Yes	-
UDF_5	VARCHAR2(254)	Yes	-
UDF_6	VARCHAR2(254)	Yes	-
UDF_7	VARCHAR2(254)	Yes	-
UDF_8	VARCHAR2(254)	Yes	-
VERSION	NUMBER(5,0)	No	-

### Primary Key:

Key Type	Column Name
Simple	BUS_RULE_ID

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF845P0	Unique	BUS_RULE_ID

## C.18 C1\_BUS\_RULE\_VAL

<b>Purpose:</b>	Used to store the details of a business rule criteria.
<b>Total Number of Columns:</b>	6

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-
BUS_OBJ_CD	CHAR(30)	No	' '
BO_DATA_AREA	CLOB	Yes	-
BO_STATUS_CD	CHAR(12)	No	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	BUS_RULE_VAL_SEQ

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF836P0	Unique	BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ

## C.19 C1\_BUS\_RULE\_VAL\_CHAR

<b>Purpose:</b>	Used to store the characteristics of a business rule criteria.
<b>Total Number of Columns:</b>	13

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-



Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
SEQ_NUM	NUMBER(5,0)	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(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	BUS_RULE_VAL_SEQ
	CHAR_TYPE_CD
	SEQ_NUM

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF840P0	Unique	BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ
			CHAR_TYPE_CD
			SEQ_NUM
2.	XF840S0	Non Unique	SRCH_CHAR_VAL

## C.20 C1\_BUS\_RULE\_VAL\_L

<b>Purpose:</b>	Used to store the description of a business rule criteria.
<b>Total Number of Columns:</b>	6

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	-
DESCRLONG	VARCHAR2(4000)	No	-
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	BUS_RULE_VAL_SEQ
	LANGUAGE_CD

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF837P0	Unique	BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ
			LANGUAGE_CD

## C.21 C1\_BUS\_RULE\_VAL\_LOG

<b>Purpose:</b>	Used to store the logs of a business rule criteria.
<b>Total Number of Columns:</b>	20

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
SEQNO	NUMBER(5,0)	No	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	''
BO_STATUS_CD	CHAR(12)	No	''
LOG_DTTM	DATE	No	-
DESCRLONG	VARCHAR2(4000)	No	''
MESSAGE_CAT_NBR	NUMBER(5,0)	No	0
MESSAGE_NBR	NUMBER(5,0)	No	0
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	''
USER_ID	CHAR(8)	No	''
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	BUS_RULE_VAL_SEQ
	SEQNO

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF838P0	Unique	BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ
			SEQNO
2.	XF838S0	Non Unique	CHAR_TYPE_CD
			CHAR_VAL_FK1

Sr. No.	Index Name	Index Type	Column Name
3.	XF838S1	Non Unique	SRCH_CHAR_VAL

## C.22 C1\_BUS\_RULE\_VAL\_LOG\_PARM

<b>Purpose:</b>	Used to store the log parameters of a business rule criteria.
<b>Total Number of Columns:</b>	7

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-
SEQNO	NUMBER(5,0)	No	-
PARM_SEQ	NUMBER(3,0)	No	-
MSG_PARM_TYP_FLG	CHAR(4)	No	' '
MESSAGE_PARM	VARCHAR2(2000)	No	' '
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	BUS_RULE_VAL_SEQ
	SEQNO
	PARM_SEQ

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF839P0	Unique	SEQNO
			PARM_SEQ
			BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ

## C.23 C1\_BUS\_RULE\_VAL\_PARM

<b>Purpose:</b>	Used to store the parameters and their values specified in a business rule criteria.
<b>Total Number of Columns:</b>	5

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_DEF_CD	CHAR(30)	No	-
BUS_RULE_VAL_SEQ	NUMBER(5,0)	No	-
SEQ_NUM	NUMBER(5,0)	No	-
PARAM_VALUE	VARCHAR2(254)	Yes	-
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Composite	BUS_RULE_DEF_CD
	BUS_RULE_VAL_SEQ
	SEQ_NUM

