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Version 2.4.0.0.0

Upgrade Guide

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Oracle Revenue Management and Billing Upgrade Guide

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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
- 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 2.3.0.2.0 to 2.4.0.0.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0.
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 V2.4.0.0.0	Lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 2.4.0.0.0 database.
Appendix D	Existing Tables Modified in V2.4.0.0.0	Lists the existing tables and their columns that are modified in the Oracle Revenue Management and Billing Version 2.4.0.0.0 database.

Section No.	Section Name	Description
Appendix E	Algorithms and Algorithm Types Dropped in V2.4.0.0.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.4.0.0.0.
Appendix F	Parameters Added or Removed from Algorithm Types in V2.4.0.0.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 2.4.0.0.0.
Appendix G	SQL Statements for 2.3.0.2.0 to 2.4.0.0.0 Data Migration	Lists and describes the SQL queries which are used for migrating data from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0.

Related Documents

You can refer to the following documents for more information:

Document	Description
<i>Oracle Revenue Management and Billing Version 2.4.0.0.0 Release Notes</i>	Provides a brief description about the new features and enhancements made in this release. It also highlights the 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.

Change Log

Revision	Last Update	Updated Section	Comments
6.1	08-June-2015	Section 2.2: Downloading the ORMB Packages and Patches	Updated Content
		Section 2.3.1: Installing Rollup Pack for OUAF Version 4.2.0.2.0	Updated Steps
		Section 2.3.2: Generating Security for Database Objects	Updated Note
		Section 2.6.2: Installing ORMB Version 2.4.0.0.0	Updated Note
		Section 2.6.4: Generating Security for Database Objects	Updated Note
6.2	24-Mar-2016	Section 2.7: Migrating Data	Added Step
6.3	29-April-2016	Section 2.1: Prerequisites	Updated Information
6.4	02-Aug-2018	Section 2.6: Upgrading the ORMB Database	Updated Information

Revision	Last Update	Updated Section	Comments
6.5	20-Aug-2019	Section 2: Upgrading from ORMB Version 2.3.0.2.0 to 2.4.0.0.0	Added Information about the Single-Step Utility

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1. Preparing for Upgrade

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

1.1 Upgrade Overview

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

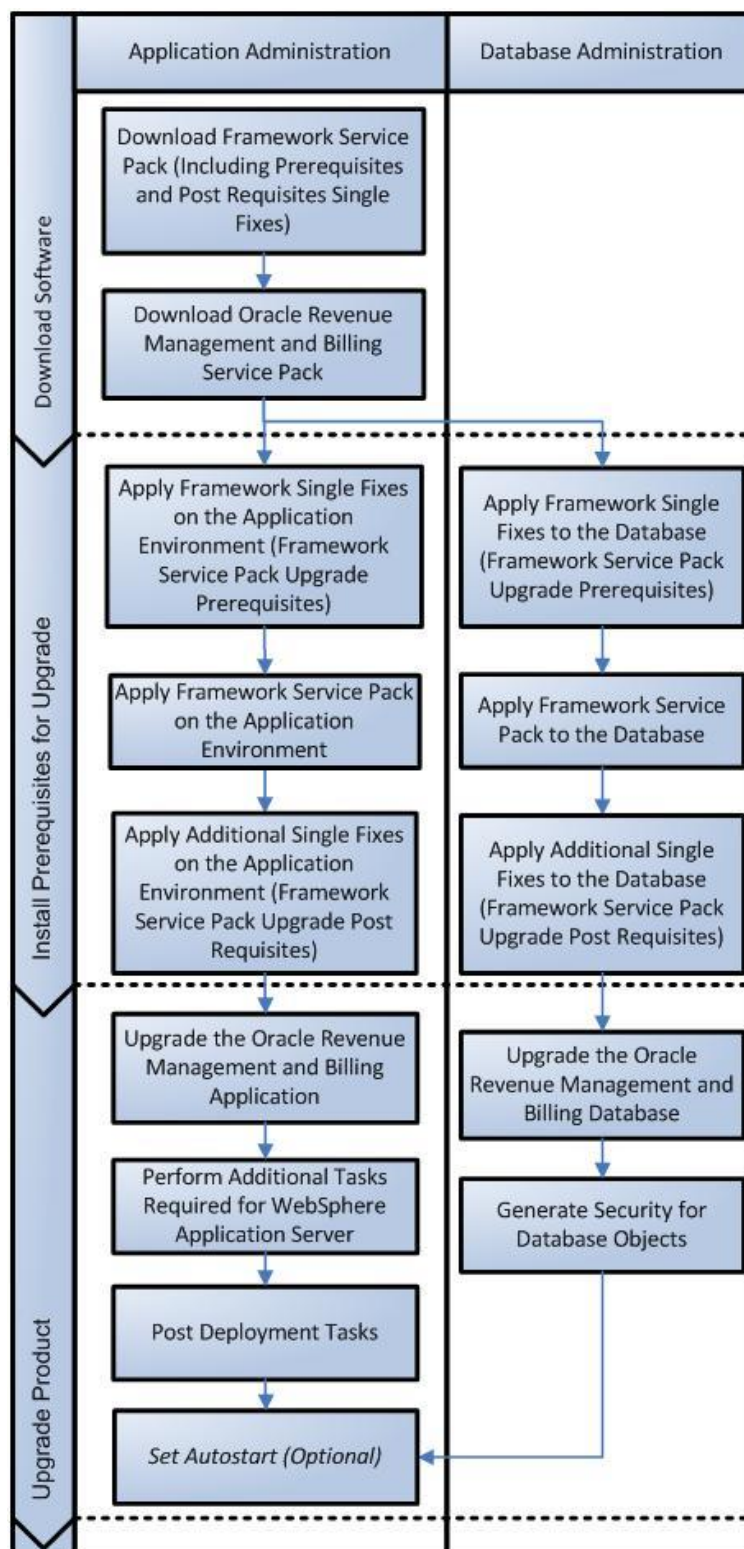


Figure 1 : Upgrade Process

1.2 Upgrade Pre-requisites

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

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

1.3 Supported Upgrades

In this release, we support the following upgrades:

- Upgrade from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0

Note: For upgrading from any other version of Oracle Revenue Management and Billing other than 2.3.0.2.0, consult with Oracle Support, Oracle Partner, or Oracle Consulting that may be supporting your implementation and upgrade process.

2. Upgrading from ORMB Version 2.3.0.2.0 to 2.4.0.0.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0. The high-level steps include:

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

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

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

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

2.1 Prerequisites

If you are already using the Transaction Feed Management feature and want to upgrade to Oracle Revenue Management and Billing Version 2.4.0.0.0, 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 2.3.0.2.0 will not happen successfully.
- Transactions which are uploaded using 2.3.0.2.0 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 product parameter code or value. Otherwise, erroneous results might occur.

If you are already using the On Demand Billing feature and want to upgrade to Oracle Revenue Management and Billing Version 2.4.0.0.0, then you need to ensure the following (before upgrading):

- The billable charges and adhoc bills are generated and completed for the usage data files where billing method is set to **Adhoc Billing**.
- The file types created in 2.3.0.2.0 must no longer be used in 2.4.0.0.0. You should create new file types in 2.4.0.0.0.

2.2 Downloading the ORMB Packages and Patches

For upgrading from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0, you must download the following packages from the Oracle Revenue Management and Billing V2.4.0.0.0 media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework V4.2.0.2.0 Single Fix Prerequisite Rollup for RMB V2.4.0.0.0
- Oracle Revenue Management and Billing V2.4.0.0.0 for <PLATFORM>

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

- ENCOUNTERING ISSUES DURING ORMB 2.4.0.0 UPGRADE

Note: You can search for the ENCOUNTERING ISSUES DURING ORMB 2.4.0.0 UPGRADE patch using the 21184662 patch number.

- RMB V2.4.0.0.0 Rollup Pack for <Platform>

Note: You can search for the RMB V2.4.0.0.0 Rollup Pack for Windows patch using the 20888407 bug number, the RMB V2.4.0.0.0 Rollup Pack for AIX patch using the 20888388 bug number, and the RMB V2.4.0.0.0 Rollup Pack for Linux patch using the 20873277 bug number.

- PACKAGE FOR DATA UPGRADE FROM 2.3.0.2.0 to 2.4.0.0.0 patch

Note: You can search for the PACKAGE FOR DATA UPGRADE FROM 2.3.0.2.0 to 2.4.0.0.0 patch using the 21055108 bug number.

The downloaded files will be in the ZIP format.

2.3 Upgrading Framework on the Database

Both, Oracle Revenue Management and Billing Version 2.3.0.2.0 and Oracle Revenue Management and Billing Version 2.4.0.0.0 are based on Oracle Utilities Application Framework Version 4.2.0.2.0. You need to just apply the post-requisites framework single fixes while upgrading from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0.

To apply the framework rollup pack to the database, you must have the following:

- Oracle Database Client 11.2.0.1 installed on the Windows machine from where you want to apply the rollup pack
- Ability to connect to the database

2.3.1 Installing Rollup Pack for OUAF Version 4.2.0.2.0

To install the rollup pack for Oracle Utilities Application Framework (OUAF) Version 4.2.0.2.0 on the database:

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

```
mkdir TEMPDIR
```

Note: On Windows machine, you can either use the User Interface (UI) or the Command Prompt to execute these commands.

3. Copy the ENCOUNTERING ISSUES DURING ORMB 2.4.0.0 UPGRADE patch to the `TEMPDIR` folder using the following command:

```
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:

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

5. Unzip the ENCOUNTERING ISSUES DURING ORMB 2.4.0.0 UPGRADE patch using the following command:

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

The contents of the zip file are extracted in the `TEMPDIR` folder. The contents include the following files:

- `README.txt`
- `OracleDatabase.zip`

6. Unzip the `OracleDatabase.zip` file using the following command:

```
unzip OracleDatabase.zip -d <PATH>\<DESTINATION_FOLDER>
```

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

- `Demo_dump`
- `FW`
- `RMB`

7. Change to the `FW42020-HFix47` folder using the following command:

```
cd <DESTINATION_FOLDER>\FW\FW42020\FW42020-HFix47
```

Note: The `<DESTINATION_FOLDER>` folder is the location where you have extracted the contents of the `OracleDatabase.zip` file.

8. Execute the `CDXPatch.exe` utility using the following command:

```
CDXPatch.exe
```


Note: Ensure that you execute the `CDXPatch` utility from the Window 32-bit or 64-bit desktop that has Oracle Database 11g Release 2 Client (11.2.0.1), 32-bit, and Java Development Kit Version 6.0 Update 20 or later installed. The database must be listed in the `tnsnames.ora` file on your local machine.

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	<DB_NAME>

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

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

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

2.3.2 Generating Security for Database Objects

Once you apply the framework rollup pack to the database, you need to execute a utility program named `OraGenSec`. This utility program helps you to generate security for all or specific objects in the database.

To generate security for all database objects:

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

```
cd <DESTINATION_FOLDER>\FW\FW42020\Install-Upgrade
```

Note: The `<DESTINATION_FOLDER>` folder is the location where you have extracted the contents of the `OracleDatabase.zip` file.

2. Execute the `OraGenSec` utility using the following command:

```
OraGenSec.exe
```

Note: Ensure that you execute the `OraGenSec` utility from the Window 32-bit or 64-bit desktop that has Oracle Database 11g Release 2 Client (11.2.0.1), 32-bit, and Java Development Kit Version 6.0 Update 20 or later installed. The database must be listed in the `tnsnames.ora` file on your local machine.

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

Parameter	Value
Name of the owner of the database schema	<DB_USER> Example: CISADM
Password for the user (in silent mode)	<DB_USER_PASSWORD>
Name of the Oracle database	<DB_NAME>
Comma-separated list of Oracle users in which synonyms need to be created	<DB_USER> Example: CISUSER, CISREAD

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

Select the following options:

(A/a): Generate security for all objects in the Database?

(O/o): Generate security for specific Objects inputted in this terminal?

(F/f): Generate security for specific objects generated from an input File?

4. Enter **A** to generate security for all objects in the database, and then press **Enter**. A message appears indicating that the database connection is established and security is defined for all objects in the database.

2.4 Upgrading Framework on the Application Environment

Once you apply the framework rollup pack to the database and define security for all database objects, you must install the framework rollup pack on the application environment.

2.4.1 Installing Rollup Pack for OUAF Version 4.2.0.2.0

To install the rollup pack for Oracle Utilities Application Framework Version 4.2.0.2.0 on the application environment:

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

```
mkdir TEMPDIR
```

3. Copy the Oracle Utilities Application Framework V4.2.0.2.0 Single Fix Prerequisite Rollup for RMB V2.4.0.0.0 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.

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

AIX, Linux:

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

Windows:

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

5. Unzip the Oracle Utilities Application Framework V4.2.0.2.0 Single Fix Prerequisite Rollup for RMB V2.4.0.0.0 package using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER>` folder. The contents include the `FW-4.2.0.2.0-Post_SP2_Single_Fixes_Installer.jar` file.

6. Decompress the `FW-4.2.0.2.0-Post_SP2_Single_Fixes_Installer.jar` file using the following command:

AIX, Linux:

```
jar -xvf FW-4.2.0.2.0-Post_SP2_Single_Fixes_Installer.jar
```

Windows:

```
jar -xvf FW-4.2.0.2.0-Post_SP2_Single_Fixes_Installer.jar
```

A sub-directory named “`FW_V4.2.0.2.0-Rollup`” is created.

7. Change to the `FW_V4.2.0.2.0-Rollup` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/FW_V4.2.0.2.0-Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW_V4.2.0.2.0-Rollup
```

Note: The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `FW-4.2.0.2.0-Post_SP2_Single_Fixes_Installer.jar` file.

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

AIX, Linux:

```
installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

The following message appears in the command line:

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

9. Enter **Y** in the command line, and then press **Enter**. A message appears indicating that the process has been completed successfully.
10. Execute the `SPErrorChecker` utility using the following command:

AIX, Windows and Linux:

```
perl SPErrorChecker.plx
```

Note: The `SPErrorChecker` utility scans the log file in all patch folders and reports any errors that have occurred while applying the rollup pack on the application environment.

A message appears indicating the number of log files that were generated and whether any error occurred while applying the rollup pack on the application environment.

Note: You can view a list of patches and the order in which they are applied on the application environment through the `$SPLEBASE/etc/installed_fixes.txt` file.

2.5 Upgrading the ORMB Application

This section explains how to upgrade the application. While upgrading from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0, you need to install the following on the application environment:

1. Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0
2. Rollup Pack for Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0

When you upgrade application on the WebLogic application server, the application is deployed automatically on the server. However, when you upgrade application on the WebSphere application server, the application is not deployed automatically on the server. You have to manually deploy the application on the WebSphere application server. For more information, refer to the [Additional Tasks Required for WebSphere Application Server](#) section.

Note:

Before you upgrade the application, you must take a backup of the application and the database. If you have updated the template files in the `$SPLEBASE/etc` folder, you must also take a backup of these files. Once the application is upgraded, you need to copy the latest template files back in the `$SPLEBASE/etc` folder.

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

Before you upgrade the application, you must reflect the path where you have installed Micro Focus Server 5.1 in the `$SPLEBASE/etc/cobdir.txt` file.

2.5.1 Installing ORMB Version 2.4.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0 on the application environment:

1. Login to the application server using the administrator's credentials.
2. 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%
```

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. Stop the application environment using the following command:

AIX, Linux:

```
$SPLEBASE/bin/spl.sh stop
```

Windows:

```
%SPLEBASE%\bin\spl.cmd stop
```

Note: If you have the WebLogic application server, you need to stop the application environment before you proceed with the installation. However, if you have the WebSphere application server, you need to stop the application server before you proceed with the installation. To stop the application server, use the following command:

```
/opt/IBM/WebSphere/AppServer/bin/stopServer.sh <Server_Name>
```

4. 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 applicable only for Windows and not for AIX or Linux machine.

