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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 Application Framework | Lists and describes the steps for upgrading the application framework. |
| Section 3 | Upgrading the Oracle Revenue Management and Billing Application | Lists and describes the steps for upgrading the Oracle Revenue Management and Billing application. |
| Section 4 | Upgrading the Oracle Revenue Management and Billing Database | Lists and describes the steps for upgrading the Oracle Revenue Management and Billing database. |
| Section 5 | Data Migration | Explains how to migrate data from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0. |
| Section 6 | 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. |

| Section No. | Section Name | Description |
|-------------|--|---|
| Appendix C | New Tables Added in V2.3.0.1.0 | Lists and describes the tables that are newly added in the Oracle Revenue Management and Billing V2.3.0.1.0 database. |
| Appendix D | Existing Tables Modified in V2.3.0.1.0 | Lists the existing tables and their columns that are modified in the Oracle Revenue Management and Billing V2.3.0.1.0 database. |
| Appendix E | Before and After Data Migration | Lists the tables which are affected due to data migration and explains the impact on these tables. |

Related Documents

You can refer to the following documents for more information:

| Document | Description |
|--|---|
| <i>Oracle Revenue Management and Billing Release Notes Version 2.3.0.1.0</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 |
|----------|-------------|--|---------------------|
| 4.2 | 16-Dec-2015 | Section 5.1: Migrating Data | Updated Information |
| | | Section 5.2: SQL Statements for Data Migration | Updated Information |
| | | Section 5.2.1: migrate_V5_to_V5SP1.sql | Updated Information |
| | | Section 5.2.4: analyse_org_tables.sql | Added Section |
| | | Section 5.2.7: create_temp_indexes.sql | Added Section |
| | | Section 5.2.9: drop_temp_indexes.sql | Added Section |

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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.

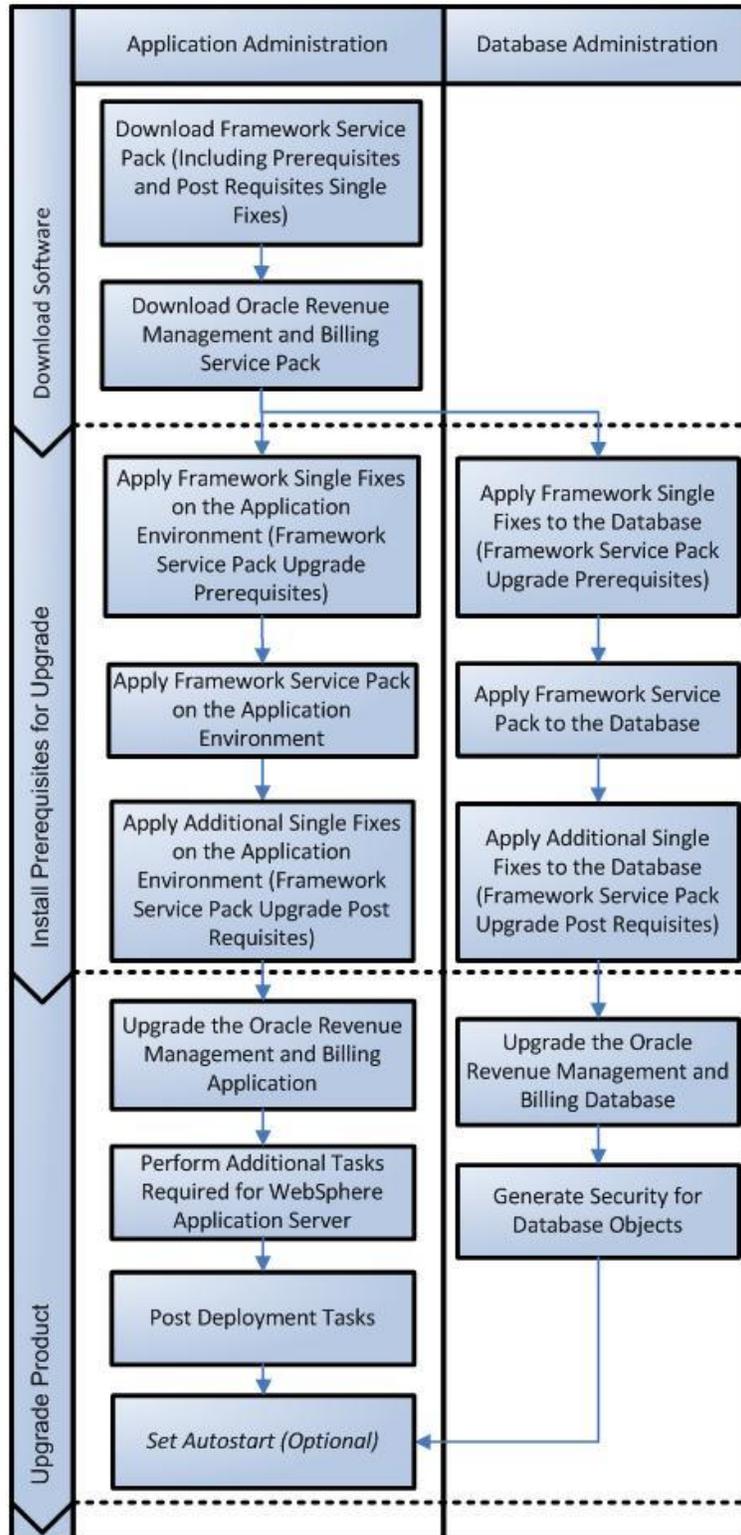


Figure 1 : Upgrade Process

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*.

2. Upgrading Application Framework

This section explains how to upgrade the application framework. While upgrading the application framework, you must first apply the application framework service pack (patch set) to the database and then on the application environment.

This section describes how to:

- Download Application Framework Service Pack
- Decompress Service Pack
- Apply Application Framework Service Pack to the Database
- Generate Security for Database Objects
- Apply Application Framework Service Pack on the Application Environment

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

2.1 Prerequisites

If you are already using the Transaction Feed Management feature and want to upgrade to Oracle Revenue Management and Billing Version 2.3.0.1.0, 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 2.3.0.0.0 will not happen successfully.
- Transactions which are uploaded using 2.3.0.0.0 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.

2.2 Downloading Application Framework Service Pack

For upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you must download the following packages from the Oracle Revenue Management and Billing V2.3.0.1.0 media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework V4.2.0.2.0 Multiplatform
- Oracle Utilities Application Framework V4.2.0.2.0 Single Fix Prerequisite Rollup
- Oracle Revenue Management and Billing V2.3.0.1.0 Oracle Database

In addition, you must download the ALIGNMENT ISSUE AND SCROLL BARS MISSING IN THE MODIFY AND RESOLVE SCREENS patch (Patch Number: 18114617) from [My Oracle Support](#).

The downloaded file will be in the ZIP format for AIX, Windows and Linux platforms.

Note: For upgrading from any previous version of Oracle Revenue Management and Billing other than 2.3.0.0.0 to 2.3.0.1.0, consult with Oracle Support, Oracle Partner, or Oracle Consulting that may be supporting your implementation and upgrade process.