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF839P0	Unique	BUS_RULE_DEF_CD
			BUS_RULE_VAL_SEQ
			SEQ_NUM

## C.24 C1\_DEAL\_TYPE\_CST\_AHCY\_CHAR

<b>Purpose:</b>	Used to store the characteristic criteria defined for a deal approval profile in a deal type.
<b>Total Number of Columns:</b>	13

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
DEAL_TYPE_CD	VARCHAR2(20)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
CHAR_VAL	CHAR(16)	No	-
SEQNO	NUMBER(5,0)	No	1
ADHOC_CHAR_VAL	VARCHAR2(254)	No	-
VERSION	NUMBER(5,0)	No	1
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(50)	No	' '
EFFDT	DATE	Yes	-

**Primary Key:**

Key Type	Column Name
Composite	DEAL_TYPE_CD
	SEQNO
	CHAR_TYPE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XM689P0	Unique	DEAL_TYPE_CD
			SEQNO
			CHAR_TYPE_CD

## C.25 C1\_ENT\_BUS\_RULE

<b>Purpose:</b>	Used to store the business rules which are applicable for an entity.
<b>Total Number of Columns:</b>	8

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ENT_TYPE_FLG	CHAR(4)	No	-
BUS_RULE_ENT_ID	CHAR(30)	No	-
BUS_RULE_ID	CHAR(15)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_CAT_FLG	CHAR(4)	No	-
BUS_RULE_ENT_STAT_FLG	CHAR(4)	No	-
EFFDT	DATE	No	-
CRE_DTTM	DATE	Yes	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	BUS_RULE_ENT_TYPE_FLG
	BUS_RULE_ENT_ID
	BUS_RULE_ID
	BUS_RULE_CAT_FLG
	EFFDT

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF850PO	Unique	BUS_RULE_ENT_TYPE_FLG
			BUS_RULE_ENT_ID
			BUS_RULE_ID
			BUS_RULE_CAT_FLG
			EFFDT

## C.26 C1\_HEALTH\_PLAN

<b>Purpose:</b>	Used to store the details of a health plan.
<b>Total Number of Columns:</b>	15

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
HEALTH_PLAN_CD	CHAR(30)	No	-
PRODUCT_CD	CHAR(30)	No	-
START_DT	DATE	Yes	-
END_DT	DATE	Yes	-
BUS_OBJ_CD	CHAR(30)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
BO_STATUS_CD	CHAR(12)	No	''
BO_DATA_AREA	CLOB	Yes	-
CHARITABLE_PLAN_SW	CHAR(1)	No	''
STANDARD_PLAN_SW	CHAR(1)	No	''
ACA_QHP_SW	CHAR(1)	No	''
GRAND_FATHER_PLAN_SW	CHAR(1)	No	''
ANCILLARY_BENEFITS_SW	CHAR(1)	No	''
RIDER_BENEFITS_SW	CHAR(1)	No	''
ADD_ON_PLAN_SW	CHAR(1)	No	'N'
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Simple	HEALTH_PLAN_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF941P0	Unique	HEALTH_PLAN_CD
2.	XF941S0	Non Unique	PRODUCT_CD
3.	XF941S1	Non Unique	BUS_OBJ_CD
			BO_STATUS_CD
			HEALTH_PLAN_CD

## C.27 C1\_HEALTH\_PLAN\_CHAR

<b>Purpose:</b>	Used to store the characteristics of a health plan.
<b>Total Number of Columns:</b>	12

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
HEALTH_PLAN_CD	CHAR(30)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
EFFDT	DATE	No	-
CHAR_VAL	CHAR(16)	No	''



Column Name	Data Type	Nullable (Yes or No)	Default Value
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(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	HEALTH_PLAN_CD
	CHAR_TYPE_CD
	EFFDT