5. Copy the Oracle Revenue Management and Billing V2.4.0.0.0 for <PLATFORM> 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.

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

AIX, Linux:

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

Windows:

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

7. Unzip the Oracle Revenue Management and Billing V2.4.0.0.0 for <PLATFORM> package using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER> folder. The contents include a folder named `RMB.V2.4.0.0.0`.

8. Change to the `RMB.V2.4.0.0.0` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER>/RMB.V2.4.0.0.0
```

Windows:

```
cd <DESTINATION_FOLDER>\RMB.V2.4.0.0.0
```

9. 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:
```

10. Type **Y** and then press **Enter**. The following message appears in the command line:

```
Product CCB is already installed in the environment $SPLENVIRON.  
Do you want to reinstall it? [Y/N]
```

```
Enter Choice:
```

11. Type **Y** and then press **Enter**. The installation process might take some time to generate the WAR files. Once the build is deployed successfully, the following message appears in the command line:

```
Do you wish to start the environment now? Y/N:
```

12. Type **N** and then press **Enter**.

Note:

If you are installing application on the WebSphere application server, the following message appears before you are prompted to start the environment:

```
Would you wish to deploy web application to WebSphere now? Y/N:
```

Type **N** and then press **Enter**.

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 Installing Rollup Pack for ORMB Version 2.4.0.0.0

To install the rollup pack for Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0 on the application environment:

1. Copy the RMB V2.4.0.0.0 Rollup Pack for <Platform> 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 RMB V2.4.0.0.0 Rollup Pack for <Platform> patch using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER> folder. The contents include two sub-folders - RMB_V2.4.0.0.0_App_Rollup and RMB_V2.4.0.0.0_DB_Rollup.

4. Change to the RMB_V2.4.0.0.0_App_Rollup folder using the following command:

AIX, Linux:

```
cd <Destination_Folder>/RMB_V2.4.0.0.0_App_Rollup
```

Windows:

```
cd <Destination_Folder>\RMB_V2.4.0.0.0_App_Rollup
```

5. Install the rollup pack using the following command:

AIX, Linux:

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

6. Start the application environment using the following command:

AIX, Linux:

```
$SPLEBASE/bin/spl.sh start
```

Windows:

```
%SPLEBASE%\bin\spl.cmd start
```

A log file is generated. It indicates whether the application environment has started successfully or not. If any error occurred during startup, the same is recorded in the log file. By default, the log file is stored in the \$SPLSYSTEMLOGS (%SPLSYSTEMLOGS% on Windows) directory.

Note: If you have the WebLogic application server, you need to start the application environment. However, if you have the WebSphere application server, you need to start the application server. To start the application server, use the following command:

```
/opt/IBM/WebSphere/AppServer/bin/startServer.sh <Server_Name>
```

But, before you start the server, you need to manually deploy the application on the WebSphere application server. For more information, refer to the [Additional Tasks Required for WebSphere Application Server](#) section.

2.5.3 Additional Tasks Required for WebSphere Application Server

Once you upgrade the application, you need to manually deploy the application on WebSphere application server. To deploy the application on WebSphere application server, you need to do the following in the specified order:

1. Deploy the `SPLService.ear` file
2. Deploy the `SPLWeb.ear` file
3. Configure the `SPLService.ear` file
4. Configure the `SPLWeb.ear` file
5. Map Users or Groups to the `cisusers` Role

Note: If the `SPLService.ear` and `SPLWeb.ear` files are already deployed on WebSphere application server, you need to first uninstall them.

2.5.3.1 Deploying the SPLService.ear File

To deploy the `SPLService.ear` file on WebSphere application server:

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Install New Application** link. The **Preparing for the application installation** page appears in the right pane.
4. Select the **Remote file system** option. The **Browse Remote Filesystems** page appears in the right pane.
5. Browse to the `$SPLEBASE\splapp\applications` location. The `applications` folder includes all `WAR` and `EAR` files.
6. Select the **SPLService.ear** option and click **OK**. The **Preparing for the application installation** page appears in the right pane.
7. Click **Next**. The **Install New Application** wizard appears in the right pane.
8. Click **Next**. The **Map modules to servers** wizard page appears.
9. Select the clusters or servers on which you want to install the modules that are contained in the application.
10. Select the check box corresponding to the module named **ServiceBean**. This indicates that you want to install the **ServiceBean** module on the selected server.
11. Click **Apply**. The module is mapped to the selected servers.
12. Click **Next**. The **Provide JNDI names for beans** wizard page appears.
13. Enter the Java Naming and Directory Interface (JNDI) name for the **ServiceBean** module. Use the following naming convention:

```
spl-<server name>/servicebean
```
14. Click **Next**. The **Summary** wizard page appears.
15. Click **Finish**. The deployment process starts. It takes some time. A message appears indicating that the `SPLService.ear` file is deployed successfully on WebSphere application server.

16. Click the **Save** link to reflect the changes in the master configuration files.

2.5.3.2 Deploying the SPLWeb.ear File

To deploy the SPLWeb.ear file on WebSphere application server:

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Install New Application** link. The **Preparing for the application installation** page appears in the right pane.
4. Select the **Remote file system** option. The **Browse Remote Filesystems** page appears in the right pane.
5. Browse to the `$SPLEBASE\splapp\applications` location. The `applications` folder includes all `WAR` and `EAR` files.
6. Select the **SPLWeb.ear** option and click **OK**. The **Preparing for the application installation** page appears in the right pane.
7. Select the **Show me all installation options and parameters** option and then click **Next**. Additional installation options and parameters appear in the right pane.
8. Click **Next**. The **Install New Application** wizard appears in the right pane.
9. Select the **Precompile JavaServer Pages files** check box and then click **Next**. The **Map modules to servers** wizard page appears.
10. Select the clusters or servers on which you want to install the modules that are contained in the application.
11. Select the check box corresponding to all modules, such as `SPLApp.war`, `XAIApp.war`, `appViewer.war`, and `help.war`. This indicates that you want to deploy all `WAR` files on the selected server.
12. Click **Apply**. The modules are mapped to the selected server.
13. Click **Next**. The **Provide options to compile JSPs** wizard page appears.
14. Enter `15` in the **JDK Source Level** field corresponding to all URIs.
15. Click **Next**. The **Provide JSP reloading options for Web modules** wizard page appears.
16. Click **Next**. The **Map shared libraries** wizard page appears.
17. Click **Next**. The **Initialize parameters for servlets** wizard page appears.
18. Click **Next**. The **Map virtual hosts for Web modules** wizard page appears.
19. Click **Next**. The **Map context roots for Web modules** wizard page appears.
20. Click **Next**. The **Map environment entries for Web modules** wizard page appears.
21. Click **Next**. The **Map security roles to users or groups** wizard page appears.
22. Click **Next**. The **Summary** wizard page appears.
23. Click **Finish**. The deployment process starts. It takes some time. A message appears indicating that the `SPLWeb.ear` file is deployed successfully on WebSphere application server.
24. Click the **Save** link to reflect the changes in the master configuration files.

2.5.3.3 Configuring the SPLService.ear File

To configure the `SPLService.ear` file:

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Enterprise Applications** link. The **Enterprise Applications** page appears in the right pane.
4. Click the application (**SPLService-<Server Name>**) link. The **Configuration** tab appears where you can define settings of the application or its modules.
5. Under the **Modules** section, click the **Manage Modules** link. The **Manage Modules** page appears.
6. Click the **ServiceBean** link in the **Module** column. The **Configuration** tab appears where you can define settings of the module.
7. Enter 1 in the **Starting weight** field. This helps to indicate the startup priority for the **spl-servicebean-<Version Number>.jar** URI.
8. Click **OK**. The **Manage Modules** page appears.
9. Click **OK**. The **Configuration** tab appears where you can define settings of the application or its modules.
10. Click **OK**.
11. Click the **Save** link to reflect the changes in the master configuration files.

2.5.3.4 Configuring the SPLWeb.ear File

To configure the `SPLWeb.ear` file:

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Enterprise Applications** link. The **Enterprise Applications** page appears in the right pane.
4. Click the application (**SPLWeb-<Server Name>**) link. The **Configuration** tab appears where you can define settings of the application or its modules.
5. Under the **Detail Properties** section, click the **Startup behavior** link.
6. Enter 2 in the **Startup order** field. This helps to indicate the order in which the application should be started.
7. Click **OK**. The **Configuration** tab appears.
8. Under the **Detail Properties** section, click the **Class loading and update detection** link.
9. Enter 0 in the **Polling interval for updated files** field. This helps to indicate the seconds within which the application file system should be scanned for updated files.
10. Click the **Classes loaded with application class loader first** option to indicate that you want class loader to first search application class loader to load a class.
11. Click **OK**. The **Configuration** tab appears.
12. Under the **Modules** section, click the **Manage Modules** link. The **Manage Modules** page appears.

13. Click the **SPLApp.war** link. The **Configuration** tab appears where you can define settings of the module.
14. Enter 10000 in the **Starting weight** field. This helps to indicate the startup priority for the module compared to other modules while starting a server.
15. Select the **Classes loaded with application class loader first** option from the **Class loader order** list. This helps to indicate that you want class loader to first search application class loader to load a class.
16. Click **OK**. The **Manage Modules** page appears.
17. Click the **XAIApp.war** link. The **Configuration** tab appears where you can define settings of the module.
18. Enter 10000 in the **Starting weight** field.
19. Select the **Classes loaded with application class loader first** option from the **Class loader order** list.
20. Click **OK**. The **Manage Modules** page appears.
21. Click the **appViewer.war** link. The **Configuration** tab appears where you can define settings of the module.
22. Enter 10000 in the **Starting weight** field.
23. Select the **Classes loaded with application class loader first** option from the **Class loader order** list.
24. Click **OK**. The **Manage Modules** page appears.
25. Click the **help.war** link. The **Configuration** tab appears where you can define settings of the module.
26. Enter 10000 in the **Starting weight** field.
27. Select the **Classes loaded with application class loader first** option from the **Class loader order** list.
28. Click **OK**. The **Manage Modules** page appears.
29. Click **OK**. The **Configuration** tab appears where you can define settings of the application or its modules.
30. Click **OK**.
31. Click the **Save** link to reflect the changes in the master configuration files.

2.5.3.5 Mapping Users or Groups to a Security Role

Once you deploy the application on WebSphere application server, you need to map users or groups to the `cisusers` role. To map users or groups to the `cisusers` role:

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Enterprise Applications** link. The **Enterprise Applications** page appears in the right pane.
4. Click the application (**SPLService-<Server Name>**) link. The **Configuration** tab appears where you can define settings of the application or its modules.
5. Under the **Detail Properties** section, click the **Security role to user/group mapping** link.

6. Select the **All authenticated** check box corresponding to the `cisusers` role. This indicates that only authenticated users should be granted access to the `cisusers` role.
7. Select the **Select** check box corresponding to the `cisusers` role and then click **Look up users**. The **Look up users or groups** page appears.
8. Enter `SYSUSER` in the **Search String** field and then click **Search**. The user name appears in the **Available** list.
9. Select **SYSUSER** in the **Available** list and then click the **Move** () button. The selected user is moved to the **Selected** list.
10. Click **OK**. The user is mapped to the `cisusers` role.
11. Click **OK**. The **Configuration** tab appears where you can define settings of the application or its modules.
12. Click **OK**.
13. Click the **Save** link to reflect the changes in the master configuration files.
14. Similarly, repeat the steps from 5 to 13 for **SPLWeb-<Server Name>**.

2.5.4 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	http://<Hostname>:<WebLogic_Port_Number>/ouaf/loginPage.jsp
WebSphere	http://<Hostname>:<WebSphere_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 2.3.0.2.0 to 2.4.0.0.0, you need to install the following on the database:

1. Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0
2. Rollup Pack for Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0

Prerequisites:

Before you upgrade the Oracle Revenue Management and Billing database, you need to do the following:

1. Truncate the CI_BATCH_RUN_CNTRL table.
2. If you have attached an algorithm of the following algorithm types on the respective system event, you need to remove these algorithms from the system events:

Algorithm Type	Object	System Event
C1-MULTIB	Customer Class	FT Freeze
C1-SATPBLPPS	Contract Type	Post-Processing (Billing)
C1_MDEFFSCR	Installation	Modify Effective Pricing Screen
C1_PLASN_ADD	Business Object	Validation
C1_PLASSIGN	Business Object	Pre-Processing
C1_PRICCMPFV	Business Object	Pre-Processing
C1_PSBLEX	Bill Route Type	Bill Extract Method
FTFREZBSEG	Customer Class	FT Freeze
FTFREZFTGLEX	Customer Class	FT Freeze

3. If you have attached any of the following algorithms on the respective system event, you need to remove these algorithms from the system events:

Algorithm	Object	System Event
C1-BCGENA	Bill	Preprocessing
C1-SATPBLPPS	Contract Type	Post-Processing (Billing)
C1_PLASN_ADD	Business Object	Validation
C1_PLASSIGN	Business Object	Pre-Processing
C1_PRICCMPFV	Business Object	Pre-Processing
C1_RATEVALUE	Rate Component	Value Algorithm
C1_RATE_STEP	Rate Component	Step Algorithm
FTFREZBSEG	Customer Class	FT Freeze
FTFREZFTGLEX	Customer Class	FT Freeze
WRITE DWN	Customer Class	Pay Freeze

4. Execute the `Pre_BlueprintScript.sql` query

2.6.1 Executing the Pre_BlueprintScript.sql Query

To execute the `Pre_BlueprintScript.sql` query:

1. Copy the PACKAGE FOR DATA UPGRADE FROM 2.3.0.2.0 to 2.4.0.0.0 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 PACKAGE FOR DATA UPGRADE FROM 2.3.0.2.0 to 2.4.0.0.0 patch using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_1>` folder. The contents include a folder named `Migration_From_V2.3.0.2.0_To_V2.4.0.0.0`. This folder contains the following two files:

- `Pre_BlueprintScript.sql`
- `Post_BlueprintScript.sql`

5. Change to the `Migration_From_V2.3.0.2.0_To_V2.4.0.0.0` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/Migration_From_V2.3.0.2.0_To_V2.4.0.0.0
```

Windows:

```
cd <DESTINATION_FOLDER_1>\Migration_From_V2.3.0.2.0_To_V2.4.0.0.0
```

6. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, CISADM) credentials.
7. Execute the `Pre_BlueprintScript.sql` query from the `Migration_From_V2.3.0.2.0_To_V2.4.0.0.0` folder.

Note:

For more information on what happens when you execute the `Pre_BlueprintScript.sql` query, refer to the [Pre_BlueprintScript.sql](#) section in Appendix E : SQL Statements for 2.3.0.2.0 to 2.4.0.0.0 Data Migration.

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.

2.6.2 Installing ORMB Version 2.4.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0 on the database:

1. Login to the database server using the administrator's credentials.
2. Change to the `Install-Upgrade` folder using the following command:

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

Note: The `<DESTINATION_FOLDER>` folder is the location where you have extracted the contents of the `OracleDatabase.zip` file.

3. Execute the `CdxDBI.exe` utility using the following command:

```
CdxDBI.exe
```

Note:

The `CdxDBI` utility helps to apply the blueprint to the database. In other words, it helps to reflect the metadata changes to the database.

Ensure that you execute the `CdxDBI` utility from the Window 32-bit or 64-bit desktop that has Oracle Database 11g Release 2 Client (11.2.0.1), 32-bit, and Java Development Kit Version 6.0 Update 20 or later installed. The database must be listed in the `tnsnames.ora` file on your local machine.

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

Parameter	Value
Enter the name of the target database	<DB_NAME>
Enter the name of the owner of Database Schema	<DB_USER> Example: CISADM
Enter the location for Java Home (e.g. C:\Java\jdk1.6.0_18)	..\jdk1.6.0_20
Enter the TUGBU jarfiles location (e.g. C:\Database-Install\Jarfiles)	..\RMB\jarfiles
Enter the password for <DB_USER> schema (or hit ENTER to quit)	<DB_USER_PASSWORD>
Re-enter the password	<DB_USER_PASSWORD>
Enter the Oracle user with read-write privileges to Database Schema	<DB_USER> Example: CISUSER
Enter the Oracle user with read-only privileges to Database Schema	<DB_USER> Example: CISREAD
Enter the database role with read-write privileges to Database Schema	<DB_USER_ROLE> Example: CIS_USER
Enter the database role with read-only privileges to Database Schema	<DB_USER_ROLE> Example: CIS_READ

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

```
Ready to perform initial install of Database Rel.V2.4.0.0.0, do
you want to continue (Y/N)?
```
5. Type **Y** and then press **Enter**. The following message appears in the command line:

```
Ready to upgrade the target database, Do you want to continue? (Y/N)
```
6. Type **Y** and then press **Enter**. A message appears indicating that the process has completed successfully.

2.6.3 Installing Rollup Pack for ORMB Version 2.4.0.0.0

To install the rollup pack for Oracle Revenue Management and Billing (ORMB) Version 2.4.0.0.0 on the database:

1. Change to the RMB_V2.4.0.0.0_DB_Rollup folder using the following command:

```
cd <Destination_Folder>\RMB_V2.4.0.0.0_DB_Rollup
```

Note: The <DESTINATION_FOLDER> folder is the location where you have extracted the contents of the RMB V2.4.0.0.0 Rollup Pack for <Platform> patch.

2. Execute the CDXPatch.exe utility using the following command:

```
CDXPatch.exe
```

Note: Ensure that you execute the `CDXPatch` utility from the Window 32-bit or 64-bit desktop that has Oracle Database 11g Release 2 Client (11.2.0.1), 32-bit, and Java Development Kit Version 6.0 Update 20 or later installed. The database must be listed in the `tnsnames.ora` file on your local machine.

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	<DB_NAME>

3. Enter the required parameter values. The following message appears in the command line:
Ready to process patches, Do you want to continue? (Y/N)
4. Type **Y** and then press **Enter**. A message appears indicating that the process has been completed successfully.

2.6.4 Generating Security for Database Objects

Once you upgrade the database, you need to execute a utility program named `OraGenSec`. This utility program helps you to generate security for all or specific objects in the database.

To generate security for all database objects:

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

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

Note: The `<DESTINATION_FOLDER>` folder is the location where you have extracted the contents of the `OracleDatabase.zip` file.

2. Execute the `OraGenSec` utility using the following command:

```
OraGenSec.exe
```

Note: Ensure that you execute the `OraGenSec` utility from the Window 32-bit or 64-bit desktop that has Oracle Database 11g Release 2 Client (11.2.0.1), 32-bit, and Java Development Kit Version 6.0 Update 20 or later installed. The database must be listed in the `tnsnames.ora` file on your local machine.

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

Parameter	Value
Enter the application read-only user or Schema Owner in the database	<DB_USER> Example: CISADM
Enter the password for the <DB_USER> user	<DB_USER_PASSWORD>
Enter the name of the Oracle database	<DB_NAME>
Enter a comma-separated list of Oracle users in which synonyms need to be created (e.g. cisuser, cisread)	<DB_USER> Example: CISUSER, CISREAD

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

Select the following options:

(A/a): Generate security for all objects in the Database?

(O/o): Generate security for specific Objects inputted in this terminal?

(F/f): Generate security for specific objects generated from an input File?

4. Type **A** to generate security for all objects in the database, and then press **Enter**. A message appears indicating that the database connection is established and security is defined for all objects in the database.

2.7 Migrating Data

Once you upgrade the database, you can migrate data from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0 using the `Post_BlueprintScript.sql` query which is available in the PACKAGE FOR DATA UPGRADE FROM 2.3.0.2.0 TO 2.4.0.0.0 patch. To migrate the data from ORMB Version 2.3.0.2.0 to 2.4.0.0.0:

1. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, CISADM) credentials.
2. Execute the `Post_BlueprintScript.sql` query from the `Migration_From_V2.3.0.2.0_To_V2.4.0.0.0` folder.

Note:

For more information on what happens when you execute the `Post_BlueprintScript.sql` query, refer to the [Post_BlueprintScript.sql](#) section in Appendix E : SQL Statements for 2.3.0.2.0 to 2.4.0.0.0 Data Migration.

The mechanism to specify reference entity while defining a reference parameter is redesigned from this release onwards. If you have used reference parameter for defining product pricing, contact Oracle Support for more information.

3. Execute the following script to delete unwanted records from the CI_BCHG_HSTG table:

```
UPDATE CI_BCHG_STG SET BCHG_HSTG_ID = (SELECT BCHG_HSTG_ID
FROM CI_BCHG_HSTG WHERE BILLTYPE_SW = 'RLB' AND FLGRP_CD =
'FGP_RLB' AND ROWNUM = 1 ORDER BY BCHG_HSTG_ID DESC) WHERE
BCHG_HSTG_ID IN (SELECT BCHG_HSTG_ID FROM CI_BCHG_HSTG WHERE
BILLTYPE_SW = 'RLB');

DELETE FROM CI_BCHG_HSTG WHERE BILLTYPE_SW = 'RLB' AND
BCHG_HSTG_ID NOT IN SELECT MIN(BCHG_HSTG_ID) FROM CI_BCHG_HSTG
WHERE BILLTYPE_SW = 'RLB' AND FLGRP_CD = 'FGP_RLB';

UPDATE CI_BCHG_HSTG SET FILE_NAME = "", UPLD_FLTY_CD = ""
WHERE BILLTYPE_SW = 'RLB' AND FLGRP_CD = 'FGP_RLB';
```

Post-requisites:

Once you migrate the data, you need to define parameters of the following algorithm types once again:

- BS-CRE-PRICE
- C1-BILLSEG
- C1-GENBSEGPA
- C1-PDOV-WTBS
- RV-PP-PRICE

This is because some parameters are either added or removed from these algorithm types. For more information, refer to [Appendix F : Parameters Added or Removed from Algorithm Types in V2.4.0.0.0](#).

3. Additional Tasks

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

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

3.1 Generating the Application Viewer

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

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

AIX, Linux:

```
$SPLEBASE/bin/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 %SPLEBASE% is the name of the application environment for which you want to set the environment variables.

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

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

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

4. Execute the genappvieweritems utility using the following command:

AIX, Linux:

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

Windows:

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

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

5. Execute the initialSetup utility using the following command:

AIX, Linux:

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

Windows:

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

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

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

3.2 Starting the Thread Pool Worker

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

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

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

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

AIX, Linux:

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

Windows:

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

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

3.3 Building Javadoc Index

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

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

AIX, Linux:

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

Windows:

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

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

Appendix A : Known Issues

To view a list of known issues in the current release, refer to the *Oracle Revenue Management and Billing Version 2.4.0.0.0 Release Notes*.

Appendix B : Third Party Software Upgrade

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

Appendix C : New Tables Added in V2.4.0.0.0

This section lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 2.4.0.0.0 database.

C.1 CI_POLICY_TYPE

Purpose:	Used to store a policy type.
Total Number of Columns:	6
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
POLICY_TYPE_CD	CHAR	No	
C1_ACTIVE_INACTIVE_FLG	CHAR	No	
BUS_OBJ_CD	CHAR	No	''
BO_DATA_AREA	CLOB	Yes	
VERSION	NUMBER	No	1
TRANS_BUS_OBJ_CD	CHAR	No	''

Primary Key:

Key Type	Column Name
SINGLE	POLICY_TYPE_CD

Indexes:

Sr. No.	Index Type	Column Name
1.	PRIMARY	POLICY_TYPE_CD

C.2 CI_POLICY_TYPE_L

Purpose:	Used to store description of a policy type.
Total Number of Columns:	5
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
POLICY_TYPE_CD	CHAR	No	
LANGUAGE_CD	CHAR	No	
DESCR	VARCHAR2	No	''
DESCRLONG	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	POLICY_TYPE_CD
	LANGUAGE_CD

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	POLICY_TYPE_CD
		LANGUAGE_CD

C.3 CI_POLICY_TYPE_CHAR

Purpose:	Used to store characteristics defined for a policy type.
Total Number of Columns:	12
Constraints:	XF426P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
POLICY_TYPE_CD	CHAR	No	
CHAR_TYPE_CD	CHAR	No	
SEQ_NUM	NUMBER	No	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
SRCH_CHAR_VAL	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	POLICY_TYPE_CD
	CHAR_TYPE_CD
	SEQ_NUM

C.4 CI_POLICY_PLAN

Purpose:	Used to store a policy plan.
Total Number of Columns:	12
Constraints:	XF453P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PLAN_ID	CHAR	No	
POLICY_ID	CHAR	No	''
PRICEITEM_CD	CHAR	No	''
START_DT	DATE	No	
END_DT	DATE	Yes	
PLAN_NBR	VARCHAR2	No	''
BO_DATA_AREA	CLOB	Yes	
BUS_OBJ_CD	CHAR	No	''
ILM_ARCH_SW	CHAR	Yes	
ILM_DT	DATE	Yes	
VERSION	NUMBER	No	1
PRIMARY_PLAN_SW	CHAR	Yes	N

Primary Key:

Key Type	Column Name
SINGLE	PLAN_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	POLICY_ID
		PRICEITEM_CD
		START_DT

C.5 CI_POLICY_PLAN_K

Purpose:	Used to generate policy plan ID.
Total Number of Columns:	2
Constraints:	XF343P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PLAN_ID	CHAR	No	
ENV_ID	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	PLAN_ID
	ENV_ID

C.6 CI_POLICY_PLAN_CHAR

Purpose:	Used to store characteristics defined for a policy plan.
Total Number of Columns:	12
Constraints:	XF344P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PLAN_ID	CHAR	No	
CHAR_TYPE_CD	CHAR	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
SRCH_CHAR_VAL	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	PLAN_ID
	CHAR_TYPE_CD
	EFFDT

C.7 CI_POLICY_USAGE

Purpose:	Used to store mapping details of a policy, plan, and membership.
Total Number of Columns:	5
Constraints:	XF467P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
USAGE_ID	CHAR	No	
POLICY_ID	CHAR	No	
PLAN_ID	CHAR	Yes	
SA_ID	CHAR	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
SINGLE	USAGE_ID

C.8 CI_POLICY_USAGE

Purpose:	Used to generate policy usage ID.
Total Number of Columns:	2
Constraints:	XF468P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
USAGE_ID	CHAR	No	
ENV_ID	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	USAGE_ID
	ENV_ID

C.9 CI_MEMBERSHIP

Purpose:	Used to store details of a membership.
Total Number of Columns:	15
Constraints:	XF454P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
PLAN_ID	CHAR	Yes	
POLICY_ID	CHAR	Yes	
START_DT	DATE	No	
END_DT	DATE	Yes	
EXT_MEMBER_ID	VARCHAR2	Yes	
BUS_OBJ_CD	CHAR	No	
BO_DATA_AREA	CLOB	Yes	
BO_STATUS_CD	CHAR	No	
BO_STATUS_REASON_CD	VARCHAR2	Yes	
STATUS_UPD_DTTM	DATE	Yes	
CRE_DTTM	DATE	Yes	
ILM_ARCH_SW	CHAR	Yes	
ILM_DT	DATE	Yes	
VERSION	NUMBER	No	

Primary Key:

Key Type	Column Name
SINGLE	MEMBERSHIP_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	PLAN_ID

C.10 CI_MEMBERSHIP_CHAR

Purpose:	Used to store characteristics defined for a membership.
Total Number of Columns:	12
Constraints:	XF455P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
CHAR_TYPE_CD	CHAR	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
SRCH_CHAR_VAL	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	MEMBERSHIP_ID
	CHAR_TYPE_CD
	EFFDT

C.11 CI_MEMBERSHIP_PER

Purpose:	Used to store details of persons who are added in a membership.
Total Number of Columns:	9
Constraints:	XF461P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
PER_ID	CHAR	No	
START_DT	DATE	No	
END_DT	DATE	Yes	

Column Name	Data Type	Nullable (Yes or No)	Default Value
SA_REL_TYPE_CD	CHAR	No	''
FIN_RESP_SW	CHAR	No	''
MAIN_CUST_SW	CHAR	No	''
VERSION	NUMBER	No	1
C1_MEMBER_SW	CHAR	No	''

Primary Key:

Key Type	Column Name
COMPOSITE	MEMBERSHIP_ID
	PER_ID
	START_DT

C.12 CI_MEMBERSHIP_PER_CHAR

Purpose:	Used to store characteristics defined for a person who is added in a membership.
Total Number of Columns:	14
Constraints:	XF462P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
PER_ID	CHAR	No	
START_DT	DATE	No	
CHAR_TYPE_CD	CHAR	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
SRCH_CHAR_VAL	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	MEMBERSHIP_ID
	PER_ID
	START_DT
	CHAR_TYPE_CD
	EFFDT

C.13 CI_MEMBERSHIP_SA

Purpose:	Used to store contracts associated with a membership.
Total Number of Columns:	6
Constraints:	XF463P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
SA_ID	CHAR	Yes	
START_DT	DATE	No	
END_DT	DATE	Yes	
VERSION	NUMBER	No	1
BILL_TO_TYPE_FLG	CHAR	No	

Primary Key:

Key Type	Column Name
COMPOSITE	MEMBERSHIP_ID
	START_DT
	BILL_TO_TYPE_FLG

C.14 CI_MEMBERSHIP_LOG

Purpose:	Used to store membership logs.
Total Number of Columns:	20
Constraints:	XF457P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
SEQNO	NUMBER	No	
LOG_ENTRY_TYPE_FLG	CHAR	No	''
LOG_DTTM	DATE	No	
BO_STATUS_CD	CHAR	No	''
DESCRLONG	VARCHAR2	No	''
MESSAGE_CAT_NBR	NUMBER	No	0
MESSAGE_NBR	NUMBER	No	0
CHAR_TYPE_CD	CHAR	No	''
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
SRCH_CHAR_VAL	VARCHAR2	No	''
USER_ID	CHAR	No	''
BO_STATUS_REASON_CD	VARCHAR2	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
----------	-------------