2.3 Applying Application Framework Service Pack to the Database

You can apply application framework service pack only to the existing database. To apply the service 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 service pack
- Ability to connect to the database

While upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you need to apply the following to the database:

1. Oracle Utilities Application Framework Version 4.2.0.2.0
2. Rollup Pack for Oracle Utilities Application Framework Version 4.2.0.2.0

2.3.1 Applying Oracle Utilities Application Framework Version 4.2.0.2.0

To apply the Oracle Utilities Application Framework Version 4.2.0.2.0 to 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 Oracle Revenue Management and Billing V2.3.0.1.0 Oracle Database package 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 Oracle Revenue Management and Billing V2.3.0.1.0 Oracle Database package using the following command:

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

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

- `Demo_dump`

- Upgrade
6. Change to the Upgrade folder using the following command:


```
cd <DESTINATION_FOLDER>\Upgrade
```

It contains the RMB_Blueprint_V23010_44526.zip file.
 7. Unzip the RMB_Blueprint_V23010_44526.zip file using the following command:


```
unzip RMB_Blueprint_V23010_44526.zip -d
<PATH>\<DESTINATION_FOLDER>
```

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

 - FW
 - RMB
 8. Change to the Install-Upgrade folder using the following command:


```
cd <DESTINATION_FOLDER>\FW\FW42020\Install-Upgrade
```
 9. Execute the OraDBI.exe utility using the following command:


```
OraDBI.exe
```

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

| Parameter | Value |
|--|-------------------------------------|
| Name of the target database | <DB_NAME> |
| Name of the owner of the database schema | <DB_USER> Example: CISADM |
| Password for the user (in silent mode) | <DB_USER_PASSWORD> |
| Location of Java Home | ..\jdk1.6.0_20 |
| Location of TUGBU Jar files | ..\FW\FW42020\jarfiles |
| Oracle user with read-write privileges to the database schema | <DB_USER> Example: CISUSER |
| Oracle user with read-only privileges to the database schema | <DB_USER> Example: CISREAD |
| Oracle database role with read-write privileges to the database schema | <DB_USER_ROLE> Example: CIS_USER |
| Oracle database role with read-only privileges to the database schema | <DB_USER_ROLE> Example: CIS_READ |

10. Enter the required parameter values. A message appears indicating that the process has been completed successfully. Log files are generated each time you execute the OraDBI.exe utility. Each log file has the following naming convention:

```
OraDBInnn
```

Where, `nnn` is a running number.

2.3.2 Applying Rollup Pack for Oracle Utilities Application Framework Version 4.2.0.2.0

To apply the rollup pack for Oracle Utilities Application Framework Version 4.2.0.2.0 to the database:

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

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

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

```
CDXPatch.exe
```

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

| Parameter | Value |
|---|---|
| Target database type (O/M/D) | O (if you have Oracle database) OR M (if you have MySQL database) |
| Name of the user that owns the database objects | <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 |
| Database role which has a read-write privilege | <DB_USER_ROLE> Example: CIS_USER |
| Database role which has a read only privilege | <DB_USER_ROLE> Example: CIS_READ |

3. Enter the required parameter values. A message appears indicating that the process has been completed successfully.

2.4 Generating Security for Database Objects

Once you apply the 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
```

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

```
OraGenSec.exe
```

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.

2.5 Applying Application Framework Service Pack on the Application Environment

Once you apply the application framework service pack to the database and define security for all database objects, you must apply the application framework service pack on the application environment. You can apply the application framework service pack only on the existing application environment.

While upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you need to apply the following on the application environment:

1. Oracle Utilities Application Framework Version 4.2.0.2.0
2. Rollup Pack for Oracle Utilities Application Framework Version 4.2.0.2.0
3. Hot Fix for Bug 18114617

2.5.1 Applying Oracle Utilities Application Framework Version 4.2.0.2.0

To apply the 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:

AIX, Windows, Linux:

```
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 Oracle Utilities Application Framework V4.2.0.2.0 Multiplatform package to the TEMPDIR folder using the following command:

AIX, Linux:

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

Windows:

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

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

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 Multiplatform 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-V4.2.0.2.0-Multiplatform.jar file.

6. Decompress the FW-V4.2.0.2.0-Multiplatform.jar file using the following command:

AIX, Linux:

```
jar -xvf FW-V4.2.0.2.0-Multiplatform.jar
```

Windows:

```
jar -xvf FW-V4.2.0.2.0-Multiplatform.jar
```

A sub-directory named “FW-V4.2.0.2.0-SP2” is created.

7. Initialize the application environment (on which you want to apply the application framework service pack) using the following command:

AIX, Linux:

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

Windows:

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

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

8. Stop the application environment using the following command:

AIX, Linux:

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

Windows:

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

9. Change to the FW-V4.2.0.2.0-SP2 folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER>/FW-V4.2.0.2.0-SP2
```

Windows:

```
cd <DESTINATION_FOLDER>\FW-V4.2.0.2.0-SP2
```

10. Execute the installSP utility using the following command:

AIX, Linux:

```
installSP.sh
```

Windows:

```
installSP.cmd
```

The following message appears in the command line:

```
Press Enter to continue {CNTRL-C to abort}
```

11. Press **Enter**. A message appears indicating that the process has been completed successfully.

2.5.2 Applying Rollup Pack for Oracle Utilities Application Framework Version 4.2.0.2.0

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

1. Copy the Oracle Utilities Application Framework V4.2.0.2.0 Single Fix Prerequisite Rollup package to the TEMPDIR folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

3. Unzip the Oracle Utilities Application Framework V4.2.0.2.0 Single Fix Prerequisite Rollup 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.

4. 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.

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

AIX, Linux:

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

Windows:

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

6. 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)

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

2.5.3 Applying Hot Fix for Bug 18114617

To apply hot fix for Bug 18114617 on the application environment:

1. Copy the ALIGNMENT ISSUE AND SCROLL BARS MISSING IN THE MODIFY AND RESOLVE SCREENS 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 ALIGNMENT ISSUE AND SCROLL BARS MISSING IN THE MODIFY AND RESOLVE SCREENS 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 the `readme.txt` and `Hot-Fix_18114617.zip` files.

4. Unzip the `Hot-Fix_18114617.zip` file using the following command:

AIX, Linux:

```
Unzip ../<DESTINATION_FOLDER>/Hot-Fix_18114617.zip -d  
<PATH>/<DESTINATION_FOLDER>
```

Windows:

```
Unzip ..\<DESTINATION_FOLDER>\Hot-Fix_18114617.zip -d  
<PATH>\<DESTINATION_FOLDER>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER>` folder. The contents include the `deploy.zip` file and a document which provides information about the hot fix.