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF942P0	Unique	HEALTH_PLAN_CD
			CHAR_TYPE_CD
			EFFDT
2.	XF942S0	Non Unique	SRCH_CHAR_VAL

## C.28 C1\_HEALTH\_PLAN\_L

<b>Purpose:</b>	Used to store the description of a health plan.
<b>Total Number of Columns:</b>	5

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
HEALTH_PLAN_CD	CHAR(30)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	''
DESCRLONG	VARCHAR2(4000)	Yes	''
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	HEALTH_PLAN_CD
	LANGUAGE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF943PO	Unique	HEALTH_PLAN_CD
			LANGUAGE_CD

## C.29 C1\_HEALTH\_PLAN\_LOG

<b>Purpose:</b>	Used to store the logs of a health plan.
<b>Total Number of Columns:</b>	20

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
HEALTH_PLAN_CD	CHAR(30)	No	-
SEQNO	NUMBER(5,0)	No	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	''
BO_STATUS_CD	CHAR(12)	No	''
LOG_DTTM	DATE	No	-
DESCRLONG	VARCHAR2(4000)	No	''
MESSAGE_CAT_NBR	NUMBER(5,0)	No	-
MESSAGE_NBR	NUMBER(5,0)	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	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
USER_ID	CHAR(8)	No	' '
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	HEALTH_PLAN_CD
	SEQNO

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF944P0	Unique	HEALTH_PLAN_CD
			SEQNO

## C.30 C1\_HEALTH\_PLAN\_LOG\_PARM

<b>Purpose:</b>	Used to store the log parameters of a health plan.
<b>Total Number of Columns:</b>	6

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
HEALTH_PLAN_CD	CHAR(30)	No	-
SEQNO	NUMBER(5,0)	No	-
PARM_SEQ	NUMBER(3,0)	No	-
MSG_PARM_TYP_FLG	CHAR(4)	No	' '
MESSAGE_PARM	VARCHAR2(2000)	No	' '
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	HEALTH_PLAN_CD
	SEQNO
	PARM_SEQ

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF91120	Unique	HEALTH_PLAN_CD
			SEQNO
			PARM_SEQ

### C.31 C1\_HEALTH\_PLAN\_PRC\_RUL\_TYPE

<b>Purpose:</b>	Used to store the pricing rule types associated with a health plan.
<b>Total Number of Columns:</b>	3

#### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
HEALTH_PLAN_CD	CHAR(30)	No	-
PRICING_RULE_TYPE_CD	CHAR(30)	No	-
VERSION	NUMBER(5,0)	No	1

#### Primary Key:

Key Type	Column Name
Composite	HEALTH_PLAN_CD
	PRICING_RULE_TYPE_CD

#### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF91130	Unique	HEALTH_PLAN_CD
			PRICING_RULE_TYPE_CD

## C.32 C1\_MEMBERSHIP\_ID\_TYPE

<b>Purpose:</b>	Used to store the details of a membership identifier type.
<b>Total Number of Columns:</b>	5

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_IDEN_TYPE_CD	CHAR(8)	No	-
IDEN_VAL_ALG_CD	CHAR(12)	No	''
BUS_OBJ_CD	CHAR(30)	No	-
BO_DATA_AREA	CLOB	Yes	-
VERSION	NUMBER(5,0)	No	-

### Primary Key:

Key Type	Column Name
Simple	MEMBERSHIP_IDEN_TYPE_CD

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF749P0	Unique	MEMBERSHIP_IDEN_TYPE_CD

## C.33 C1\_MEMBERSHIP\_ID\_TYPE\_L

<b>Purpose:</b>	Used to store the description of a membership identifier type.
<b>Total Number of Columns:</b>	5

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_IDEN_TYPE_CD	CHAR(8)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	-
DESCRLONG	VARCHAR2(4000)	No	''
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	MEMBERSHIP_IDEN_TYPE_CD
	LANGUAGE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF977P0	Unique	MEMBERSHIP_IDEN_TYPE_CD
			LANGUAGE_CD