COMPOSITE	MEMBERSHIP_ID
	SEQNO

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	CHAR_TYPE_CD
		CHAR_VAL_FK1

C.15 CI_MEMBERSHIP_LOG_PARM

Purpose:	Used to store membership log parameters.
Total Number of Columns:	6
Constraints:	XF458P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MEMBERSHIP_ID	CHAR	No	
SEQNO	NUMBER	No	
PARM_SEQ	NUMBER	No	
MSG_PARM_TYP_FLG	CHAR	No	''
MESSAGE_PARM	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	MEMBERSHIP_ID
	SEQNO
	PARM_SEQ

C.16 CI_APAY_SRC_ALG

Purpose:	Used to store validation algorithm of an auto pay source.
Total Number of Columns:	5
Constraints:	XF452P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_SRC_CD	CHAR	No	
APAY_SRC_ALG_ENTITY_FLG	CHAR	No	
SEQ_NUM	NUMBER	No	
ALG_CD	CHAR	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	APAY_SRC_CD
	APAY_SRC_ALG_ENTITY_FLG
	SEQ_NUM

C.17 CI_APAY_STAGE_UP

Purpose:	Used to store the clearing staging record for a clearing record.
Total Number of Columns:	9
Constraints:	None

Column Details

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_STAGE_UP_ID	NUMBER	No	
APAY_CLR_ID	CHAR	No	
APAY_UP_STATUS_FLG	CHAR	No	
UPLOAD_DT	DATE	No	
BUS_OBJ_CD	CHAR	No	
BO_DATA_AREA	CLOB	Yes	
BO_STATUS_CD	CHAR	Yes	
VERSION	NUMBER	No	1
BATCH_NBR	NUMBER	Yes	0

Primary Key:

Key Type	Column Name
SINGLE	APAY_STAGE_UP_ID

C.18 CI_APAY_STAGE_UP_REM

Purpose:	Used to store the reason and sub reason codes of each clearing staging record.
Total Number of Columns:	7
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_STAGE_UP_ID	NUMBER	No	
APAY_UPL_RSN_CD	CHAR	No	
APAY_UPL_RSN_TYPE	CHAR	No	
SEQNO	NUMBER	No	
APAY_UPL_SUB_RSN_CD	CHAR	Yes	
DESCR	VARCHAR2	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	APAY_UPL_RSN_CD
	APAY_UPL_RSN_TYPE
	SEQNO
	APAY_STAGE_UP_ID

C.19 CI_APAY_STAGE_CHAR

Purpose:	Used to store additional information about the clearing staging record in the form of characteristics.
Total Number of Columns:	12
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_STAGE_UP_ID	NUMBER	No	
CHAR_TYPE_CD	CHAR	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR	Yes	
ADHOC_CHAR_VAL	VARCHAR2	Yes	
VERSION	NUMBER	No	1
CHAR_VAL_FK1	VARCHAR2	Yes	
CHAR_VAL_FK2	VARCHAR2	Yes	
CHAR_VAL_FK3	VARCHAR2	Yes	
CHAR_VAL_FK4	VARCHAR2	Yes	
CHAR_VAL_FK5	VARCHAR2	Yes	
SRCH_CHAR_VAL	VARCHAR2	Yes	

Primary Key:

Key Type	Column Name
COMPOSITE	APAY_STAGE_UP_ID
	CHAR_TYPE_CD
	EFFDT

C.20 CI_APAY_STGUP_EXC

Purpose:	Used to store exceptions that occur while freezing or cancelling automatic payments.
Total Number of Columns:	20
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_STAGE_UP_ID	NUMBER	No	
SEQNO	NUMBER	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
MESSAGE_CAT_NBR	NUMBER	No	
MESSAGE_NBR	NUMBER	No	
EXP_MSG	VARCHAR2	No	
MESSAGE_PARM1	VARCHAR2	Yes	
MESSAGE_PARM2	VARCHAR2	Yes	
MESSAGE_PARM3	VARCHAR2	Yes	
MESSAGE_PARM4	VARCHAR2	Yes	
MESSAGE_PARM5	VARCHAR2	Yes	
MESSAGE_PARM6	VARCHAR2	Yes	
MESSAGE_PARM7	VARCHAR2	Yes	
MESSAGE_PARM8	VARCHAR2	Yes	
MESSAGE_PARM9	VARCHAR2	Yes	
USER_ID	CHAR	No	
CRE_DTTM	DATE	No	
REVIEW_USER_ID	CHAR	No	
REVIEW_DT	DATE	Yes	
COMMENTS	VARCHAR2	No	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	APAY_STAGE_UP_ID
	SEQNO

C.21 CI_APAY_UPL_RSN

Purpose:	Used to store an auto pay upload reason.
Total Number of Columns:	7
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_UPL_RSN_CD	CHAR	No	
APAY_UPL_RSN_TYPE	CHAR	Yes	
ELIG_FOR_PROC_SW	CHAR	No	
BUS_OBJ_CD	CHAR	No	
BO_DATA_AREA	CLOB	Yes	
BO_STATUS_CD	CHAR	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
SINGLE	APAY_UPL_RSN_CD

C.22 CI_APAY_UPL_RSN_ALG

Purpose:	Used to store algorithms attached to an auto pay upload reason.
Total Number of Columns:	4
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_UPL_RSN_CD	CHAR	No	
SEQNO	NUMBER	No	
APAY_UPL_RSN_ALG_CD	CHAR	No	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	APAY_UPL_RSN_CD
	SEQNO

C.23 CI_APAY_UPL_RSN_L

Purpose:	Used to store description of an auto pay upload reason.
Total Number of Columns:	5
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APAY_UPL_RSN_CD	CHAR	No	
LANGUAGE_CD	CHAR	No	
VERSION	NUMBER	No	1
DESCRLONG	VARCHAR2	Yes	
DESCR	VARCHAR2	No	

Primary Key:

Key Type	Column Name
COMPOSITE	APAY_UPL_RSN_CD
	SEQNO

C.24 CI_BILL_LOG

Purpose:	Used to store bill logs.
Total Number of Columns:	19
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
SEQ_NUM	NUMBER	No	
LOG_DTTM	DATE	No	
USER_ID	VARCHAR2	No	''
BO_STATUS_CD	CHAR	No	''
DESCRLONG	VARCHAR2	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
MESSAGE_CAT_NBR	NUMBER	No	0
MESSAGE_NBR	NUMBER	No	0
CHAR_TYPE_CD	CHAR	No	''
EFFDT	DATE	Yes	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
VERSION	NUMBER	No	1
SRCH_CHAR_VAL	VARCHAR2	No	''

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	SEQ_NUM

C.25 CI_FEEDTYPE_LABEL

Purpose:	Used to store base labels for each feed type.
Total Number of Columns:	5
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FEED_FOR_FLG	CHAR	No	
BASE_LABEL	VARCHAR2	No	
MANDATORY_SW	CHAR	No	
TBL_NAME	VARCHAR2	Yes	''
FLD_NAME	VARCHAR2	Yes	''

Primary Key:

Key Type	Column Name
COMPOSITE	BASE_LABEL
	FEED_FOR_FLG

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	BASE_LABEL
		FEED_FOR_FLG

C.26 CI_FILEGROUP_DIVISION

Purpose:	Used to store divisions associated with a file group.
Total Number of Columns:	2
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FLGRP_CD	CHAR	No	
CIS_DIVISION	CHAR	No	

Primary Key:

Key Type	Column Name
COMPOSITE	FLGRP_CD
	CIS_DIVISION

C.27 CI_FILETYPE_DIVISION

Purpose:	Used to store divisions associated with a file type.
Total Number of Columns:	2
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
UPLD_FLTY_CD	CHAR	No	
CIS_DIVISION	CHAR	No	

Primary Key:

Key Type	Column Name
COMPOSITE	UPLD_FLTY_CD
	CIS_DIVISION

C.28 CI_FILETYPE_MAPPING

Purpose:	Used to store custom labels defined for base labels in a file type.
Total Number of Columns:	6
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
UPLD_FLTY_CD	CHAR	No	
FEED_FOR_FLG	CHAR	No	
BASE_LABEL	VARCHAR2	No	
CUSTOM_LABEL	VARCHAR2	Yes	''
TBL_NAME	VARCHAR2	Yes	''
FLD_NAME	VARCHAR2	Yes	''

Primary Key:

Key Type	Column Name
COMPOSITE	UPLD_FLTY_CD
	FEED_FOR_FLG
	BASE_LABEL

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	UPLD_FLTY_CD
		FEED_FOR_FLG
		BASE_LABEL

C.29 CI_FILE_GROUP_L

Purpose:	Used to store description of a file group.
Total Number of Columns:	4
Constraints:	XF469P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FLGRP_CD	CHAR	No	
LANGUAGE_CD	CHAR	No	
VERSION	NUMBER	No	1
DESCR	VARCHAR2	No	

Primary Key:

Key Type	Column Name
COMPOSITE	FLGRP_CD
	LANGUAGE_CD

C.30 CI_FILE_GROUP

Purpose:	Used to store a file group.
Total Number of Columns:	13
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FLGRP_CD	CHAR	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILLTYPE_SW	CHAR	No	
BILL_AFTER_DT	DATE	No	
BO_STATUS_CD	CHAR	Yes	
BUS_OBJ_CD	CHAR	Yes	
BO_DATA_AREA	CLOB	Yes	
STATUS_UPD_DTTM	DATE	Yes	
CREATED_BY	CHAR	Yes	
VERSION	NUMBER	No	1
FILE_GRP_STAT_FLG	CHAR	Yes	
USAGE_START_DATE	DATE	No	
USAGE_END_DATE	DATE	No	
CREATE_DT	DATE	Yes	

Primary Key:

Key Type	Column Name
SINGLE	FLGRP_CD

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	FLGRP_CD

C.31 CI_PAY_PORTAL

Purpose:	Used to store payment portal distribution details.
Total Number of Columns:	15
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_PORTAL_ID	CHAR	No	
PAY_MATCH_TYPE_ID	CHAR	No	
ACCT_ID	CHAR	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	Yes	
BSEG_ID	CHAR	Yes	
SA_ID	CHAR	Yes	
MEMBERSHIP_ID	CHAR	Yes	
AMOUNT	NUMBER	No	0
PAID_AMT	NUMBER	No	0
UNPAID_AMT	NUMBER	No	0
WRITE_OFF_ADJ_AMT	NUMBER	No	0
PAY_AMT	NUMBER	No	0
CURRENCY_CD	CHAR	Yes	
PAY_ID	CHAR	Yes	
MATCH_EVT_ID	CHAR	Yes	

Primary Key:

Key Type	Column Name
SINGLE	PAY_PORTAL_ID

C.32 CI_PAY_PORTAL_K

Purpose:	Used to generate payment portal ID.
Total Number of Columns:	2
Constraints:	C1_CXF452P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_PORTAL_ID	CHAR	No	
ENV_ID	NUMBER	No	

Primary Key:

Key Type	Column Name
IOT	PAY_PORTAL_ID
	ENV_ID

C.33 CI_PAY_PRTL_MTH_TYPE

Purpose:	Used to store payment portal match types.
Total Number of Columns:	10
Constraints:	XF451P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_MATCH_TYPE_ID	CHAR	No	
PAY_EVENT_ID	CHAR	No	
PAYMENT_MODE_FLG	CHAR	No	
MATCH_TYPE_CD	CHAR	No	
MATCH_TYPE_ENTITY_ID	VARCHAR2	No	
MATCH_TYPE_ENTITY_TYPE	CHAR	No	
SEQNO	NUMBER	No	
CRE_DTTM	DATE	Yes	
COMMENTS	VARCHAR2	Yes	
ENTITY_FKREF	VARCHAR2	Yes	

Primary Key:

Key Type	Column Name
SINGLE	PAY_MATCH_TYPE_ID

C.34 CI_PRICELIST_ASGN_CHAR

Purpose:	Used to store characteristics defined for a price list assignment.
Total Number of Columns:	12
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRICELIST_ASGN_ID	CHAR	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
CHAR_TYPE_CD	CHAR	No	
EFFDT	DATE	No	
ADHOC_CHAR_VAL	VARCHAR2	Yes	
CHAR_VAL	CHAR	Yes	
CHAR_VAL_FK1	VARCHAR2	Yes	
CHAR_VAL_FK2	VARCHAR2	Yes	
CHAR_VAL_FK3	VARCHAR2	Yes	
CHAR_VAL_FK4	VARCHAR2	Yes	
CHAR_VAL_FK5	VARCHAR2	Yes	
SRCH_CHAR_VAL	VARCHAR2	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	CHAR_TYPE_CD
	EFFDT
	PRICELIST_ASGN_ID

C.35 CI_TRL_BILL

Purpose:	Used to store a trial bill.
Total Number of Columns:	29
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
BILL_CYC_CD	CHAR	No	''
WIN_START_DT	DATE	Yes	
ACCT_ID	CHAR	No	''
BILL_STAT_FLG	CHAR	No	''
BILL_DT	DATE	Yes	

Column Name	Data Type	Nullable (Yes or No)	Default Value
DUE_DT	DATE	Yes	
CRE_DTTM	DATE	Yes	
COMPLETE_DTTM	DATE	Yes	
LATE_PAY_CHARGE_SW	CHAR	No	''
LATE_PAY_CHARGE_DT	DATE	Yes	
ALLOW_REOPEN_SW	CHAR	No	''
VERSION	NUMBER	No	1
NEXT_CR_RVW_DT	DATE	Yes	
CR_NOTE_FR_BILL_ID	CHAR	No	''
ALT_BILL_ID	NUMBER	No	0
APAY_CRE_DT	DATE	Yes	
APAY_AMT	NUMBER	No	0
ARCHIVE_SW	CHAR	No	N
APAY_STOP_USER_ID	CHAR	No	''
APAY_STOP_DTTM	DATE	Yes	
APAY_STOP_AMT	NUMBER	No	0
APAY_STOP_CRE_DT	DATE	Yes	
ADHOC_BILL_SW	CHAR	No	N
GRP_REF_VAL	VARCHAR2	No	''
REAL_BILL_FLG	CHAR	No	N
BATCH_RUN_NBR	NUMBER	Yes	0
BILL_DESCR	VARCHAR2	Yes	
DELETE_BILL_SW	CHAR	No	N

Primary Key:

Key Type	Column Name
SINGLE	BILL_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	CR_NOTE_FR_BILL_ID
		BILL_ID
2.	NORMAL	ACCT_ID
3.	NORMAL	ALT_BILL_ID
		BILL_STAT_FLG

C.36 CI_TRL_BILL_CHAR

Purpose:	Used to store characteristics defined for a trial bill.
Total Number of Columns:	12
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
CHAR_TYPE_CD	CHAR	No	
SEQ_NUM	NUMBER	No	
VERSION	NUMBER	No	1
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
SRCH_CHAR_VAL	VARCHAR2	No	''

Primary Key:

Key Type	Column Name
SINGLE	SRCH_CHAR_VAL

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	SRCH_CHAR_VAL

C.37 CI_TRL_BILL_EXCP

Purpose:	Used to store exceptions generated while creating a trial bill.
Total Number of Columns:	22
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
USER_ID	CHAR	No	
MESSAGE_CAT_NBR	NUMBER	No	0
MESSAGE_NBR	NUMBER	No	0
BILL_EXCP_FLG	CHAR	No	''
EXP_MSG	VARCHAR2	No	''
MESSAGE_PARM1	VARCHAR2	No	''
MESSAGE_PARM2	VARCHAR2	No	''
MESSAGE_PARM3	VARCHAR2	No	''
MESSAGE_PARM4	VARCHAR2	No	''
MESSAGE_PARM5	VARCHAR2	No	''
MESSAGE_PARM6	VARCHAR2	No	''
MESSAGE_PARM7	VARCHAR2	No	''
MESSAGE_PARM8	VARCHAR2	No	''
MESSAGE_PARM9	VARCHAR2	No	''
CALL_SEQ	VARCHAR2	No	''
CRE_DTTM	DATE	Yes	
REVIEW_COMP	CHAR	No	''
REVIEW_DT	DATE	Yes	
VERSION	NUMBER	No	1

Column Name	Data Type	Nullable (Yes or No)	Default Value
REVIEW_USER_ID	CHAR	No	''
COMMENTS	VARCHAR2	No	''

Primary Key:

Key Type	Column Name
SINGLE	BILL_ID

C.38 CI_TRL_BILL_K

Purpose:	Used to generate trial bill ID.
Total Number of Columns:	2
Constraints:	XXT508P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
ENV_ID	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	ENV_ID

C.39 CI_TRL_BILL_LOG

Purpose:	Used to store trial bill logs.
Total Number of Columns:	19
Constraints:	XXT034P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
SEQ_NUM	NUMBER	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
USER_ID	VARCHAR2	No	
LOG_DTTM	DATE	No	
VERSION	NUMBER	No	1
DESCR	VARCHAR2	No	''
BO_STATUS_CD	CHAR	No	''
MESSAGE_CAT_NBR	NUMBER	No	0
MESSAGE_NBR	NUMBER	No	0
CHAR_TYPE_CD	CHAR	No	''
EFFDT	DATE	Yes	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
SRCH_CHAR_VAL	VARCHAR2	No	''

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	SEQ_NUM

C.40 CI_TRL_BILL_MSGS

Purpose:	Used to store trial bill messages.
Total Number of Columns:	3
Constraints:	SYS_C0065721

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
BILL_MSG_CD	CHAR	No	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	BILL_MSG_CD

C.41 CI_TRL_BILL_MSG_PRM

Purpose:	Used to store trial bill message parameters.
Total Number of Columns:	5
Constraints:	SYS_C0065722, SYS_C0065723, SYS_C0065724, SYS_C0065725, SYS_C0065726, SYS_C0065727

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
BILL_MSG_CD	CHAR	No	
SEQ_NUM	NUMBER	No	
MSG_PARM_VAL	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	BILL_MSG_CD
	SEQ_NUM

C.42 CI_TRL_BILL_ROUTING

Purpose:	Used to store trial bill routing information.
Total Number of Columns:	31
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
SEQNO	NUMBER	No	
PER_ID	CHAR	No	''
NBR_BILL_COPIES	NUMBER	No	0
BATCH_CD	CHAR	No	''
BILL_FORMAT_FLG	CHAR	No	''
CUST_PO_ID	VARCHAR2	No	''
ENTITY_NAME1	VARCHAR2	No	''
ENTITY_NAME2	VARCHAR2	No	''
ENTITY_NAME3	VARCHAR2	No	''
COUNTRY	CHAR	No	''
ADDRESS1	VARCHAR2	No	''
ADDRESS2	VARCHAR2	No	''
ADDRESS3	VARCHAR2	No	''
ADDRESS4	VARCHAR2	No	''
CITY	VARCHAR2	No	''
NUM1	CHAR	No	''
NUM2	CHAR	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
HOUSE_TYPE	CHAR	No	''
COUNTY	VARCHAR2	No	''
STATE	CHAR	No	''
POSTAL	CHAR	No	''
GEO_CODE	CHAR	No	''
IN_CITY_LIMIT	CHAR	No	''
BATCH_NBR	NUMBER	No	0
EXTRACT_DTTM	DATE	Yes	
REPRINT_SW	CHAR	No	''
NO_BATCH_PRT_SW	CHAR	No	''
BILL_PRT_INTERCEPT	CHAR	No	''
VERSION	NUMBER	No	1
BILL_RTE_TYPE_CD	CHAR	No	''

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	SEQNO

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	BATCH_CD
		BATCH_NBR
		BILL_ID
		NO_BATCH_PRT_SW

C.43 CI_TRL_BILL_SA

Purpose:	Used to store trial bill's contract balance information.
Total Number of Columns:	6
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ID	CHAR	No	
SA_ID	CHAR	No	
CUR_AMT	NUMBER	No	0
TOT_AMT	NUMBER	No	0
CURRENCY_CD	CHAR	No	' '
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BILL_ID
	SA_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	SA_ID

C.44 CI_TRL_BSCALC

Purpose:	Used to store trial bill segment header information.
Total Number of Columns:	11
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
HEADER_SEQ	NUMBER	No	
START_DT	DATE	No	
CURRENCY_CD	CHAR	No	
END_DT	DATE	No	
RS_CD	CHAR	No	
EFFDT	DATE	Yes	

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILLABLE_CHG_ID	CHAR	No	
CALC_AMT	NUMBER	No	
DESCR_ON_BILL	VARCHAR2	No	
VERSION	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	HEADER_SEQ
	BSEG_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	HEADER_SEQ
		BILLABLE_CHG_ID
		BSEG_ID
2.	NORMAL	BILLABLE_CHG_ID

C.45 CI_TRL_BSCALC_LN

Purpose:	Used to store trial bill segment calculation line information.
Total Number of Columns:	27
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
HEADER_SEQ	NUMBER	No	
SEQNO	NUMBER	No	
CHAR_TYPE_CD	CHAR	No	''
CURRENCY_CD	CHAR	No	''
CHAR_VAL	CHAR	No	''
DST_ID	CHAR	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
UOM_CD	CHAR	No	''
TOU_CD	CHAR	No	''
RC_SEQ	NUMBER	No	0
PRT_SW	CHAR	No	''
APP_IN_SUMM_SW	CHAR	No	''
CALC_AMT	NUMBER	No	0
EXEMPT_AMT	NUMBER	No	0
BASE_AMT	NUMBER	No	0
SQI_CD	CHAR	No	''
BILL_SEQ	NUMBER	No	0
MSR_PEAK_QTY_SW	CHAR	No	''
DESCR_ON_BILL	VARCHAR2	No	''
VERSION	NUMBER	No	0
PRIC_CCY_CD	CHAR	No	''
PRIC_AMT	NUMBER	No	0
EXCHRATE_ID	CHAR	No	''
EXCHRATE	NUMBER	Yes	
TOT_AGG_SEQ	NUMBER	No	0
PRICECOMP_ID	CHAR	No	''
VALUE_AMT	NUMBER	Yes	

Primary Key:

Key Type	Column Name
COMPOSITE	BSEG_ID
	HEADER_SEQ
	SEQNO

C.46 CI_TRL_BSCL_CHAR

Purpose:	Used to store characteristics defined for trial bill segment calculation line.
Total Number of Columns:	12

Constraints:	None
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Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
HEADER_SEQ	NUMBER	No	
SEQNO	NUMBER	No	
CHAR_TYPE_CD	CHAR	No	
CHAR_VAL	CHAR	No	''
ADHOC_CHAR_VAL	VARCHAR2	No	''
CHAR_VAL_FK1	VARCHAR2	No	''
CHAR_VAL_FK2	VARCHAR2	No	''
CHAR_VAL_FK3	VARCHAR2	No	''
CHAR_VAL_FK4	VARCHAR2	No	''
CHAR_VAL_FK5	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	HEADER_SEQ
	SEQNO
	CHAR_TYPE_CD
	BSEG_ID

C.47 CI_TRL_BSEG

Purpose:	Used to store a trial bill segment.
Total Number of Columns:	22
Constraints:	XXT508P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_CYC_CD	CHAR	No	''
WIN_START_DT	DATE	Yes	
CAN_RSN_CD	CHAR	No	''
CAN_BSEG_ID	CHAR	No	''
SA_ID	CHAR	No	''
BILL_ID	CHAR	No	''
START_DT	DATE	Yes	
END_DT	DATE	Yes	
EST_SW	CHAR	No	''
CLOSING_BSEG_SW	CHAR	No	''
SQ_OVERRIDE_SW	CHAR	No	''
ITEM_OVERRIDE_SW	CHAR	No	''
PREM_ID	CHAR	No	''
BSEG_STAT_FLG	CHAR	No	''
CRE_DTTM	DATE	Yes	
STAT_CHG_DTTM	DATE	Yes	
REBILL_SEG_ID	CHAR	No	''
VERSION	NUMBER	No	1
MASTER_BSEG_ID	CHAR	No	''
QUOTE_DTL_ID	CHAR	No	''
BILL_SCNR_ID	CHAR	No	''

Primary Key:

Key Type	Column Name
SINGLE	BSEG_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	BILL_ID
2.	NORMAL	SA_ID
3.	NORMAL	QUOTE_DTL_ID
4.	NORMAL	START_DT

5.	NORMAL	END_DT
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C.48 CI_TRL_BSEG_K

Purpose:	Used to generate trial bill segment ID.
Total Number of Columns:	2
Constraints:	XXT511P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
ENV_ID	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	BSEG_ID
	ENV_ID

C.49 CI_TRL_BSEXCP

Purpose:	Used to store exceptions occurred while generating trial bill segments.
Total Number of Columns:	22
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
MESSAGE_CAT_NBR	NUMBER	No	0
MESSAGE_NBR	NUMBER	No	0
BSEG_EXCP_FLG	CHAR	No	''
EXP_MSG	VARCHAR2	No	''
MESSAGE_PARM1	VARCHAR2	No	''
MESSAGE_PARM2	VARCHAR2	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
MESSAGE_PARM3	VARCHAR2	No	''
MESSAGE_PARM4	VARCHAR2	No	''
MESSAGE_PARM5	VARCHAR2	No	''
MESSAGE_PARM6	VARCHAR2	No	''
MESSAGE_PARM7	VARCHAR2	No	''
MESSAGE_PARM8	VARCHAR2	No	''
MESSAGE_PARM9	VARCHAR2	No	''
CALL_SEQ	VARCHAR2	No	''
USER_ID	CHAR	No	''
CRE_DTTM	DATE	Yes	
REVIEW_COMP	CHAR	No	''
REVIEW_USER_ID	CHAR	No	''
REVIEW_DT	DATE	Yes	
COMMENTS	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
SINGLE	BSEG_ID

C.50 CI_TRL_BSEXT

Purpose:	Used to store trial bill segment extension details.
Total Number of Columns:	12
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
CONSTRUCT_ID	CHAR	No	
PRIORITY_NUM	NUMBER	No	
TEMPLATE_PURPOSE_FLG	CHAR	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
VERSION_NUM	NUMBER	No	
USAGE_ACCT_ID	CHAR	No	
PRICEITEM_CD	CHAR	Yes	
TOU_CD	CHAR	Yes	
PRICE_ASGN_ID	CHAR	Yes	
PRICEITEM_PARM_GRP_ID	NUMBER	No	0
VERSION	NUMBER	No	1
BSEG_TYPE_FLG	CHAR	No	''

Primary Key:

Key Type	Column Name
SINGLE	BSEG_ID

C.51 CI_TRL_BSITEM

Purpose:	Used to store trial bill segment item information.
Total Number of Columns:	10
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
SEQNO	NUMBER	No	
ITEM_TYPE_CD	CHAR	No	''
ITEM_ID	CHAR	No	''
START_DT	DATE	No	
END_DT	DATE	No	
ITEM_CNT	NUMBER	No	0
UOM_CD	CHAR	No	''
SVC_QTY	NUMBER	No	0
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BSEG_ID
	SEQNO

C.52 CI_TRL_BSMSG

Purpose:	Used to store trial bill segment messages.
Total Number of Columns:	3
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
BILL_MSG_CD	CHAR	No	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BSEG_ID
	BILL_MSG_CD

C.53 CI_TRL_BSREAD

Purpose:	Used to store trial bill segment read details.
Total Number of Columns:	23
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
SP_ID	CHAR	No	
REG_CONST	NUMBER	No	0
SEQNO	NUMBER	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
USAGE_FLG	CHAR	No	''
USE_PCT	NUMBER	No	0
HOW_TO_USE_FLG	CHAR	No	''
MSR_PEAK_QTY_SW	CHAR	No	''
UOM_CD	CHAR	No	''
TOU_CD	CHAR	No	''
START_REG_READ_ID	CHAR	No	''
START_READ_DTTM	DATE	No	
START_REG_READING	NUMBER	No	0
END_REG_READ_ID	CHAR	No	''
END_READ_DTTM	DATE	No	
END_REG_READING	NUMBER	No	0
MSR_QTY	NUMBER	No	0
FINAL_UOM_CD	CHAR	No	''
FINAL_TOU_CD	CHAR	No	''
FINAL_REG_QTY	NUMBER	No	0
VERSION	NUMBER	No	1
SQI_CD	CHAR	No	''
FINAL_SQI_CD	CHAR	No	''

Primary Key:

Key Type	Column Name
COMPOSITE	BSEG_ID
	SP_ID
	SEQNO

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	SP_ID
2.	NORMAL	START_REG_READ_ID
3.	NORMAL	END_REG_READ_ID

C.54 CI_TRL_BSSQ

Purpose:	Used to store trial bill segment service quantity details.
Total Number of Columns:	7
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BSEG_ID	CHAR	No	
UOM_CD	CHAR	No	
TOU_CD	CHAR	No	
SQI_CD	CHAR	No	
INIT_SQ	NUMBER	No	0
BILL_SQ	NUMBER	No	0
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BSEG_ID
	UOM_CD
	TOU_CD
	SQI_CD

C.55 CI_TRL_FT

Purpose:	Used to store financial transactions created for trial bills.
Total Number of Columns:	29
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FT_ID	CHAR	No	
SIBLING_ID	CHAR	No	''
SA_ID	CHAR	No	''

Column Name	Data Type	Nullable (Yes or No)	Default Value
PARENT_ID	CHAR	No	''
GL_DIVISION	CHAR	No	''
CIS_DIVISION	CHAR	No	''
CURRENCY_CD	CHAR	No	''
FT_TYPE_FLG	CHAR	No	''
CUR_AMT	NUMBER	No	0
TOT_AMT	NUMBER	No	0
CRE_DTTM	DATE	No	
FREEZE_SW	CHAR	No	''
FREEZE_USER_ID	CHAR	No	''
FREEZE_DTTM	DATE	Yes	
ARS_DT	DATE	Yes	
CORRECTION_SW	CHAR	No	''
REDUNDANT_SW	CHAR	No	''
NEW_DEBIT_SW	CHAR	No	''
SHOW_ON_BILL_SW	CHAR	No	''
NOT_IN_ARS_SW	CHAR	No	''
BILL_ID	CHAR	No	''
ACCOUNTING_DT	DATE	Yes	
VERSION	NUMBER	No	0
XFERRED_OUT_SW	CHAR	No	''
XFER_TO_GL_DT	DATE	Yes	
GL_DISTRIB_STATUS	CHAR	No	''
SCHED_DISTRIB_DT	DATE	Yes	
BAL_CTL_GRP_ID	NUMBER	No	0
MATCH_EVT_ID	CHAR	No	''