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

AIX, Linux:

```
Unzip ../<DESTINATION_FOLDER>/deploy.zip -d  
<PATH>/<DESTINATION_FOLDER_1>
```

Windows:

```
Unzip ..\<DESTINATION_FOLDER>\deploy.zip -d  
<PATH>\<DESTINATION_FOLDER_1>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_1>` folder. The contents include the following two files:

- `cisDisabled.css`
- `privateUserMapSupport.js`

6. Copy the `splapp.war` file on your local machine using the following command:

AIX, Linux:

```
cp $SPLEBASE/splapp/applications/splapp.war <PATH>/TMPDIR
```

Windows:

```
copy %SPLEBASE%\splapp\applications\splapp.war <PATH>\TMPDIR
```

Note: `$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed.

7. Decompress the `splapp.war` file on your local machine using the following command:

```
jar -xvf splapp.war
```

8. Copy the `cisDisabled.css` file from the `<DESTINATION_FOLDER_1>` folder to the `<DESTINATION_FOLDER_2>` folder.

Note: The `<DESTINATION_FOLDER_1>` is the location where you have extracted the contents of the `deploy.zip` file. And, the `<DESTINATION_FOLDER_2>` is the location where you have extracted the contents of the `splapp.war` file.

9. Copy the `privateUserMapSupport.js` file from the `<DESTINATION_FOLDER_1>` folder to the `<DESTINATION_FOLDER_2>\code` folder.

10. Compress the <DESTINATION_FOLDER_2> folder into a WAR file named `splapp.war` using the following command:

```
jar -cvf splapp.war *
```

11. Copy the updated `splapp.war` file to `$SPLEBASE\splapp\applications` folder.
12. 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.

3. Upgrading the Oracle Revenue Management and Billing Application

This section explains how to upgrade the application. 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*.

This section describes how to:

- Download Install Media
- Install Application
- Perform Additional Tasks Required for WebSphere Application Server
- Access the Oracle Revenue Management and Billing Application

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.

3.1 Downloading Install Media

Separate install media is available for each supported platform. For upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you must download the following:

- Oracle Revenue Management and Billing V2.3.0.1.0 for <PLATFORM> package from the Oracle Revenue Management and Billing V2.3.0.1.0 media pack which is available on [Oracle Software Delivery Cloud](#)
- Additional Rollup Pack – 2.3.0.1.0 patch (Patch Number: 19488009) from [My Oracle Support](#)

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

3.2 Installing the Application

When you install the application on the WebLogic application server, the application is deployed automatically on the server. However, when you install 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.

While upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you need to install the following on the application environment:

1. Oracle Revenue Management and Billing Version 2.3.0.1.0

2. Rollup Pack for Oracle Revenue Management and Billing Version 2.3.0.1.0

Note: If the `spl-ccb-4.2.0.jar` file is available at any location where the application environment is installed, then delete the `spl-ccb-4.2.0.jar` file from these locations before you install the application.

3.2.1 Installing Oracle Revenue Management and Billing Version 2.3.0.1.0

To install the application:

1. Login to the application server using the administrator's credentials.
2. Copy the Oracle Revenue Management and Billing V2.3.0.1.0 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.

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

AIX, Linux:

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

Windows:

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

4. Unzip the Oracle Revenue Management and Billing V2.3.0.1.0 for <PLATFORM> package using the following command:

AIX, Linux:

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

Windows:

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

A sub-directory named `RMB.V2.3.0.1.0` is created.

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

AIX, Linux:

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

Windows:

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

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.

6. 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 WebLogic application server on AIX machine, you need to stop the application environment before you proceed with the installation. However, if you have WebSphere application server on AIX machine, 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>
```

7. 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.

8. Change to the `RMB.V2.3.0.1.0` folder using the following command:

AIX:

```
cd <DESTINATION_FOLDER>/RMB.V2.3.0.1.0
```

Windows:

```
cd <DESTINATION_FOLDER>\RMB.V2.3.0.1.0
```

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

AIX, Linux:

```
<PATH>/install.sh
```

Windows:

```
<PATH>\install.cmd
```

The following message appears in the command line:

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

10. Enter **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. Enter **Y** and then press **Enter**. A message appears indicating that the build is deployed successfully. In other words, it means the application is installed successfully on the application environment. The installation process might take some time to generate the WAR files.

The following message appears in the command line:

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

12. Enter **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:
```

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

Once the application is installed, 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.

3.2.2 Installing Rollup Pack for Oracle Revenue Management and Billing Version 2.3.0.1.0

To install the rollup pack for Oracle Revenue Management and Billing Version 2.3.0.1.0 on the application environment:

1. Copy the Additional Rollup Pack – 2.3.0.1.0 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 Additional Rollup Pack – 2.3.0.1.0 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 Hotfix_for_Multiple_V23010.zip.

4. Unzip the Hotfix_for_Multiple_V23010.zip file using the following command:

AIX, Linux:

```
unzip Hotfix_for_Multiple_V23010.zip -d
<PATH>/<DESTINATION_FOLDER>
```

Windows:

```
unzip Hotfix_for_Multiple_V23010.zip -d
<PATH>\<DESTINATION_FOLDER>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER> folder. The contents include the deploy.zip file and a document which lists all bugs which are fixed in this rollup pack.

5. 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 two sub-folders:

- Classes
- sql

6. Create a copy of the %SPLEBASE%\splapp\businessapp\lib\spl-ccb-4.2.0.1.0.jar file on your local machine.

Note: \$SPLEBASE or %SPLEBASE% is the path where the application environment is installed.

7. Decompress the spl-ccb-4.2.0.1.0.jar file on your local machine using the following command:

```
jar -xvf spl-ccb-4.2.0.1.0.jar
```

The contents include the following sub-folders:

- META-INF
- services
- config
- cobolServices
- com

8. Copy the following class files from the <DESTINATION_FOLDER_1>\classes\com.splwg.ccb.domain.pricing.price

assign folder to the
 <DESTINATION_FOLDER_2>\com\splwg\ccb\domain\pricing\priceassign
 folder on your local machine:

- PriceAssignmentChangeTxnDisAgg.class
- PriceAssignmentChangeTxnDisAgg_Impl.class

Note: The <DESTINATION_FOLDER_1> is the location where you have extracted the contents of the deploy.zip file. And, the <DESTINATION_FOLDER_2> is the location where you have extracted the contents of the spl-ccb-4.2.0.1.0.jar file.

9. Copy the packageMetaInfo.xml file from the <DESTINATION_FOLDER_1>\classes\com.splwg.ccb.domain.pricing.price assign folder to the <DESTINATION_FOLDER_2>\com\splwg\ccb\domain\pricing\priceassign folder on your local machine.
10. Copy the DisaggregationService.class file from the <DESTINATION_FOLDER_1>\classes\com.splwg.ccb.domain.banking.transactionFeed.transactionDisaggregation folder to the <DESTINATION_FOLDER_2>\com\splwg\ccb\domain\banking\transactionFeed\transactionDisaggregation folder on your local machine.
11. Copy the following class files from the <DESTINATION_FOLDER_1>\classes\com.splwg.ccb.domain.banking.transactionFeed.transactionFeedAgg folder to the <DESTINATION_FOLDER_2>\com\splwg\ccb\domain\banking\transactionFeed\transactionFeedAgg folder on your local machine:
 - IdentifyAffectedEntitiesBatch\$Worker.class
 - IdentifyAffectedEntitiesBatch.class
 - RefreshPricingBatch\$Worker.class
 - RefreshPricingBatch.class
 - RefreshPricingBatch_Gen\$JobParameters.class
 - RefreshPricingBatch_Gen\$RefreshPricingBatchWorker_Gen\$ThreadParameters.class
 - RefreshPricingBatch_Gen\$RefreshPricingBatchWorker_Gen.class
 - RefreshPricingBatch_Gen.class
12. Copy the PriceItemRelationPreProcess_Impl.class file from the <DESTINATION_FOLDER_1>\classes\com.splwg.ccb.domain.pricing.price item folder to the <DESTINATION_FOLDER_2>\com\splwg\ccb\domain\pricing\priceitem folder on your local machine.
13. Copy the following XML files from the <DESTINATION_FOLDER_1>\classes\com.splwg.ccb.domain folder to the <DESTINATION_FOLDER_2>\com\splwg\ccb\domain folder on your local machine:

- contextManagedObjects.xml
 - hibernateConsole.hbm.xml
14. Delete the invoiceObject package from the <DESTINATION_FOLDER_2>\com\splwg\ccb\domain\admin folder on your local machine.
15. Delete the following XML files from the <DESTINATION_FOLDER_2>\services folder on your local machine:
- INVOBJ_DTLS.xml
 - CMVINVOBJ.xml
 - CMVINVOBJMAINT.xml
16. Compress the <DESTINATION_FOLDER_2> folder into a JAR file named spl-ccb-4.2.0.1.0.jar using the following command:
- ```
jar -cvf spl-ccb-4.2.0.1.0.jar META-INF services config
cobolServices com
```
17. Copy the updated spl-ccb-4.2.0.1.0.jar file at the following locations in the application environment:
- %SPLEBASE%\etc\lib
  - %SPLEBASE%\splapp\businessapp\lib
  - %SPLEBASE%\splapp\mpl\lib
  - %SPLEBASE%\splapp\standalone\lib
18. Initialize the application environment (on which you have installed the application and rollup pack) using the following command:
- AIX, Linux:**
- ```
$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
```
- Windows:**
- ```
%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
```
- Where, \$SPLEBASE or %SPLEBASE% is the path where the application environment is installed, and \$SPLENVIRON or %SPLENVIRON% is the name of the application environment for which you want to set the environment variables.
19. 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.

20. 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 on AIX machine, you need to start the application environment. However, if you have the WebSphere application server on AIX machine, 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 perform the tasks listed in the [Additional Tasks Required for WebSphere Application Server](#) section.

## 3.3 Additional Tasks Required for WebSphere Application Server

Once the application service pack is installed, 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.

### 3.3.1 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.

### 3.3.2 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.

### 3.3.3 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.

### 3.3.4 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.

### 3.3.5 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>**.

## 3.4 Accessing the Oracle Revenue Management and Billing 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 |

## 4. Upgrading the Oracle Revenue Management and Billing Database

This section explains how to upgrade the Oracle Revenue Management and Billing 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.

Before you upgrade the database, you need to apply application framework service pack to the database as mentioned in the *Oracle Revenue Management and Billing Upgrade Path Guide*.

This section describes how to:

- Download and Decompress the Database Package
- Upgrade the Oracle Revenue Management and Billing Database
- Generate Security for Database Objects

**Note:**

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.

### 4.1 Prerequisites

Before you upgrade the Oracle Revenue Management and Billing database, you need to execute the `preBlueprintScript.sql` query. This SQL query does the following:

- Adds the following columns in the `CI_TXN_DETAIL` table:
  - `DISAGG_SW`
  - `DISAGG_CNT`
  - `PROCESSING_DT`
  - `LAST_SYS_PRCES_DT`
  - `CURR_SYS_PRCES_DT`
- Deletes the data from the `CI_TXN_DTL_PRITM_SUMMARY` table and then drops the `CI_TXN_DTL_PRITM_SUMMARY` table.

To execute the `preBlueprintScript.sql` query:

1. Connect to the ORMB database using a utility named SQL\*Plus and the administrator's (for example, CISADM) credentials.
2. Execute the `preBlueprintScript.sql` query from the `Migration_From_V2.3.0.0.0_To_V2.3.0.1.0` folder.

**Note:** The `Migration_From_V2.3.0.0.0_To_V2.3.0.1.0` folder is available only when you download and decompress the `PACKAGE FOR DATA UPGRADE FROM 2.3.0.0.0 TO 2.3.0.1.0` patch (Patch Number: 19704463). You can download this patch from [My Oracle Support](#). For more information on how to decompress this patch, refer to the [Migrating Data](#) section (from step 1 to 6).

## 4.2 Downloading and Decompressing the Database Package

For upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you must download the following:

- Oracle Revenue Management and Billing V2.3.0.1.0 Oracle Database package from the Oracle Revenue Management and Billing V2.3.0.1.0 media pack which is available on [Oracle Software Delivery Cloud](#)
- Additional Rollup Pack – 2.3.0.1.0 patch (Patch Number: 19488009) from [My Oracle Support](#)

We have already extracted the contents of the Oracle Revenue Management and Billing V2.3.0.1.0 Oracle Database package while applying the application framework service pack to the database. The contents of the `RMB_Blueprint_V23010_44526.zip` file are extracted, which includes the following sub-folders:

- FW
- RMB

We have also extracted the contents of the Additional Rollup Pack – 2.3.0.1.0 patch while installing the rollup pack for Oracle Revenue Management and Billing Version 2.3.0.1.0 on the application environment. The contents of the `deploy.zip` file are extracted, which includes the following sub-folders:

- Classes
- sql

## 4.3 Upgrading Database

While upgrading from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0, you need to install the following on the database:

1. Oracle Revenue Management and Billing Version 2.3.0.1.0
2. Rollup Pack for Oracle Revenue Management and Billing Version 2.3.0.1.0

### 4.3.1 Installing Oracle Revenue Management and Billing Version 2.3.0.1.0

To install the Oracle Revenue Management and Billing Version 2.3.0.1.0 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 `RMB_Blueprint_V23010_44526.zip` file.

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

```
CdxDBI.exe
```

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

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

| Parameter                                                              | Value                               |
|------------------------------------------------------------------------|-------------------------------------|
| Name of the target database                                            | <DB_NAME>                           |
| Name of the owner of the database schema                               | <DB_USER><br>Example: CISADM        |
| Password for the user (in silent mode)                                 | <DB_USER_PASSWORD>                  |
| Location of Java Home                                                  | ..\jdk1.6.0_20                      |
| Location of TUGBU Jar files                                            | ..\RMB\jarfiles                     |
| Oracle user with read-write privileges to the database schema          | <DB_USER><br>Example: CISUSER       |
| Oracle user with read-only privileges to the database schema           | <DB_USER><br>Example: CISREAD       |
| Oracle database role with read-write privileges to the database schema | <DB_USER_ROLE><br>Example: CIS_USER |
| Oracle database role with read-only privileges to the database schema  | <DB_USER_ROLE><br>Example: CIS_READ |

4. Enter the required parameter values. If the target database connection is established successfully, the following message appears in the command line:

```
Ready to upgrade the target database from <Old_RMB_Version> to
<New_RMB_Version>. Do you want to continue (Y/N)?:
```

5. Enter **Y** and then press **Enter**. The system checks whether the specified user name exists in the database and then reflects the metadata changes in the database. If an error occurs while upgrading the database, the same is reflected in the log file. You can find these log files in the `Install-Upgrade` folder.