## C.34 C1\_PRC\_RULE\_ELIG

<b>Purpose:</b>	Used to store the eligibility criteria of a pricing rule.
<b>Total Number of Columns:</b>	6

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRICING_RULE_ID	CHAR(15)	No	-
SEQNO	NUMBER(5,0)	No	-
PRICE_PARM_CD	VARCHAR2(30)	No	-
PRICE_PARM_VAL	VARCHAR2(254)	No	-
VERSION	NUMBER(5,0)	No	1
VERSION_NUM	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	PRICING_RULE_ID
	VERSION_NUM
	PRICE_PARM_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF967P0	Unique	PRICING_RULE_ID
			VERSION_NUM
			PRICE_PARM_CD

## C.35 C1\_PRODUCT\_HC\_DTLS

<b>Purpose:</b>	Used to store the details of a health product.
<b>Total Number of Columns:</b>	10

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRODUCT_CD	CHAR(30)	No	-
PRODUCT_TYPE_FLG	CHAR(4)	No	-
PRODUCT_SUB_TYPE_FLG	CHAR(4)	No	''
PRODUCT_HC_CAT_FLG	CHAR(4)	No	''
PRODUCT_ADMIN	VARCHAR2(254)	No	''
PRODUCT_LOB_FLG	CHAR(4)	No	''
PRODUCT_LOB_CAT_FLG	CHAR(4)	No	''
PRODUCT_BUNDLED_SW	CHAR(1)	No	'N'
BUNDLED_PRODUCTS	VARCHAR2(254)	No	''
VERSION	NUMBER(5,0)	No	1

### Primary Key:

Key Type	Column Name
Simple	PRODUCT_CD

### Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF979P0	Unique	PRODUCT_CD

## C.36 CI\_MEMBERSHIP\_IDENT

<b>Purpose:</b>	Used to store the identifiers of a membership.
<b>Total Number of Columns:</b>	4

### Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR(15)	No	-
MEMBERSHIP_IDENT_TYPE_CD	CHAR(8)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_IDEN_TYPE_VAL	VARCHAR2(100)	No	-
VERSION	NUMBER(5,0)	No	1

**Primary Key:**

Key Type	Column Name
Composite	MEMBERSHIP_ID
	MEMBERSHIP_IDEN_TYPE_CD

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF974P0	Unique	MEMBERSHIP_ID
			MEMBERSHIP_IDEN_TYPE_CD

## C.37 CI\_MEMBERSHIP\_PER\_LOG

<b>Purpose:</b>	Used to store the logs of a member person.
<b>Total Number of Columns:</b>	22

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR(15)	No	-
PER_ID	CHAR(10)	No	-
SEQNO	NUMBER(5,0)	No	-
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	''
LOG_DTTM	DATE	No	-
MEMBER_PER_STATUS_FLG	CHAR(4)	No	''
DESCRLONG	VARCHAR2(4000)	No	''
MESSAGE_CAT_NBR	NUMBER(5,0)	No	0
MESSAGE_NBR	NUMBER(5,0)	No	0
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	''



Column Name	Data Type	Nullable (Yes or No)	Default Value
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(254)	No	''
USER_ID	CHAR(8)	No	''
MEMB_PERS_STAT_RSN_FLG	CHAR(4)	No	''
VERSION	NUMBER(5,0)	No	1
START_DT	DATE	No	-

**Primary Key:**

Key Type	Column Name
Composite	MEMBERSHIP_ID
	PER_ID
	START_DT
	SEQNO

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF975P0	Unique	MEMBERSHIP_ID
			PER_ID
			START_DT
			SEQNO
2.	XF975S1	Non Unique	CHAR_TYPE_CD
			CHAR_VAL_FK1
3.	XF975S2	Non Unique	SRCH_CHAR_VAL

## C.38 CI\_MEMBERSHIP\_PER\_LOG\_PARM

<b>Purpose:</b>	Used to store the log parameters of a member person.
<b>Total Number of Columns:</b>	8