Primary Key:

Key Type	Column Name
SINGLE	FT_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	SA_ID
		REDUNDANT_SW
2.	NORMAL	PARENT_ID
3.	NORMAL	BILL_ID
4.	NORMAL	SIBLING_ID
5.	NORMAL	MATCH_EVT_ID
6.	NORMAL	SA_ID

C.56 CI_TRL_FT_GL

Purpose:	Used to store trial bill financial transaction general ledger information.
Total Number of Columns:	15
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FT_ID	CHAR	No	
GL_SEQ_NBR	NUMBER	No	
DST_ID	CHAR	No	''
CHAR_TYPE_CD	CHAR	No	''
AMOUNT	NUMBER	No	0
CHAR_VAL	CHAR	No	''
TOT_AMT_SW	CHAR	No	''
VERSION	NUMBER	No	1
STATISTIC_AMOUNT	NUMBER	No	0
GL_ACCT	VARCHAR2	No	''
DIVISION_AMT	NUMBER	Yes	0
DIVISION_BASE_CCY	CHAR	Yes	''
EXCHRATE	NUMBER	Yes	0
VALIDATE_SW	CHAR	No	N
GLA_VAL_DT	DATE	Yes	

Primary Key:

Key Type	Column Name
COMPOSITE	FT_ID
	GL_SEQ_NBR

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	GL_ACCT
		FT_ID

C.57 CI_TRL_FT_K

Purpose:	Used to generate trial bill financial transaction ID.
Total Number of Columns:	2
Constraints:	XXT525P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FT_ID	CHAR	No	
ENV_ID	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	FT_ID
	ENV_ID

C.58 CI_TRL_FT_PROC

Purpose:	Used to store trial bill financial transaction process details.
Total Number of Columns:	7
Constraints:	XT988P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
FT_ID	CHAR	No	
SEQ_NUM	NUMBER	No	
BATCH_CD	CHAR	No	
BATCH_NBR	NUMBER	No	
SPR_CD	CHAR	No	
ADJ_ID	CHAR	No	
VERSION	NUMBER	No	

Primary Key:

Key Type	Column Name
COMPOSITE	SEQ_NUM
	FT_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	NORMAL	BATCH_CD
		BATCH_NBR

C.59 CI_TXN_DETAIL_EXCP

Purpose:	Used to store exceptions occurred during the transaction feed management process.
Total Number of Columns:	10
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TXN_DETAIL_ID	NUMBER	No	
SEQ_NO	NUMBER	No	0
CURR_SYS_PRCs_DT	DATE	No	
MESSAGE_NBR	NUMBER	No	0
MESSAGE_CAT_NBR	NUMBER	No	0
MESSAGE_PARM1	VARCHAR2	Yes	
MESSAGE_PARM2	VARCHAR2	Yes	
MESSAGE_PARM3	VARCHAR2	Yes	
MESSAGE_PARM4	VARCHAR2	Yes	

Primary Key: None

C.60 CI_TXN_SQL_FRAG_L

Purpose:	Used to store description of an SQL.
Total Number of Columns:	4
Constraints:	XF437P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
SQL_CD	CHAR	No	
LANGUAGE_CD	CHAR	No	
DESCR	VARCHAR2	No	''
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	SQL_CD
	LANGUAGE_CD

C.61 CI_UPLPAY_HSTG

Purpose:	Used to store information about the payment data file which is uploaded.
Total Number of Columns:	10
Constraints:	XF437P0

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_HSTG_ID	NUMBER	No	
CRE_DTTM	DATE	No	SYSDATE
USER_ID	CHAR	No	
FILE_NAME	VARCHAR2	No	
UPLD_FLTY_CD	CHAR	No	
FILE_STATUS_FLG	CHAR	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_OBJ_CD	CHAR	Yes	
BO_STATUS_CD	CHAR	Yes	
VERSION	NUMBER	No	1
BATCH_JOB_ID	CHAR	Yes	

Primary Key:

Key Type	Column Name
SINGLE	PAY_HSTG_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	PAY_HSTG_ID

C.62 CI_UPLPAY_STG

Purpose:	Used to store records of a payment data file.
Total Number of Columns:	25
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_HSTG_ID	NUMBER	No	
PAY_STG_ID	NUMBER	No	
ACCT_ID	CHAR	Yes	
ACCT_NBR_TYPE_CD	CHAR	Yes	
ACCT_NBR	VARCHAR2	Yes	
PAY_STG_STAT_FLG	CHAR	Yes	
BANK_ACCOUNT	CHAR	Yes	
MATCH_TYPE_CD	CHAR	Yes	
MATCH_VAL	VARCHAR2	Yes	
PAY_TENDER_ID	CHAR	Yes	
TENDER_AMT	NUMBER	Yes	

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_AMT	NUMBER	Yes	
TENDER_TYPE_CD	CHAR	Yes	
CHECK_NBR	CHAR	Yes	
NOTES	CHAR	Yes	
CURRENCY_CD	CHAR	Yes	
RECEIVE_DT	DATE	Yes	
BUS_OBJ_CD	CHAR	Yes	
BO_STATUS_CD	CHAR	Yes	
EXT_TRANSMIT_ID	CHAR	Yes	
EXT_BATCH_ID	CHAR	Yes	
EXT_REFERENCE_ID	CHAR	Yes	
VERSION	NUMBER	No	1
PAYOR_ACCT_ID	CHAR	Yes	
MICR_ID	VARCHAR2	Yes	

Primary Key:

Key Type	Column Name
SINGLE	PAY_STG_ID

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	PAY_STG_ID

C.63 CI_UPLPAY_STG_CHAR

Purpose:	Used to store characteristics defined for a payment.
Total Number of Columns:	13
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_STG_ID	NUMBER	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
CHAR_TYPE_CD	CHAR	No	
EFFDT	DATE	No	
ADHOC_CHAR_VAL	VARCHAR2	Yes	
CHAR_VAL	CHAR	Yes	
CHAR_VAL_FK1	VARCHAR2	Yes	
CHAR_VAL_FK2	VARCHAR2	Yes	
CHAR_VAL_FK3	VARCHAR2	Yes	
CHAR_VAL_FK4	VARCHAR2	Yes	
CHAR_VAL_FK5	VARCHAR2	Yes	
SRCH_CHAR_VAL	VARCHAR2	Yes	
SEQ_NUM	NUMBER	Yes	
VERSION	NUMBER	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	PAY_STG_ID
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Type	Column Name
1.	UNIQUE	PAY_STG_ID
		CHAR_TYPE_CD
		EFFDT

C.64 CI_UPLPAY_STG_ERR

Purpose:	Used to store errors that occurred while uploading a payment record.
Total Number of Columns:	14
Constraints:	None

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_STG_ID	NUMBER	No	
SEQ_NUM	NUMBER	No	
MESSAGE_CAT_NBR	NUMBER	Yes	0
MESSAGE_NBR	NUMBER	Yes	0
EXP_MSG	VARCHAR2	Yes	
MESSAGE_PARM1	VARCHAR2	Yes	
MESSAGE_PARM2	VARCHAR2	Yes	
MESSAGE_PARM3	VARCHAR2	Yes	
MESSAGE_PARM4	VARCHAR2	Yes	
MESSAGE_PARM5	VARCHAR2	Yes	
USER_ID	CHAR	Yes	
CRE_DTTM	DATE	Yes	
VERSION	NUMBER	No	1
COLUMN_NAME	VARCHAR2	Yes	

Primary Key:

Key Type	Column Name
COMPOSITE	PAY_STG_ID
	SEQ_NUM

Appendix D : Existing Tables Modified in V2.4.0.0.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 2.4.0.0.0. It also indicates the columns that are newly added, dropped or modified in these tables.

D.1 CI_ACCT

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	TRIAL_BILL_SW	Newly Added	-	CHAR(1)	No	-
2.	ACCT_USAGE_FLG	Newly Added	-	CHAR(4)	No	-

D.2 CI_ACCT_APAY

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	APAY_RTE_TYPE_CD	Newly Added	-	CHAR(10)	Yes	The column value is set to the value defined in the APAY_RTE_TYPE_CD column of the CI_APAY_SRC table.

D.3 CI_ADJ

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BILL_ID	Newly Added	-	CHAR(12)	No	-
2.	BSEG_ID	Newly Added	-	CHAR(12)	No	-
3.	EXCHRATE	Newly Added	-	NUMBER	No	-
4.	EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
5.	ORIG_ADJ_AMT	Newly Added	-	NUMBER	No	-
6.	ORIG_ADJ_CCY_CD	Newly Added	-	CHAR(3)	No	-

D.4 CI_ADJ_TYPE

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	INFLNC_BILL_BAL	Newly Added	-	CHAR(1)	No	-

D.5 CI_APPTXN_BOCHAIN_CRIT

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OPERATOR_FLG	Newly Added	-	CHAR(4)	No	-
2.	APP_CRITERION_VAL	Increased Column Length	CHAR(10)	VARCHAR2(50)	No	-

D.6 CI_APPTXN_CRIT_TYPE

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ALG_CD	Newly Added	-	CHAR(12)	No	-
2.	CRITERIA_TYPE_FLG	Newly Added	-	CHAR(4)	No	-

D.7 CI_APPTXN_GROUP_BO

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	FK1_REF	Newly Added	-	VARCHAR2(30)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
2.	FK2_REF	Newly Added	-	VARCHAR2(30)	No	-
3.	FK3_REF	Newly Added	-	VARCHAR2(30)	No	-
4.	FK4_REF	Newly Added	-	VARCHAR2(30)	No	-
5.	FK5_REF	Newly Added	-	VARCHAR2(30)	No	-
6.	FK6_REF	Newly Added	-	VARCHAR2(30)	No	-

D.8 CI_APPTXN_ITEM

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	FK6	Newly Added	-	VARCHAR2(1000)	No	-
2.	EXTERNAL_REF_ID1	Increased Column Length	CHAR(50)	VARCHAR2(1000)	No	-
3.	EXTERNAL_REF_ID2	Increased Column Length	CHAR(50)	VARCHAR2(1000)	No	-
4.	EXTERNAL_REF_ID3	Increased Column Length	CHAR(50)	VARCHAR2(1000)	No	-
5.	EXTERNAL_REF_ID4	Increased Column Length	CHAR(50)	VARCHAR2(1000)	No	-
6.	FK1	Increased Column Length	VARCHAR2(30)	VARCHAR2(1000)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
7.	FK2	Increased Column Length	VARCHAR2 (30)	VARCHAR2(1000)	No	-
8.	FK3	Increased Column Length	VARCHAR2 (30)	VARCHAR2(1000)	No	-
9.	FK4	Increased Column Length	VARCHAR2 (30)	VARCHAR2(1000)	No	-
10.	FK5	Increased Column Length	VARCHAR2 (30)	VARCHAR2(1000)	No	-

D.9 CI_BCHG_HSTG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	FILE_GRP_STAT_FLG	Newly Added	-	CHAR(4)	Yes	If the BILLTYPE_SW is set to ADB (i.e. adhoc billing), then the column value is set to CLSD . And, if BILLTYPE_SW is set to RLB (i.e. regular billing), then the column value is set to OPEN .
2.	FLGRP_CD	Newly Added	-	CHAR(8)	Yes	The column value is set to the value defined in the FLGRP_CD column of the CI_FILE_GROUP table.

D.10 CI_BCHG_STG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	FILE_NAME	Newly Added	-	CHAR(60)	Yes	The column value is set to the value defined in the FILE_NAME column of the CI_BCHG_HSTG table.
3.	BATCH_CD	Newly Added	-	CHAR(8)	No	-
4.	BATCH_NBR	Newly Added	-	NUMBER	No	-
5.	UPLD_FLTY_CD	Newly Added	-	CHAR(8)	Yes	The column value is set to the value defined in the UPLD_FLTY_CD column of the CI_BCHG_HSTG table.

D.11 CI_BILL

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	TD_ENTRY_ID	Newly Added	-	CHAR(14)	No	-
2.	TRIAL_BILL_ID	Newly Added	-	CHAR(12)	No	-

D.12 CI_BSEG_CALC_LN

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EXCHRATE	Newly Added	-	NUMBER	No	-
2.	EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
3.	PRICECOMP_ID	Newly Added	-	CHAR(10)	No	-
4.	PRIC_AMT	Newly Added	-	NUMBER	No	-
5.	PRIC_CCY_CD	Newly Added	-	CHAR(3)	No	-
6.	TOT_AGG_SQ	Newly Added	-	NUMBER	No	-
7.	VALUE_AMT	Newly Added	-	NUMBER	No	-
8.	PRICEITEM_PARM_GRP_ID	Dropped	NUMBER	-	-	-

D.13 CI_CC

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DESCRLONG	Newly Added	-	VARCHAR2 (4000)	Yes	The column value is set to the value defined in the DESCR254 column of the CI_CC table.
2.	DESCR254	Dropped	VARCHAR2 (254)	-	-	-

D.14 CI_CIS_DIV_INV_CUR

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	RND_TYPE_FLG	Newly Added	-	CHAR(4)	No	-

D.15 CI_DST_CODE_EFF

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	GLA_VAL_DT	Newly Added	-	DATE	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
2.	VALIDATE_SW	Newly Added	-	CHAR(1)	No	-

D.16 CI_FT

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PRSN_BILL_ID	Newly Added	-	CHAR(12)	No	-

D.17 CI_FT_GL

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	VALIDATE_SW	Newly Added	-	CHAR(1)	No	-
2.	GLA_VAL_DT	Newly Added	-	DATE	No	-

D.18 CI_MATCH_TYPE

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
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Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MANL_DIST_ALG	Newly Added	-	CHAR(12)	No	-
2.	MATCH_TYPE_ENTITY_FLG	Newly Added	-	CHAR(4)	No	-
3.	MATCH_TYPE_ENTITY_TYPE	Newly Added	-	CHAR(4)	No	-
4.	MATCH_TYPE_SRCH_ZONE	Newly Added	-	CHAR(12)	No	-

D.19 CI_PAY_TNDR

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EXCHRATE	Newly Added	-	NUMBER	No	-
2.	EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
3.	ORIG_TNDR_AMT	Newly Added	-	NUMBER	No	-
4.	ORIG_TNDR_CCY_CD	Newly Added	-	CHAR(3)	No	-

D.20 CI_POLICY_LOG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BO_STATUS_REASON_CD	Newly Added	-	VARCHAR2 (30)	No	-

D.21 CI_POLICY_PER

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MAIN_CUST_SW	Newly Added	-	CHAR(1)	No	-
2.	MAIN_SUBS_FLG	Dropped	CHAR(4)	-	-	-

D.22 CI_RC

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ALLOW_CURR_CONV	Newly Added	-	CHAR(1)	Yes	The column value is set to the value defined in the CHAR_VAL column of the CI_RC_CHAR table. Note: The characteristic type is determined through RC Conversion Characteristic Type option type of the C1_EX_ROUND feature configuration.