### 4.3.2 Installing Rollup Pack for Oracle Revenue Management and Billing Version 2.3.0.1.0

To install the rollup pack for Oracle Revenue Management and Billing Version 2.3.0.1.0 on the database:

1. Connect to the ORMB database using any SQL client (such as SQLPlus) and the `cisadm` credentials.
2. Execute the following SQL queries from the `<DESTINATION_FOLDER_1>\sql` folder in the specified order:
  - a. `PKG_RMB_TFM_DISAGG.sql`
  - b. `MetadataScriptBug19472832.sql`
  - c. `DROP_PROCEDURE_rmb_parallel_update_sql.sql`

- d. Patch\_Update\_1.sql
- e. Patch\_Update\_2.sql

**Note:** The <DESTINATION\_FOLDER\_1> is the location where you have extracted the contents of the `deploy.zip` file.

## 4.4 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
```

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

```
OraGenSec.exe
```

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

| Parameter                                                                 | Value                                  |
|---------------------------------------------------------------------------|----------------------------------------|
| Name of the owner of the database schema                                  | <DB_USER><br>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><br>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.

## 5. Data Migration

Once you upgrade the database, you can migrate data from Oracle Revenue Management and Billing Version 2.3.0.0.0 to V2.3.0.1.0 using SQL queries available in the PACKAGE FOR DATA UPGRADE FROM 2.3.0.0.0 TO 2.3.0.1.0 patch. You can download the PACKAGE FOR DATA UPGRADE FROM 2.3.0.0.0 TO 2.3.0.1.0 patch (Patch Number: 19704463) from [My Oracle Support](#).

The downloaded file will be in the ZIP format. It is common for all platforms, such as AIX, Windows, and Linux.

### 5.1 Migrating Data

To migrate data from V2.3.0.0.0 to V2.3.0.1.0:

1. Copy the PACKAGE FOR DATA UPGRADE FROM 2.3.0.0.0 TO 2.3.0.1.0 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 2.3.0.0.0 TO 2.3.0.1.0 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 Hot-Fix\_19704463.zip.

4. Unzip the Hot-Fix\_19704463.zip file using the following command:

**AIX, Linux:**

```
unzip Hot-Fix_19704463.zip -d <PATH>/<DESTINATION_FOLDER>
```

**Windows:**

```
unzip Hot-Fix_19704463.zip -d <PATH>\<DESTINATION_FOLDER>
```

The contents of the zip file are extracted in the <DESTINATION\_FOLDER> folder. The contents include the deploy.zip file.

- Unzip the deploy.zip file using the following command:

**AIX, Linux:**

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

**Windows:**

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

The contents of the zip file are extracted in the <DESTINATION\_FOLDER> folder. The contents include a folder named Migration\_From\_V2.3.0.0.0\_To\_V2.3.0.1.0. This folder contains all SQL files.

- Change to the Migration\_From\_V2.3.0.0.0\_To\_V2.3.0.1.0 folder using the following command:

**AIX, Linux:**

```
cd <DESTINATION_FOLDER>/Migration_From_V2.3.0.0.0_To_V2.3.0.1.0
```

**Windows:**