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR(15)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
PER_ID	CHAR(10)	No	-
SEQNO	NUMBER(5,0)	No	-
PARM_SEQ	NUMBER(3,0)	No	-
MSG_PARM_TYP_FLG	CHAR(4)	No	''
MESSAGE_PARM	VARCHAR2(2000)	No	''
VERSION	NUMBER(5,0)	No	1
START_DT	DATE	No	-

**Primary Key:**

Key Type	Column Name
Composite	MEMBERSHIP_ID
	PER_ID
	START_DT
	SEQNO
	PARM_SEQ

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF976P0	Unique	MEMBERSHIP_ID
			PER_ID
			START_DT
			SEQNO
			PARM_SEQ

## C.39 CI\_MEMBERSHIP\_PROCESS

<b>Purpose:</b>	Used to store the details of future dated actions required for a membership.
<b>Total Number of Columns:</b>	10

**Column Details:**

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR(15)	No	-
PER_ID	CHAR(10)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEM_PRC_STAT_FLG	CHAR(4)	No	-
PROCESS_DT	DATE	No	-
MEMB_PROCESS_FLG	CHAR(4)	No	-
CRE_DTTM	DATE	Yes	-
MAIN_CUST_SW	CHAR(1)	Yes	-
ILM_ARCH_SW	CHAR(1)	Yes	-
ILM_DT	DATE	Yes	-
VERSION	NUMBER(5,0)	Yes	1

**Primary Key:**

Key Type	Column Name
Composite	MEMBERSHIP_ID
	PER_ID
	MEM_PRC_STAT_FLG
	PROCESS_DT

**Indexes:**

Sr. No.	Index Name	Index Type	Column Name
1.	XF978P0	Unique	PER_ID
			MEM_PRC_STAT_FLG
			PROCESS_DT
			MEMBERSHIP_ID
2.	XF978PS0	Non Unique	CRE_DTTM
3.	XF978PS1	Non Unique	PROCESS_DT
4.	XF978PS2	Non Unique	MAIN_CUST_SW
5.	XF978PS3	Non Unique	MEMB_PROCESS_FLG

## Appendix D : Existing Tables Modified in 3.0.0.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 3.0.0.0. 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 newly added, modified, or dropped in the C1\_ACCR\_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	APPLICABLE_FOR_ACCOUNT_SW	Newly Added	-	CHAR(1)	No	-

### D.2 C1\_BENEFITS

The following table lists the columns that are newly added, modified, or dropped in the C1\_BENEFITS table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BENEFIT_SUB_TYPE_CD	Newly Added	-	CHAR(30)	Yes	The column value is set to the value stored in the <b>BENEFIT_SUB_TYPE_FLG</b> column corresponding to the record in the <b>C1_BENEFITS</b> table.

## D.3 C1\_DEAL\_COMMENTS

The following table lists the columns that are newly added, modified, or dropped in the C1\_DEAL\_COMMENTS table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	APPTXN_REASON_CD	Newly Added	-	CHAR(6)	No	-
2.	APPTXN_REASON_TYPE	Newly Added	-	CHAR(4)	No	-

## D.4 C1\_DISCREPANCY\_RPT\_LN

The following table lists the columns that are newly added, modified, or dropped in the C1\_DISCREPANCY\_RPT\_LN table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DR_SEQNO	Newly Added	-	NUMBER(8)	No	-
2.	SEQNO	Dropped	NUMBER(5)	-	-	-

## D.5 C1\_DISCREPANCY\_RPT\_LN\_CHAR

The following table lists the columns that are newly added, modified, or dropped in the C1\_DISCREPANCY\_RPT\_LN\_CHAR table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DR_SEQNO	Newly Added	-	NUMBER(8)	No	-
2.	SEQNO	Dropped	NUMBER(5)	-	-	-