D.23 CI_TXN_DETAIL

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	UDF_CHAR_26	Newly Added	-	VARCHAR2 (60)	No	-
2.	UDF_CHAR_27	Newly Added	-	VARCHAR2 (60)	No	-
3.	UDF_CHAR_28	Newly Added	-	VARCHAR2 (60)	No	-
4.	UDF_CHAR_29	Newly Added	-	VARCHAR2 (60)	No	-
5.	UDF_CHAR_30	Newly Added	-	VARCHAR2 (60)	No	-
6.	UDF_CHAR_31	Newly Added	-	VARCHAR2 (60)	No	-
7.	UDF_CHAR_32	Newly Added	-	VARCHAR2 (60)	No	-
8.	UDF_CHAR_33	Newly Added	-	VARCHAR2 (60)	No	-
9.	UDF_CHAR_34	Newly Added	-	VARCHAR2 (60)	No	-
10.	UDF_CHAR_35	Newly Added	-	VARCHAR2 (60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
11.	UDF_CHAR_36	Newly Added	-	VARCHAR2 (60)	No	-
12.	UDF_CHAR_37	Newly Added	-	VARCHAR2 (60)	No	-
13.	UDF_CHAR_38	Newly Added	-	VARCHAR2 (60)	No	-
14.	UDF_CHAR_39	Newly Added	-	VARCHAR2 (60)	No	-
15.	UDF_CHAR_40	Newly Added	-	VARCHAR2 (60)	No	-
16.	UDF_CHAR_41	Newly Added	-	VARCHAR2 (60)	No	-
17.	UDF_CHAR_42	Newly Added	-	VARCHAR2 (60)	No	-
18.	UDF_CHAR_43	Newly Added	-	VARCHAR2 (60)	No	-
19.	UDF_CHAR_44	Newly Added	-	VARCHAR2 (60)	No	-
20.	UDF_CHAR_45	Newly Added	-	VARCHAR2 (60)	No	-
21.	UDF_CHAR_46	Newly Added	-	VARCHAR2 (60)	No	-
22.	UDF_CHAR_47	Newly Added	-	VARCHAR2 (60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
23.	UDF_CHAR_48	Newly Added	-	VARCHAR2 (60)	No	-
24.	UDF_CHAR_49	Newly Added	-	VARCHAR2 (60)	No	-
25.	UDF_CHAR_50	Newly Added	-	VARCHAR2 (60)	No	-

D.24 CI_TXN_DETAIL_STG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	UDF_CHAR_26	Newly Added	-	VARCHAR2 (60)	No	-
2.	UDF_CHAR_27	Newly Added	-	VARCHAR2 (60)	No	-
3.	UDF_CHAR_28	Newly Added	-	VARCHAR2 (60)	No	-
4.	UDF_CHAR_29	Newly Added	-	VARCHAR2 (60)	No	-
5.	UDF_CHAR_30	Newly Added	-	VARCHAR2 (60)	No	-
6.	UDF_CHAR_31	Newly Added	-	VARCHAR2 (60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
7.	UDF_CHAR_32	Newly Added	-	VARCHAR2 (60)	No	-
8.	UDF_CHAR_33	Newly Added	-	VARCHAR2 (60)	No	-
9.	UDF_CHAR_34	Newly Added	-	VARCHAR2 (60)	No	-
10.	UDF_CHAR_35	Newly Added	-	VARCHAR2 (60)	No	-
11.	UDF_CHAR_36	Newly Added	-	VARCHAR2 (60)	No	-
12.	UDF_CHAR_37	Newly Added	-	VARCHAR2 (60)	No	-
13.	UDF_CHAR_38	Newly Added	-	VARCHAR2 (60)	No	-
14.	UDF_CHAR_39	Newly Added	-	VARCHAR2 (60)	No	-
15.	UDF_CHAR_40	Newly Added	-	VARCHAR2 (60)	No	-
16.	UDF_CHAR_41	Newly Added	-	VARCHAR2 (60)	No	-
17.	UDF_CHAR_42	Newly Added	-	VARCHAR2 (60)	No	-
18.	UDF_CHAR_43	Newly Added	-	VARCHAR2 (60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
19.	UDF_CHAR_44	Newly Added	-	VARCHAR2 (60)	No	-
20.	UDF_CHAR_45	Newly Added	-	VARCHAR2 (60)	No	-
21.	UDF_CHAR_46	Newly Added	-	VARCHAR2 (60)	No	-
22.	UDF_CHAR_47	Newly Added	-	VARCHAR2 (60)	No	-
23.	UDF_CHAR_48	Newly Added	-	VARCHAR2 (60)	No	-
24.	UDF_CHAR_49	Newly Added	-	VARCHAR2 (60)	No	-
25.	UDF_CHAR_50	Newly Added	-	VARCHAR2 (60)	No	-

D.25 CI_TXN_DISAGG_REQ

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PRICE_ASGN_ID	Newly Added	-	CHAR(10)	No	-
2.	REF_PRICING_STATUS_NBR	Newly Added	-	NUMBER	No	-
3.	RULE_CD	Newly Added	-	CHAR(12)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
4.	RULE_TYPE_CD	Newly Added	-	CHAR(12)	No	-
5.	SQI_CD	Newly Added	-	CHAR(8)	No	-

D.26 CI_TXN_DTL_PRITM

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CURRENCY_CD	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the CURRENCY_CD column of the CI_TXN_DETAIL table.
2.	TXN_AMT	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the TXN_AMT column of the CI_TXN_DETAIL table.
3.	TXN_VOL	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the TXN_VOL column of the CI_TXN_DETAIL table.
4.	UDF_AMT_1	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_1 column of the CI_TXN_DETAIL table.
5.	UDF_AMT_2	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_2 column of the CI_TXN_DETAIL table.

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
6.	UDF_AMT_3	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_3 column of the CI_TXN_DETAIL table.
7.	UDF_AMT_4	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_4 column of the CI_TXN_DETAIL table.
8.	UDF_AMT_5	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_5 column of the CI_TXN_DETAIL table.
9.	UDF_CURRENCY_CD_1	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_1 column of the CI_TXN_DETAIL table.
10.	UDF_CURRENCY_CD_2	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_2 column of the CI_TXN_DETAIL table.
11.	UDF_CURRENCY_CD_3	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_3 column of the CI_TXN_DETAIL table.
12.	UDF_CURRENCY_CD_4	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_4 column of the CI_TXN_DETAIL table.
13.	UDF_CURRENCY_CD_5	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_5 column of the CI_TXN_DETAIL table.

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
14.	UDF_NBR_1	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_1 column of the CI_TXN_DETAIL table.
15.	UDF_NBR_2	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_2 column of the CI_TXN_DETAIL table.
16.	UDF_NBR_3	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_3 column of the CI_TXN_DETAIL table.
17.	UDF_NBR_4	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_4 column of the CI_TXN_DETAIL table.
18.	UDF_NBR_5	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_5 column of the CI_TXN_DETAIL table.
19.	UDF_NBR_6	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_6 column of the CI_TXN_DETAIL table.
20.	UDF_NBR_7	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_7 column of the CI_TXN_DETAIL table.
21.	UDF_NBR_8	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_8 column of the CI_TXN_DETAIL table.

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
22.	UDF_NBR_9	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_9 column of the CI_TXN_DETAIL table.
23.	UDF_NBR_10	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_10 column of the CI_TXN_DETAIL table.

D.27 CI_TXN_DTL_PRITM_STG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CURRENCY_CD	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the CURRENCY_CD column of the CI_TXN_DETAIL_STG table.
2.	TXN_AMT	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the TXN_AMT column of the CI_TXN_DETAIL_STG table.
3.	TXN_VOL	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the TXN_VOL column of the CI_TXN_DETAIL_STG table.
4.	UDF_AMT_1	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_1 column of the CI_TXN_DETAIL_STG table.

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	UDF_AMT_2	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_2 column of the CI_TXN_DETAIL_STG table.
6.	UDF_AMT_3	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_3 column of the CI_TXN_DETAIL_STG table.
7.	UDF_AMT_4	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_4 column of the CI_TXN_DETAIL_STG table.
8.	UDF_AMT_5	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_AMT_5 column of the CI_TXN_DETAIL_STG table.
9.	UDF_CURRENCY_CD_1	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_1 column of the CI_TXN_DETAIL_STG table.
10.	UDF_CURRENCY_CD_2	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_2 column of the CI_TXN_DETAIL_STG table.
11.	UDF_CURRENCY_CD_3	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_3 column of the CI_TXN_DETAIL_STG table.

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
12.	UDF_CURRENCY_CD_4	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_4 column of the CI_TXN_DETAIL_STG table.
13.	UDF_CURRENCY_CD_5	Newly Added	-	CHAR(3)	Yes	The column value is set to the value defined in the UDF_CURRENCY_CD_5 column of the CI_TXN_DETAIL_STG table.
14.	UDF_NBR_1	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_1 column of the CI_TXN_DETAIL_STG table.
15.	UDF_NBR_2	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_2 column of the CI_TXN_DETAIL_STG table.
16.	UDF_NBR_3	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_3 column of the CI_TXN_DETAIL_STG table.
17.	UDF_NBR_4	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_4 column of the CI_TXN_DETAIL_STG table.
18.	UDF_NBR_5	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_5 column of the CI_TXN_DETAIL_STG table.
19.	UDF_NBR_6	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_6 column of the CI_TXN_DETAIL_STG table.

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
20.	UDF_NBR_7	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_7 column of the CI_TXN_DETAIL_STG table.
21.	UDF_NBR_8	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_8 column of the CI_TXN_DETAIL_STG table.
22.	UDF_NBR_9	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_9 column of the CI_TXN_DETAIL_STG table.
23.	UDF_NBR_10	Newly Added	-	NUMBER	Yes	The column value is set to the value defined in the UDF_NBR_10 column of the CI_TXN_DETAIL_STG table.

D.28 CI_TXN_DTL_PRITM_SUMMARY

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BCHG_END_DT	Newly Added	-	DATE	No	-
2.	BCHG_START_DT	Newly Added	-	DATE	No	-
3.	DER_DIVISION	Newly Added	-	CHAR(5)	No	-
4.	FIN_PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
5.	INIT_PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
6.	TOU_CD	Newly Added	-	CHAR(8)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
7.	TXN_MMYYYY	Dropped	DATE	-	-	-
8.	AGG_FREQ	Dropped	VARCHAR2 (1)	-	-	-
9.	TXN_END_DT	Dropped	DATE	-	-	-
10.	FINAL_PRICE_ITEM_CD	Dropped	CHAR(30)	-	-	-
11.	INTIAL_TOU_CD	Dropped	CHAR(8)	-	-	-
12.	INITIAL_PRICE_ITEM_CD	Dropped	CHAR(30)	-	-	-
13.	CIS_DIVISION	Dropped	CHAR(5)	-	-	-
14.	FINAL_TOU_CD	Dropped	CHAR(8)	-	-	-

D.29 CI_TXN_REC_TYPE_L

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	UDF_CHAR_26_DESC	Newly Added	-	VARCHAR2 (60)	No	-
2.	UDF_CHAR_27_DESC	Newly Added	-	VARCHAR2 (60)	No	-
3.	UDF_CHAR_28_DESC	Newly Added	-	VARCHAR2 (60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
4.	UDF_CHAR_29_DESC	Newly Added	-	VARCHAR2 (60)	No	-
5.	UDF_CHAR_30_DESC	Newly Added	-	VARCHAR2 (60)	No	-
6.	UDF_CHAR_31_DESC	Newly Added	-	VARCHAR2 (60)	No	-
7.	UDF_CHAR_32_DESC	Newly Added	-	VARCHAR2 (60)	No	-
8.	UDF_CHAR_33_DESC	Newly Added	-	VARCHAR2 (60)	No	-
9.	UDF_CHAR_34_DESC	Newly Added	-	VARCHAR2 (60)	No	-
10.	UDF_CHAR_35_DESC	Newly Added	-	VARCHAR2 (60)	No	-
11.	UDF_CHAR_36_DESC	Newly Added	-	VARCHAR2 (60)	No	-
12.	UDF_CHAR_37_DESC	Newly Added	-	VARCHAR2 (60)	No	-
13.	UDF_CHAR_38_DESC	Newly Added	-	VARCHAR2 (60)	No	-
14.	UDF_CHAR_39_DESC	Newly Added	-	VARCHAR2 (60)	No	-
15.	UDF_CHAR_40_DESC	Newly Added	-	VARCHAR2 (60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
16.	UDF_CHAR_41_DESC	Newly Added	-	VARCHAR2 (60)	No	-
17.	UDF_CHAR_42_DESC	Newly Added	-	VARCHAR2 (60)	No	-
18.	UDF_CHAR_43_DESC	Newly Added	-	VARCHAR2 (60)	No	-
19.	UDF_CHAR_44_DESC	Newly Added	-	VARCHAR2 (60)	No	-
20.	UDF_CHAR_45_DESC	Newly Added	-	VARCHAR2 (60)	No	-
21.	UDF_CHAR_46_DESC	Newly Added	-	VARCHAR2 (60)	No	-
22.	UDF_CHAR_47_DESC	Newly Added	-	VARCHAR2 (60)	No	-
23.	UDF_CHAR_48_DESC	Newly Added	-	VARCHAR2 (60)	No	-
24.	UDF_CHAR_49_DESC	Newly Added	-	VARCHAR2 (60)	No	-
25.	UDF_CHAR_50_DESC	Newly Added	-	VARCHAR2 (60)	No	-

D.30 CI_TXN_SQI_FRAG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	VERSION	Newly Added	-	NUMBER	No	-

D.31 CI_UPLD_FLTM

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	EXTRACT_ALG_CD	Newly Added	-	CHAR(12)	No	-

D.32 CI_POLICY

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	POLICY_STATUS_FLG	Dropped	CHAR(4)	-	-	-
2.	POLICY_TYPE_FLG	Dropped	CHAR(4)	-	-	-
3.	LOB_FLG	Dropped	CHAR(4)	-	-	-
4.	POLICY_CAN_RSN_CD	Dropped	CHAR(12)	-	-	-

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	CANCEL_METHOD_FLG	Dropped	CHAR(4)	-	-	-
6.	CANCEL_TYPE_FLG	Dropped	CHAR(4)	-	-	-
7.	POLICY_TERM	Dropped	VARCHAR2(10)	-	-	-
8.	POLICY_REINST_RSN_CD	Dropped	CHAR(12)	-	-	-
9.	REINST_TYPE_FLG	Dropped	CHAR(4)	-	-	-
10.	POLICY_START_DT	Dropped	DATE	-	-	-
11.	POLICY_END_DT	Dropped	DATE	-	-	-
12.	POLICY_DESC	Dropped	VARCHAR2(60)	-	-	-
13.	POLICY_RENEWAL_DT	Dropped	DATE	-	-	-
14.	SRC	Dropped	VARCHAR2(50)	-	-	-
15.	NET_COMP_INDICATOR_SW	Dropped	CHAR(1)	-	-	-
16.	POLICY_NBR_UPR	Increased Column Length	VARCHAR2(30)	VARCHAR2(64)	No	-

D.33 CI_TXN_BCHG

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

Sr. No.	Column Name	Modification Type	Data Type in V2.3.0.2.0	Data Type in V2.4.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	FINAL_PRICE_ITEM_CD	Increased Column Length	CHAR(10)	CHAR(30)	No	-

Appendix E : Algorithms and Algorithm Types Dropped in V2.4.0.0.0

This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.4.0.0.0.