```
cd <DESTINATION_FOLDER>\Migration_From_V2.3.0.0.0_To_V2.3.0.1.0
```

- Connect to the ORMB database using a utility named SQL\*Plus and the administrator's (for example, CISADM) credentials.
- Execute the migrate\_v5\_to\_v5SP1.sql query from the <DESTINATION\_FOLDER>\Migration\_From\_V2.3.0.0.0\_To\_V2.3.0.1.0 folder. It invokes all other SQL queries in the following order:
  - rename\_old\_tables.sql
  - modify\_old\_tables.sql
  - analyse\_org\_tables.sql
  - PostBlueprintScript.sql
  - migrate\_data.sql
  - create\_temp\_indexes.sql
  - upgrade\_param\_grp.sql
  - drop\_temp\_indexes.sql
  - analyse\_new\_tables.sql

A log file named migration\_v5\_to\_v5SP1.log is generated in the Migration\_From\_V2.3.0.0.0\_To\_V2.3.0.1.0 folder.

- Randomly, cross-check the data across the original and new tables:

| Original Table    | New Table     |
|-------------------|---------------|
| ORG_CI_TXN_DETAIL | CI_TXN_DETAIL |

| Original Table       | New Table        |
|----------------------|------------------|
| ORG_CI_TXN_DTL_PRITM | CI_TXN_DTL_PRITM |
| ORG_CI_BCHG_SQ       | CI_BCHG_SQ       |
| ORG_CI_BILL_CHG      | CI_BILL_CHG      |

If the data migration has completed successfully, you can then delete the original tables from the database.

## 5.2 SQL Statements for Data Migration

This section describes the following SQL queries which are used for migrating data from Oracle Revenue Management and Billing Version 2.3.0.0.0 to V2.3.0.1.0:

- migrate\_V5\_to\_V5SP1.sql
- rename\_old\_tables.sql
- modify\_old\_tables.sql
- analyse\_org\_tables.sql
- PostBlueprintScript.sql
- migrate\_data.sql
- create\_temp\_indexes.sql
- upgrade\_param\_grp.sql
- drop\_temp\_indexes.sql
- analyse\_new\_tables.sql

### 5.2.1 migrate\_V5\_to\_V5SP1.sql

The migrate\_V5\_to\_V5SP1.sql query is the one that you need to execute to migrate data from Oracle Revenue Management and Billing Version 2.3.0.0.0 to 2.3.0.1.0. It invokes all other SQL queries in the following order:

1. rename\_old\_tables.sql
2. modify\_old\_tables.sql
3. analyse\_org\_tables.sql
4. PostBlueprintScript.sql
5. migrate\_data.sql
6. create\_temp\_indexes.sql
7. upgrade\_param\_grp.sql
8. drop\_temp\_indexes.sql
9. analyse\_new\_tables.sql

## 5.2.2 rename\_old\_tables.sql

The rename\_old\_tables.sql query renames the following tables. During this process, the query drops the existing constraints and indexes on these tables.

| Table Name       | Renamed To           |
|------------------|----------------------|
| CI_TXN_DETAIL    | ORG_CI_TXN_DETAIL    |
| CI_TXN_DTL_PRITM | ORG_CI_TXN_DTL_PRITM |
| CI_BCHG_SQ       | ORG_CI_BCHG_SQ       |
| CI_BILL_CHG      | ORG_CI_BILL_CHG      |

## 5.2.3 modify\_old\_tables.sql

The modify\_old\_tables.sql query adds new columns in the ORG\_CI\_TXN\_DETAIL and ORG\_CI\_TXN\_DTL\_PRITM tables. It also creates a unique index using the BO\_STATUS\_CD column for the ORG\_CI\_TXN\_DETAIL table.

The following table lists the columns that are newly added in the ORG\_CI\_TXN\_DETAIL and ORG\_CI\_TXN\_DTL\_PRITM tables:

| Table Name           | Column Name         |
|----------------------|---------------------|
| ORG_CI_TXN_DETAIL    | DISAGG_SW           |
|                      | DISAGG_CNT          |
|                      | PROCESSING_DT       |
|                      | LAST_SYS_PRCS_DT    |
|                      | CURR_SYS_PRCS_DT    |
| ORG_CI_TXN_DTL_PRITM | TXN_PRITM_STATUS_CD |
|                      | IS_DISAGG           |
|                      | PROCESSING_DT       |
|                      | ORG_DIVISION        |
|                      | LAST_SYS_PRCS_DT    |
|                      | CURR_SYS_PRCS_DT    |

## 5.2.4 analyse\_org\_tables.sql

The analyse\_org\_tables.sql query analyzes the following tables:

- ORG\_CI\_TXN\_DETAIL
- ORG\_CI\_TXN\_DTL\_PRITM
- ORG\_CI\_BCHG\_SQ
- ORG\_CI\_BILL\_CHG

## 5.2.5 PostBlueprintScript.sql

The PostBlueprintScript.sql query drops the following tables and recreates them with increased intrans values:

- CI\_TXN\_DETAIL
- CI\_TXN\_DTL\_PRITM
- CI\_TXN\_DTL\_PRITM\_SUMMARY
- CI\_PRICEITEM\_PARM\_GRP\_K
- CI\_BCHG\_SQ
- CI\_BILL\_CHG
- CI\_TXN\_DETAIL\_STG
- CI\_TXN\_DTL\_PRITM\_STG
- CI\_ROLLBACK\_TXN\_DETAIL

At present, the table intrans value is set to 50, whereas the index intrans value is set to 100. You can change the intrans value, but ensure that the table intrans value does not exceed 50 and the index intrans value does not exceed 100.

In addition, this SQL query partitions the following two tables based on the CURR\_SYS\_PRCES\_DT primary key. At present, the partitioning interval is set to daily. You can change the partitioning interval, if required. The partitioning interval may vary depending on the volume of transactions. In general, each partition can hold around 50 million rows.

| Table Name       | Column Used for Partitioning |
|------------------|------------------------------|
| CI_TXN_DETAIL    | CURR_SYS_PRCES_DT            |
| CI_TXN_DTL_PRITM | CURR_SYS_PRCES_DT            |

## 5.2.6 migrate\_data.sql

The migrate\_data.sql query does the following:

- Updates the values of the following columns in the ORG\_CI\_TXN\_DETAIL, ORG\_CI\_TXN\_DTL\_PRITM, and CI\_TXN\_DISAGG\_REQ tables:

| Table Name        | Column Name       | Column Value After Data Migration                                                                                                                                                                                                                                                                                       |
|-------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ORG_CI_TXN_DETAIL | CURR_SYS_PRCES_DT | <p>The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).</p> <p>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then CURR_SYS_PRCES_DT is set to 01-01-2012.</p> |

| Table Name           | Column Name       | Column Value After Data Migration                                                                                                                                                                                                                                                                            |
|----------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | LAST_SYS_PRCES_DT | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).<br>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then LAST_SYS_PRCES_DT is set to 01-01-2012. |
|                      | DISAGG_SW         | N                                                                                                                                                                                                                                                                                                            |
|                      | DISAGG_CNT        | 0                                                                                                                                                                                                                                                                                                            |
| ORG_CI_TXN_DTL_PRITM | CURR_SYS_PRCES_DT | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).<br>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then CURR_SYS_PRCES_DT is set to 01-01-2012. |
|                      | LAST_SYS_PRCES_DT | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).<br>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then LAST_SYS_PRCES_DT is set to 01-01-2012. |
|                      | IS_DISAGG         | N                                                                                                                                                                                                                                                                                                            |

| Table Name                                                                                                      | Column Name                                                   | Column Value After Data Migration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------|----|----------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------|--|------|----|------|----|
|                                                                                                                 | TXN_PRITM_STATUS_CD                                           | <p>The column value is set based on the value of the BO_STATUS_CD column in the ORG_CI_TXN_DETAIL table.</p> <table border="1"> <thead> <tr> <th>If the value of the BO_STATUS_CD column is...</th> <th>Then the value of the TXN_PRITM_STATUS_CD column is set to...</th> </tr> </thead> <tbody> <tr> <td>COMP (and if the billable charge is generated for the transaction leg)</td> <td>40</td> </tr> <tr> <td>COMP (and if the billable charge is not generated for the transaction leg)</td> <td>20</td> </tr> <tr> <td colspan="2"> <p><b>Note:</b> This scenario will occur when one or more, but not all legs of the transaction are ignored.</p> </td> </tr> <tr> <td>IGNR</td> <td>20</td> </tr> <tr> <td>EROR</td> <td>30</td> </tr> </tbody> </table> | If the value of the BO_STATUS_CD column is... | Then the value of the TXN_PRITM_STATUS_CD column is set to... | COMP (and if the billable charge is generated for the transaction leg) | 40 | COMP (and if the billable charge is not generated for the transaction leg) | 20 | <p><b>Note:</b> This scenario will occur when one or more, but not all legs of the transaction are ignored.</p> |  | IGNR | 20 | EROR | 30 |