## D.6 C1\_DISCREPANCY\_RPT\_LN\_REL\_OBJ

The following table lists the columns that are newly added, modified, or dropped in the C1\_DISCREPANCY\_RPT\_LN\_REL\_OBJ table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DR_SEQNO	Newly Added	-	NUMBER(8)	No	-
2.	SEQNO	Dropped	NUMBER(5)	-	-	-

## D.7 C1\_EXTRACT\_TEMPLATE\_FORMAT

The following table lists the columns that are newly added, modified, or dropped in the C1\_EXTRACT\_TEMPLATE\_FORMAT table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DO_NOT_EXTRACT_SW	Newly Added	-	CHAR(1)	No	-

## D.8 C1\_EXTRACT\_TEMPLATE\_LIST\_DTL

The following table lists the columns that are newly added, modified, or dropped in the C1\_EXTRACT\_TEMPLATE\_LIST\_DTL table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	IDENTIFIER	Newly Added	-	VARCHAR2(254)	No	-
2.	NEW_FILE_SW	Newly Added	-	CHAR(1)	No	-
3.	NEW_RECORD_SW	Newly Added	-	CHAR(1)	No	-

## D.9 C1\_EXTRACT\_TEMPLATE\_MAPPING

The following table lists the columns that are newly added, modified, or dropped in the C1\_EXTRACT\_TEMPLATE\_MAPPING table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	IS_ATTRIBUTE_SW	Newly Added	-	CHAR(1)	No	-

## D.10 C1\_GEO\_RATING\_AREA\_REL\_OBJ

The following table lists the columns that are newly added, modified, or dropped in the C1\_GEO\_RATING\_AREA\_REL\_OBJ table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	HEALTH_PLAN_CD	Newly Added	-	CHAR(30)	No	-
2.	PRODUCT_CD	Dropped	VARCHAR2(30)	-	-	-

## D.11 C1\_HRCHY\_ENTITY

The following table lists the columns that are newly added, modified, or dropped in the C1\_HRCHY\_ENTITY table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SEQ_NUM	Newly Added	-	NUMBER(5)	No	-
2.	SORT_SEQUENCE	Newly Added	-	NUMBER(5)	No	-

## D.12 CI\_ACCT

The following table lists the columns that are newly added, modified, or dropped in the CI\_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCR_TYPE_CD	Newly Added	-	CHAR(30)	No	-

## D.13 CI\_DATA\_EX\_REQ

The following table lists the columns that are newly added, modified, or dropped in the CI\_DATA\_EX\_REQ table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	FILENAME	Newly Added	-	CHAR(100)	No	-

## D.14 CI\_FILE\_REQUEST\_TYPE

The following table lists the columns that are newly added, modified, or dropped in the CI\_FILE\_REQUEST\_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ERR_TD_TYPE_CD	Newly Added	-	CHAR(8)	No	-



## D.15 CI\_MEMBERSHIP

The following table lists the columns that are newly added, modified, or dropped in the CI\_MEMBERSHIP table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	AUTO_RENEW_SW	Newly Added	-	CHAR(1)	No	-
2.	BINDER_LIABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-
3.	BINDER_PAY_APPL_SW	Newly Added	-	CHAR(1)	No	-
4.	EXCHANGE_FLG	Newly Added	-	CHAR(4)	No	-
5.	EXCHANGE_ID	Newly Added	-	VARCHAR2(50)	No	-
6.	BINDER_PAY_GRACE_DAYS	Newly Added	-	NUMBER(3)	No	-
7.	HEALTH_PLAN_CD	Newly Added	-	CHAR(30)	No	-
8.	HOLD_BILLING_SW	Newly Added	-	CHAR(1)	No	-
9.	MEMBERSHIP_CAT_FLG	Newly Added	-	CHAR(4)	No	-
10.	ASSO_MEMBERSHIP_IDEN_TYPE_VAL	Newly Added	-	VARCHAR2(100)	No	-
11.	ASSO_MEMBERSHIP_IDEN_TYPE_CD	Newly Added	-	CHAR(8)	No	-
12.	RENEWAL_DT	Newly Added	-	DATE	No	-
13.	CONTRACT_PERIOD	Newly Added	-	NUMBER(2)	No	-
14.	THRESHOLD_AMT	Newly Added	-	NUMBER(15,2)	No	-
15.	BINDER_PAY_THRES	Newly Added	-	NUMBER(3)	No	-