E.1 Algorithm Type

The following table lists the algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.4.0.0.0:

Algorithm Type	Description
C1-MULTIB	Create FT GL Extension Records in Division Currcy
C1-SATPBLPPS	SA Type- Bill Post Processing - FTGL Ext Create
C1_MDEFFSCR	Modify Effective Pricing Screen
C1_PLASN_ADD	Price list Assignment –Add
C1_PLASSIGN	Assign Price List To Party (Java Pre-Processing)
C1_PRICCMPFV	Price Component Field Validations
C1_PSBLEX	PeopleSoft Bill Extract Algorithm Type
FTFREZBSEG	FT Freeze - FT GL Ext Creation for Bill Segment
FTFREZFTGLEX	FT Freeze - FT GL Ext Creation for Adj and Payment and Bill Segment Cancellation

E.2 Algorithm

The following table lists the algorithms which are dropped in Oracle Revenue Management and Billing Version 2.4.0.0.0:

Algorithm	Description
C1-BCGENA	Billable Charge Generation Algorithm
C1-SATPBLPPS	SA Type- Bill Post Processing - FTGL Ext Create
C1_PLASN_ADD	Price list Assignment –Add
C1_PLASSIGN	Assign Price List To Party (Java Pre-Processing)
C1_PRICCMPFV	Price Component Blank Field Validation
C1_RATEVALUE	Rate Component Value (Included price comp Id)
C1_RATE_STEP	Rate Component Step

Algorithm	Description
FTFREZBSEG	FT Freeze - FT GL Ext Creation for Bill segment
FTFREZFTGLEX	FT Freeze - FT GL Ext Creation for Adj and Payment and Bill Segment Cancellation
WRITE DWN	Write down small underpayments

Appendix F : Parameters Added or Removed from Algorithm Types in V2.4.0.0.0

The following table lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 2.4.0.0.0:

Algorithm Type	Parameters (Removed from 2.4.0.0.0)	Parameters (Added in 2.4.0.0.0)
BS-CRE-PRICE	Currency Conversion Algorithm, Characteristic Type for Original Pricing Amount, Characteristic Type for Pricing Currency Code, Characteristic Type for ExchangeRate	Characteristic Type to pass Trial Bill ID
C1-BILLSEG	-	Characteristic Type to pass Trial Bill ID
C1-GENBSEGPA	Currency Conversion Algorithm	-
C1-PDOV-WTBS	How to handle overpayments (D/O)	-
RV-PP-PRICE	-	Characteristic Type for Trial Billing

Appendix G : SQL Statements for 2.3.0.2.0 to 2.4.0.0.0 Data Migration

This section describes the following SQL queries which are used for migrating data from Oracle Revenue Management and Billing Version 2.3.0.2.0 to 2.4.0.0.0:

- Pre_BlueprintScript.sql
- Post_BlueprintScript.sql

G.1 Pre_BlueprintScript.sql

The Pre_BlueprintScript.sql query does the following:

- Drops the PRICEITEM_PARM_GRP_ID column of the CI_BSEG_CALC_LN table
- Creates the following tables:
 - CI_POLICY_BKP
 - CI_POLICY_K_BKP
 - CI_POLICY_PER_BKP
 - CI_POLICY_PER_CHAR_BKP
 - CI_POLICY_CHAR_BKP
 - CI_POLICY_LOG_BKP
 - CI_POLICY_LOG_PARM_BKP
 - CI_SA_BKP
- Migrates data from the CI_POLICY table to the CI_POLICY_BKP table
- Migrates data from the CI_POLICY_K table to the CI_POLICY_K_BKP table
- Migrates data from the CI_POLICY_PER table to the CI_POLICY_PER_BKP table
- Migrates data from the CI_POLICY_PER_CHAR table to the CI_POLICY_PER_CHAR_BKP table
- Migrates data from the CI_POLICY_CHAR table to the CI_POLICY_CHAR_BKP table
- Migrates data from the CI_POLICY_LOG table to the CI_POLICY_LOG_BKP table
- Migrates data from the CI_POLICY_LOG_PARM table to the CI_POLICY_LOG_PARM_BKP table
- Migrates data from the CI_SA table to the CI_SA_BKP table
- Set the value of the POLICY_ID column corresponding to each contract in the CI_SA table to NULL
- Deletes data from the following tables:
 - CI_POLICY
 - CI_POLICY_K
 - CI_POLICY_PER
 - CI_POLICY_PER_CHAR
 - CI_POLICY_CHAR
 - CI_POLICY_LOG

- CI_POLICY_LOG_PARM

G.2 Post_BlueprintScript.sql

The Post_BlueprintScript.sql query does the following:

- Updates the values of the following columns in the respective table:

Table Name	Column Name	Column Value After Data Migration
CI_ACCT_APAY	APAY_RTE_TYPE_CD	The column value is set to the value defined in the APAY_RTE_TYPE_CD column of the CI_APAY_SRC table.
CI_RC	ALLOW_CURR_CONV	The column value is set to the value defined in the CHAR_VAL column of the CI_RC_CHAR table. Note: The characteristic type is determined through RC Conversion Characteristic Type option type of the C1_EX_ROUND feature configuration.
CI_FILE_GROUP	FLGRP_CD	One file group is assigned to each file where billing method is set to Adhoc Billing. The value of the FLGRP_CD column is set to Fn where n stands for the numerical value. For example, if there are 5 files where billing method is set to Adhoc Billing, the query will create 5 file groups (i.e. F1, F2, F3, F4, and F5) and assign one file group to each file. However, if the billing method in a file is set to Regular Billing, all such files belong to one file group and the value of the FLGRP_CD column is set to FGP_RLB.
	BILLTYPE_SW	The column value is set to the value defined in the BILLTYPE_SW column of the CI_BCHG_HSTG table.
	BILL_AFTER_DT	The column value is set to the value defined in the BILL_AFTER_DT column of the CI_BCHG_HSTG table.
	CREATED_BY	The column value is set to the value defined in the USER_ID column of the CI_BCHG_HSTG table.
	BO_STATUS_CD	The column value is set to NULL.
	BUS_OBJ_CD	The column value is set to NULL.

Table Name	Column Name	Column Value After Data Migration
	VERSION	The column value is set to 1.
	FILE_GRP_STAT_FLG	If the BILLTYPE_SW is set to ADB (i.e. adhoc billing), then the column value is set to CLSD . And, if BILLTYPE_SW is set to RLB (i.e. regular billing), then the column value is set to OPEN .
	USAGE_START_DATE	The column value is set to the value defined in the USAGE_START_DATE column of the CI_BCHG_HSTG table.
	USAGE_END_DATE	The column value is set to the value defined in the USAGE_END_DATE column of the CI_BCHG_HSTG table.
	CREATE_DT	The column value is set to the current date.
CI_FILE_GROUP_L	FLGRP_CD	The column value is set to the value defined in the FLGRP_CD column of the CI_FILE_GROUP table.
	LANGUAGE_CD	The column value is set to ENG.
	VERSION	The column value is set to 1.
	DESCR	If the FLGRP_CD is set to FGP_RLB , then the column value is set to File Group for Regular billing . And, if the FLGRP_CD is set to Fn, then the column value is set to FLGRP_CD.
CI_FILEGROUP_DIVISION	FLGRP_CD	The column value is set to the value defined in the FLGRP_CD column of the CI_FILE_GROUP table.
	CIS_DIVISION	The column value is set to the value defined in the CIS_DIVISION column of the CI_BCHG_STG table.
CI_FILETYPE_DIVISION	UPLD_FLTY_CD	The column value is set to the value defined in the UPLD_FLTY_CD column of the CI_BCHG_STG table.
	CIS_DIVISION	The column value is set to the value defined in the CIS_DIVISION column of the CI_BCHG_STG table.
CI_FILETYPE_MAPPING	UPLD_FLTY_CD	The column value is set to the value defined in the UPLD_FLTY_CD column of the CI_BCHG_STG table.
	FEED_FOR_FLG	The column value is set to USDT.

Table Name	Column Name	Column Value After Data Migration
	BASE_LABEL	The column value is set to the value defined in the BASE_LABEL column of the CI_FEEDTYPE_LABEL table.
	CUSTOM_LABEL	The column value is set to NULL.
	TBL_NAME	The column value is set to NULL.
	FLD_NAME	The column value is set to NULL.
CI_BCHG_STG	FILE_NAME	The column value is set to the value defined in the FILE_NAME column of the CI_BCHG_HSTG table.
	UPLD_FLTY_CD	The column value is set to the value defined in the UPLD_FLTY_CD column of the CI_BCHG_HSTG table.
	CRE_DTTM	The column value is set to the value defined in the CRE_DTTM column of the CI_BCHG_HSTG table.
CI_BCHG_HSTG	FLGRP_CD	The column value is set to the value defined in the FLGRP_CD column of the CI_FILE_GROUP table.
	FILE_GRP_STAT_FLG	If the BILLTYPE_SW is set to ADB (i.e. adhoc billing), then the column value is set to CLSD . And, if BILLTYPE_SW is set to RLB (i.e. regular billing), then the column value is set to OPEN .
CI_TXN_DTL_PRITM_STG	TXN_VOL	The column value is set to the value defined in the TXN_VOL column of the CI_TXN_DETAIL_STG table.
	TXN_AMT	The column value is set to the value defined in the TXN_AMT column of the CI_TXN_DETAIL_STG table.
	CURRENCY_CD	The column value is set to the value defined in the CURRENCY_CD column of the CI_TXN_DETAIL_STG table.
	UDF_AMT_1	The column value is set to the value defined in the UDF_AMT_1 column of the CI_TXN_DETAIL_STG table.
	UDF_CURRENCY_CD_1	The column value is set to the value defined in the UDF_CURRENCY_CD_1 column of the CI_TXN_DETAIL_STG table.

Table Name	Column Name	Column Value After Data Migration
	UDF_AMT_2	The column value is set to the value defined in the UDF_AMT_2 column of the CI_TXN_DETAIL_STG table.
	UDF_CURRENCY_CD_2	The column value is set to the value defined in the UDF_CURRENCY_CD_2 column of the CI_TXN_DETAIL_STG table.
	UDF_AMT_3	The column value is set to the value defined in the UDF_AMT_3 column of the CI_TXN_DETAIL_STG table.
	UDF_CURRENCY_CD_3	The column value is set to the value defined in the UDF_CURRENCY_CD_3 column of the CI_TXN_DETAIL_STG table.
	UDF_AMT_4	The column value is set to the value defined in the UDF_AMT_4 column of the CI_TXN_DETAIL_STG table.
	UDF_CURRENCY_CD_4	The column value is set to the value defined in the UDF_CURRENCY_CD_4 column of the CI_TXN_DETAIL_STG table.
	UDF_AMT_5	The column value is set to the value defined in the UDF_AMT_5 column of the CI_TXN_DETAIL_STG table.
	UDF_CURRENCY_CD_5	The column value is set to the value defined in the UDF_CURRENCY_CD_5 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_1	The column value is set to the value defined in the UDF_NBR_1 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_2	The column value is set to the value defined in the UDF_NBR_2 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_3	The column value is set to the value defined in the UDF_NBR_3 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_4	The column value is set to the value defined in the UDF_NBR_4 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_5	The column value is set to the value defined in the UDF_NBR_5 column of the CI_TXN_DETAIL_STG table.

Table Name	Column Name	Column Value After Data Migration
	UDF_NBR_6	The column value is set to the value defined in the UDF_NBR_6 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_7	The column value is set to the value defined in the UDF_NBR_7 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_8	The column value is set to the value defined in the UDF_NBR_8 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_9	The column value is set to the value defined in the UDF_NBR_9 column of the CI_TXN_DETAIL_STG table.
	UDF_NBR_10	The column value is set to the value defined in the UDF_NBR_10 column of the CI_TXN_DETAIL_STG table.
CI_TXN_DTL_PRITM	TXN_VOL	The column value is set to the value defined in the TXN_VOL column of the CI_TXN_DETAIL table.
	TXN_AMT	The column value is set to the value defined in the TXN_AMT column of the CI_TXN_DETAIL table.
	CURRENCY_CD	The column value is set to the value defined in the CURRENCY_CD column of the CI_TXN_DETAIL table.
	UDF_AMT_1	The column value is set to the value defined in the UDF_AMT_1 column of the CI_TXN_DETAIL table.
	UDF_CURRENCY_CD_1	The column value is set to the value defined in the UDF_CURRENCY_CD_1 column of the CI_TXN_DETAIL table.
	UDF_AMT_2	The column value is set to the value defined in the UDF_AMT_2 column of the CI_TXN_DETAIL table.
	UDF_CURRENCY_CD_2	The column value is set to the value defined in the UDF_CURRENCY_CD_2 column of the CI_TXN_DETAIL table.
	UDF_AMT_3	The column value is set to the value defined in the UDF_AMT_3 column of the CI_TXN_DETAIL table.

Table Name	Column Name	Column Value After Data Migration
	UDF_CURRENCY_CD_3	The column value is set to the value defined in the UDF_CURRENCY_CD_3 column of the CI_TXN_DETAIL table.
	UDF_AMT_4	The column value is set to the value defined in the UDF_AMT_4 column of the CI_TXN_DETAIL table.
	UDF_CURRENCY_CD_4	The column value is set to the value defined in the UDF_CURRENCY_CD_4 column of the CI_TXN_DETAIL table.
	UDF_AMT_5	The column value is set to the value defined in the UDF_AMT_5 column of the CI_TXN_DETAIL table.
	UDF_CURRENCY_CD_5	The column value is set to the value defined in the UDF_CURRENCY_CD_5 column of the CI_TXN_DETAIL table.
	UDF_NBR_1	The column value is set to the value defined in the UDF_NBR_1 column of the CI_TXN_DETAIL table.
	UDF_NBR_2	The column value is set to the value defined in the UDF_NBR_2 column of the CI_TXN_DETAIL table.
	UDF_NBR_3	The column value is set to the value defined in the UDF_NBR_3 column of the CI_TXN_DETAIL table.
	UDF_NBR_4	The column value is set to the value defined in the UDF_NBR_4 column of the CI_TXN_DETAIL table.
	UDF_NBR_5	The column value is set to the value defined in the UDF_NBR_5 column of the CI_TXN_DETAIL table.
	UDF_NBR_6	The column value is set to the value defined in the UDF_NBR_6 column of the CI_TXN_DETAIL table.
	UDF_NBR_7	The column value is set to the value defined in the UDF_NBR_7 column of the CI_TXN_DETAIL table.
	UDF_NBR_8	The column value is set to the value defined in the UDF_NBR_8 column of the CI_TXN_DETAIL table.

Table Name	Column Name	Column Value After Data Migration
	UDF_NBR_9	The column value is set to the value defined in the UDF_NBR_9 column of the CI_TXN_DETAIL table.
	UDF_NBR_10	The column value is set to the value defined in the UDF_NBR_10 column of the CI_TXN_DETAIL table.
CI_CC	DESCRLONG	The column value is set to the value defined in the DESCR254 column of the CI_CC table.

- Drops the DESCR254 column of the CI_CC table.