| If the value of the BO_STATUS_CD column is...                                                                   | Then the value of the TXN_PRITM_STATUS_CD column is set to... |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
| COMP (and if the billable charge is generated for the transaction leg)                                          | 40                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
| COMP (and if the billable charge is not generated for the transaction leg)                                      | 20                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
| <p><b>Note:</b> This scenario will occur when one or more, but not all legs of the transaction are ignored.</p> |                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
| IGNR                                                                                                            | 20                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
| EROR                                                                                                            | 30                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
|                                                                                                                 | ORG_DIVISION                                                  | The column value is set to the value defined in the CIS_DIVISION column of the ORG_CI_TXN_DETAIL table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |
| CI_TXN_DISAGG_REQ                                                                                               | REQUEST_SRC                                                   | If the DISAGG_TRIGGER is set to <b>NULL</b> , then the column value is set to <b>AUTO</b> . And, if the DISAGG_TRIGGER is set to <b>DISAGG</b> , then the column value is set to <b>BACH</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |                                                               |                                                                        |    |                                                                            |    |                                                                                                                 |  |      |    |      |    |

- Truncates the following tables:
  - CI\_TXN\_DETAIL
  - CI\_TXN\_DTL\_PRITM
  - CI\_BCHG\_SQ
  - CI\_BILL\_CHG
  - CI\_TXN\_DETAIL\_STG
  - CI\_TXN\_DTL\_PRITM\_STG
  - CI\_ROLLBACK\_TXN\_DETAIL

- Migrates data from the ORG\_CI\_TXN\_DETAIL table to the CI\_TXN\_DETAIL table.
- Migrates data from the ORG\_CI\_TXN\_DTL\_PRITM table to the CI\_TXN\_DTL\_PRITM table.
- Migrates data from the ORG\_CI\_BCHG\_SQ table to the CI\_BCHG\_SQ table.
- Migrates data from the ORG\_CI\_BILL\_CHG table to the CI\_BILL\_CHG table.
- Migrates data from the ORG\_CI\_TXN\_DETAIL table to the CI\_ROLLBACK\_TXN\_DETAIL table.
- Drops the CURR\_SYS\_PRCES\_DT column from the ORG\_CI\_TXN\_DETAIL table (because it is not required while migrating data into the staging table).
- Migrates data from the ORG\_CI\_TXN\_DETAIL table to the CI\_TXN\_DETAIL\_STG table.
- Restores the CURR\_SYS\_PRCES\_DT column in the ORG\_CI\_TXN\_DETAIL table along with the data.

## 5.2.7 create\_temp\_indexes.sql

The create\_temp\_indexes.sql creates temporary indexes for the following tables:

- CI\_TXN\_DETAIL
- CI\_TXN\_DTL\_PRITM
- CI\_TXN\_DTL\_PRITM\_SUMMARY
- CI\_PRICEITEM\_PARM\_GRP\_K
- CI\_BCHG\_SQ
- CI\_BILL\_CHG
- CI\_TXN\_DETAIL\_STG
- CI\_TXN\_DTL\_PRITM\_STG
- CI\_ROLLBACK\_TXN\_DETAIL

## 5.2.8 upgrade\_param\_grp.sql

Now, the system does not allow you to store a parameter with null value in the product parameter group. The upgrade\_param\_grp.sql query updates the existing product parameter groups. It removes the parameters with null values from the product parameter group. Then, if a group with the same set of product parameters already exists in the system, the existing group ID is updated in the following tables:

- CI\_AGG\_SQ
- CI\_BILL\_CHG
- CI\_BSEG\_CALC\_LN
- CI\_BSEG\_EXT
- CI\_DISAGG\_TXN\_PRITM\_DETAIL
- CI\_PRICECOMP\_TIER
- CI\_PRICEITEM\_REL
- CI\_TXN\_DTL\_PRITM
- CI\_TXN\_DTL\_PRITM\_STG
- CI\_TXN\_DTL\_PRITM\_SUMMARY

For example, there are two product parameter groups – one Country=;Currency=USD and another Currency=USD. The former group has group ID 201 and latter one has group ID 501. During data migration, the system will remove the Country parameter from the 201 group. The system will then check whether a group with Currency=USD already exists in the system. In this case, 501 group with Currency=USD already exists in the system, and therefore the system replaces group ID 201 with group ID 501 in all the above mentioned tables.

**Note:** You can view the old and new group ID mapping through the RMB\_PRM\_GRP\_MAP table.

If all parameters in a product parameter group have null value, then these parameters are removed from the product parameter group. And, if such product parameter group is used in any tables, the group ID value is set to 1.

## 5.2.9 drop\_temp\_indexes.sql

The drop\_temp\_indexes.sql query drops the temporary indexes which are created for the following tables:

- CI\_TXN\_DETAIL
- CI\_TXN\_DTL\_PRITM
- CI\_TXN\_DTL\_PRITM\_SUMMARY
- CI\_PRICEITEM\_PARM\_GRP\_K
- CI\_BCHG\_SQ
- CI\_BILL\_CHG
- CI\_TXN\_DETAIL\_STG
- CI\_TXN\_DTL\_PRITM\_STG
- CI\_ROLLBACK\_TXN\_DETAIL

## 5.2.10 analyse\_new\_tables.sql

The analyse\_new\_tables.sql query generates complete statistics for the tables that are recreated by the PostBlueprintScript.sql query.

## 6. 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

### 6.1 Generating the Application Viewer

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

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

**AIX, Linux:**

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

**Windows:**

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

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

## 6.2 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.

## 6.3 Building Javadoc Index

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

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

### AIX, Linux:

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

### Windows:

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

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

## Appendix A : Known Issues

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To view a list of known issues in the current release, refer to the *Oracle Revenue Management and Billing Version 2.3.0.1.0 Release Notes*.

## Appendix B : Third Party Software Upgrade

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To view a list of third party software that you need to upgrade 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 V2.3.0.1.0

This section lists and describes the tables that are newly added in the Oracle Revenue Management and Billing V2.3.0.1.0 database.

### C.1 CI\_BATCH\_NOTIFIER

**Purpose:** Used to store notification that must be triggered on a batch completion

**Total Number of Columns:** 7

**Data Migration Required:** Not applicable

**Constraints:** None

**Indexes:** None

**Column Details:**

| Column Name  | Data Type     | Nullable (Yes or No) | Default Value |
|--------------|---------------|----------------------|---------------|
| BATCH_CD     | CHAR(8)       | No                   | -             |
| SEQ_NUM      | NUMBER(10)    | No                   | 1             |
| PROGRAM_NAME | VARCHAR2(254) | No                   | ''            |
| VERSION      | NUMBER(5)     | No                   | 1             |
| OWNER_FLG    | CHAR(4)       | No                   | ''            |
| BUS_OBJ_CD   | CHAR(30)      | No                   | ''            |
| BO_STATUS_CD | CHAR(12)      | No                   | ''            |

**Primary Key:**

| Key Type  | Column Name |
|-----------|-------------|
| COMPOSITE | BATCH_CD    |
|           | SEQ_NUM     |

### C.2 CI\_BATCH\_RUN\_CNTRL

**Purpose:** Used to store details about the batches (such as, C1-TXNIP, C1-TXNVP, C1-TXNEX, C1-TXNSQ, C1-TXNCM, and C1-TXNCU) executed during the transaction aggregation cycle

**Total Number of Columns:** 16

**Data Migration Required:** Not applicable

**Column Details:**

| Column Name        | Data Type     | Nullable (Yes or No) | Default Value |
|--------------------|---------------|----------------------|---------------|
| RUN_ID             | NUMBER(22)    | No                   | -             |
| RUN_GRP_ID         | NUMBER(22)    | No                   | -             |
| BATCH_CD           | CHAR(8)       | No                   | -             |
| NXT_BATCH_CD       | CHAR(8)       | Yes                  | -             |
| VERSION            | NUMBER(5)     | No                   | -             |