## D.16 CI\_MEMBERSHIP\_PER

The following table lists the columns that are newly added, modified, or dropped in the CI\_MEMBERSHIP\_PER table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MEMB_PERS_STAT_RSN_FLG	Newly Added	-	CHAR(4)	No	-

## D.17 CI\_PRICE\_PARM

The following table lists the columns that are newly added, modified, or dropped in the CI\_PRICE\_PARM table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PARM_AVL_BRE_SW	Newly Added	-	CHAR(1)	No	-
2.	PARM_AVL_PRE_SW	Newly Added	-	CHAR(1)	No	-

## D.18 CI\_PRICEITEM

The following table lists the columns that are newly added, modified, or dropped in the CI\_PRICEITEM table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SEQ_NUM	Newly Added	-	NUMBER(5)	No	-
2.	SORT_SEQUENCE	Newly Added	-	NUMBER(5)	No	-

## D.19 CI\_APPTXN\_REASON

The following table lists the columns that are newly added, modified, or dropped in the CI\_APPTXN\_REASON table:

Sr. No.	Column Name	Modification Type	Data Type in V2.9.0.1.0	Data Type in V3.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	APPTXN_REASON_TYPE	Format Change	CHAR(1)	CHAR(4)	No	-

## Appendix E : Algorithms and Algorithm Types Dropped in 3.0.0.0.0

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This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 3.0.0.0.0.

### E.1 Algorithm Type

No algorithm types are dropped in Oracle Revenue Management and Billing Version 3.0.0.0.0.

### E.2 Algorithm

The following table lists the algorithms which are dropped in Oracle Revenue Management and Billing Version 3.0.0.0.0:

Algorithm	Description
C1-BILLEXT	Algorithm to move Billing extract
C1-MEMRLSUBT	Member Role Derivation
CC_C1POST	Regular price item post simulation

## **Appendix F : Parameters Added or Removed from Algorithm Types in 3.0.0.0.0**

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No parameters are newly added or removed from the existing algorithm types in Oracle Revenue Management and Billing Version 3.0.0.0.0.

## Appendix G : Option Types Added or Removed from Feature Configurations in 3.0.0.0.0

This section lists the option types which are newly added or removed from the existing feature configurations in Oracle Revenue Management and Billing Version 3.0.0.0.0.

Feature Name	Option Type (Removed from 3.0.0.0.0)	Option Type (Added in 3.0.0.0.0)
C1-ASOBLLNG	-	Binder Payment Field Mapping
		Sponsored Switch Characteristic for Billable Charge
		Rating Area Field Mapping for Individual
		Medicare
		Status Reason Mapping
		Binder Payment Field Mapping
C1-DEAL	-	Deal Extract Logo File Name
		Character to indicate T&C in Deal Extract
C1_FM	-	Shuffle work unit for SQ batch

## **Appendix H : Characteristic Types Dropped in 3.0.0.0.0**

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No characteristic types are dropped in Oracle Revenue Management and Billing Version 3.0.0.0.0.

## Appendix I : Changing the DB User Password

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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 4.4.0.2.0:

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
```



## Appendix J : ORMB V3.0.0.0.0 Rollup Packs

Instead of individually applying the patches, you can download and apply the release-specific rollup packs. To view the list of rollup packs that you need to apply on the application environment and database, refer to *ORMB V3.0.0.0.0 Patch Guide (Doc ID: 2782229.1)* on [My Oracle Support](#).

### J.1 Applying a Rollup Pack on the Application Environment

Once you install Oracle Revenue Management and Billing Version 3.0.0.0.0, you need to apply the rollup packs listed in *ORMB V3.0.0.0.0 Patch Guide (Doc ID: 2782229.1)*. To apply a rollup pack on the application environment:

1. Download the rollup pack from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the rollup pack 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 `README.txt` file and three folders named `RMB_V3.0.0.0.0_App_Rollup`, `RMB_V3.0.0.0.0_DB_Rollup`, and `RMB_V3.0.0.0.0_PFDs`.

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

**AIX, Linux:**

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

**Windows:**

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

Where,

`$(SPLEBASE)` or `%SPLEBASE%` is the path where the application environment is installed and `$(SPLENVIRON)` or `%SPLENVIRON%` is the name of the application environment.

4. Change to the `RMB_V3.0.0.0.0_App_Rollup` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_1>/RMB_V3.0.0.0.0_App_Rollup
```

**Windows:**

```
cd <DESTINATION_FOLDER_1>\RMB_V3.0.0.0.0_App_Rollup
```

**Note:** The <DESTINATION\_FOLDER\_1> folder is the location where you have extracted the contents of the rollup pack.

5. Install the patch using the following command:

**AIX, Linux:**

```
./installSFgroup.sh
```

**Windows:**

```
installSFgroup.cmd
```

## J.2 Applying a Rollup Pack on the Database

Once you install Oracle Revenue Management and Billing Version 3.0.0.0.0, you need to apply the rollup packs listed in *ORMB V3.0.0.0.0 Patch Guide (Doc ID: 2782229.1)*. You can apply a rollup pack from a Windows machine or UNIX Standalone server. To apply a rollup pack on the database:

1. Download the rollup pack from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the rollup pack 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 `README.txt` file and three folders named `RMB_V3.0.0.0.0_App_Rollup`, `RMB_V3.0.0.0.0_DB_Rollup`, and `RMB_V3.0.0.0.0_PFDs`.

3. Change to the `RMB_V3.0.0.0.0_DB_Rollup` folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER_1>/RMB_V3.0.0.0.0_DB_Rollup
```

**Windows:**

```
cd <DESTINATION_FOLDER_1>\RMB_V3.0.0.0.0_DB_Rollup
```

**Note:** The <DESTINATION\_FOLDER\_1> folder is the location where you have extracted the contents of the rollup pack.

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

**Windows:**

```
ouafDatabasePatch.cmd
```

**AIX, Linux:**

```
ouafDatabasePatch.sh
```

## Appendix K : SQL Statements for 2.9.0.1.0 to 3.0.0.0.0 Data Migration

This section describes the `PostProcessingScript` query which is used for migrating data from Oracle Revenue Management and Billing Version 2.9.0.1.0 to 3.0.0.0.0.

### K.1 PostProcessingScript.sql

The `PostProcessingScript.sql` query does the following:

- Updates the following column values of the records in the respective table:

Table Name	Column Name	Column Value After Data Migration
C1_BENEFITS	BENEFIT_SUB_TYPE_CD	The column value is set to the value stored in the <b>BENEFIT_SUB_TYPE_FLG</b> column corresponding to the record in the <b>C1_BENEFITS</b> table.
CI_PRICE_PARM	SOURCE_TYPE_CD	If the value of the <b>SOURCE_TYPE_CD</b> column for a record is set to <b>BENEFIT_SUB_TYPE_FLG</b> , the column value is updated to <b>BENEFIT_SUB_TYPE_CD</b> .

**Note:** Once you upgrade the database, you need to login to the application and do the following:

>> Create a benefit sub type for all values of the **BENEFIT\_SUB\_TYPE\_FLG** lookup field using the **Benefit Sub Type** screen

>> Create a Medicare preference through the **Field Mapping** screen

>> Set the Medicare preference in the **Medicare** option type of the **C1-ASOBLNG** feature configuration

Otherwise, erroneous results might occur.