| RUN_START_DT       | DATE          | No                   | -             |
| RUN_END_DT         | DATE          | No                   | -             |
| RUN_STEP           | NUMBER(5)     | No                   | -             |
| STEP_SEQ           | NUMBER(5)     | No                   | -             |
| RERUN_NBR          | NUMBER(10)    | No                   | -             |
| FW_BATCH_NBR       | NUMBER(10)    | No                   | -             |
| FW_BATCH_RERUN_NBR | NUMBER(10)    | No                   | -             |
| CURRENT_DT         | TIMESTAMP(6)  | No                   | SYSTIMESTAMP  |
| PARAM_DIVISION     | VARCHAR2(254) | Yes                  | -             |
| PARAM_SOURCE_CD    | VARCHAR2(254) | Yes                  | -             |
| PARAM_HEADER_ID    | VARCHAR2(254) | Yes                  | -             |

**Primary Key:**

| Key Type  | Column Name |
|-----------|-------------|
| COMPOSITE | RUN_GRP_ID  |
|           | RUN_STEP    |
|           | STEP_SEQ    |
|           | RERUN_NBR   |

**Indexes:**

| Sr. No. | Index Type | Column Name |
|---------|------------|-------------|
| 1       | UNIQUE     | RUN_ID      |

## C.3 CI\_BATCH\_RUN\_SEQUENCE

**Purpose:** Used to store the sequence in which the batches must be executed during the transaction aggregation cycle

**Total Number of Columns:** 5

**Data Migration Required:** Not applicable

**Indexes:** None

**Column Details:**

| Column Name | Data Type | Nullable (Yes or No) | Default Value |
|-------------|-----------|----------------------|---------------|
| BATCH_CD    | CHAR(8)   | No                   | -             |
| RUN_STEP    | NUMBER(5) | No                   | -             |
| STEP_SEQ    | NUMBER(5) | No                   | -             |
| RUN_TYPE    | CHAR(2)   | No                   | -             |
| VERSION     | NUMBER(5) | No                   | -             |

**Primary Key:**

| Key Type  | Column Name |
|-----------|-------------|
| COMPOSITE | BATCH_CD    |
|           | RUN_STEP    |
|           | STEP_SEQ    |

## C.4 CI\_PRC\_AGRD

**Purpose:** Used to store agreed pricing details

**Total Number of Columns:** 30

**Data Migration Required:** Not applicable

**Primary Key:** None

**Column Details:**

| Column Name       | Data Type | Nullable (Yes or No) | Default Value |
|-------------------|-----------|----------------------|---------------|
| ACCT_ID           | CHAR(10)  | No                   | -             |
| BASE_PER_ID       | CHAR(10)  | No                   | -             |
| INIT_PRICEITEM_CD | CHAR(10)  | No                   | -             |
| FIN_PRICEITEM_CD  | CHAR(10)  | No                   | -             |
| BUN_SCR           | NUMBER    | Yes                  | -             |

| Column Name       | Data Type | Nullable (Yes or No) | Default Value |
|-------------------|-----------|----------------------|---------------|
| PA_PER_ID         | CHAR(10)  | No                   | -             |
| PER_START_DT      | DATE      | Yes                  | -             |
| PER_END_DT        | DATE      | Yes                  | -             |
| PARTY_TYPE_FLG    | CHAR(4)   | Yes                  | -             |
| PRICE_ASGN_ID     | CHAR(10)  | No                   | -             |
| PA_OWNER_TYPE_FLG | CHAR(4)   | Yes                  | -             |
| TOU_CD            | CHAR(8)   | Yes                  | -             |
| PER_START_DT      | DATE      | Yes                  | -             |
| PER_END_DT        | DATE      | Yes                  | -             |
| PA_TYPE_FLAG      | CHAR(4)   | No                   | -             |
| PA_USAGE_FLG      | CHAR(2)   | No                   | ''            |
| PLA_PRICELIST_ID  | CHAR(10)  | Yes                  | -             |
| PA_PRICELIST_ID   | CHAR(10)  | Yes                  | -             |
| PRICELIST_ASGN_ID | CHAR(10)  | Yes                  | -             |
| PLA_START_DT      | DATE      | Yes                  | -             |
| PLA_END_DT        | DATE      | Yes                  | -             |
| PER_LEVEL         | NUMBER    | Yes                  | -             |
| PL_PRIORITY       | NUMBER    | Yes                  | -             |
| PL_LEVEL          | NUMBER    | Yes                  | -             |
| PLH_START_DT      | DATE      | Yes                  | -             |
| PLH_END_DT        | DATE      | Yes                  | -             |
| BUN_START_DT      | DATE      | Yes                  | -             |
| BUN_END_DT        | DATE      | Yes                  | -             |
| EFF_START_DT      | DATE      | Yes                  | -             |
| EFF_END_DT        | DATE      | Yes                  | -             |

**Indexes:**

| Sr. No. | Index Type | Column Name       |
|---------|------------|-------------------|
| 1       | COMPOSITE  | ACCT_ID           |
|         |            | INIT_PRICEITEM_CD |
|         |            | TOU_CD            |

## C.5 CI\_PRC\_INH\_PL

**Purpose:** Used to store pricing details of all inherited price lists

**Total Number of Columns:** 30

**Data Migration Required:** Not applicable

**Primary Key:** None

**Column Details:**

| Column Name       | Data Type | Nullable (Yes or No) | Default Value |
|-------------------|-----------|----------------------|---------------|
| ACCT_ID           | CHAR(10)  | No                   | -             |
| BASE_PER_ID       | CHAR(10)  | No                   | -             |
| INIT_PRICEITEM_CD | CHAR(10)  | No                   | -             |
| FIN_PRICEITEM_CD  | CHAR(10)  | No                   | -             |
| BUN_SCR           | NUMBER    | Yes                  | -             |
| PA_PER_ID         | CHAR(10)  | No                   | -             |
| PER_START_DT      | DATE      | Yes                  | -             |
| PER_END_DT        | DATE      | Yes                  | -             |
| PARTY_TYPE_FLG    | CHAR(4)   | Yes                  | -             |
| PRICE_ASGN_ID     | CHAR(10)  | No                   | -             |
| PA_OWNER_TYPE_FLG | CHAR(4)   | Yes                  | -             |
| TOU_CD            | CHAR(8)   | Yes                  | -             |
| PA_START_DT       | DATE      | Yes                  | -             |
| PA_END_DT         | DATE      | Yes                  | -             |
| PA_TYPE_FLAG      | CHAR(4)   | No                   | -             |
| PA_USAGE_FLG      | CHAR(2)   | No                   | ''            |
| PLA_PRICELIST_ID  | CHAR(10)  | Yes                  | -             |
| PA_PRICELIST_ID   | CHAR(10)  | Yes                  | -             |
| PRICELIST_ASGN_ID | CHAR(10)  | Yes                  | -             |
| PLA_START_DT      | DATE      | Yes                  | -             |
| PLA_END_DT        | DATE      | Yes                  | -             |
| PER_LEVEL         | NUMBER    | Yes                  | -             |
| PL_PRIORITY       | NUMBER    | Yes                  | -             |
| PL_LEVEL          | NUMBER    | Yes                  | -             |

| Column Name  | Data Type | Nullable (Yes or No) | Default Value |
|--------------|-----------|----------------------|---------------|
| PLH_START_DT | DATE      | Yes                  | -             |
| PLH_END_DT   | DATE      | Yes                  | -             |
| BUN_START_DT | DATE      | Yes                  | -             |
| BUN_END_DT   | DATE      | Yes                  | -             |
| EFF_START_DT | DATE      | Yes                  | -             |
| EFF_END_DT   | DATE      | Yes                  | -             |

**Indexes:**

| Sr. No. | Index Type       | Column Name       |
|---------|------------------|-------------------|
| 1       | NORMAL COMPOSITE | ACCT_ID           |
|         |                  | INIT_PRICEITEM_CD |
|         |                  | TOU_CD            |

## C.6 CI\_PRC\_PL

**Purpose:** Used to store pricing details of all pricelists

**Total Number of Columns:** 30

**Data Migration Required:** Not applicable

**Primary Key:** None

**Column Details:**

| Column Name       | Data Type | Nullable (Yes or No) | Default Value |
|-------------------|-----------|----------------------|---------------|
| ACCT_ID           | CHAR(10)  | No                   | -             |
| BASE_PER_ID       | CHAR(10)  | No                   | -             |
| INIT_PRICEITEM_CD | CHAR(10)  | No                   | -             |
| FIN_PRICEITEM_CD  | CHAR(10)  | No                   | -             |
| BUN_SCR           | NUMBER    | Yes                  | -             |
| PA_PER_ID         | CHAR(10)  | No                   | -             |
| PER_START_DT      | DATE      | Yes                  | -             |
| PER_END_DT        | DATE      | Yes                  | -             |
| PARTY_TYPE_FLG    | CHAR(4)   | Yes                  | -             |
| PRICE_ASGN_ID     | CHAR(10)  | No                   | -             |
| PA_OWNER_TYPE_FLG | CHAR(4)   | Yes                  | -             |

| Column Name       | Data Type | Nullable (Yes or No) | Default Value |
|-------------------|-----------|----------------------|---------------|
| TOU_CD            | CHAR(8)   | Yes                  | -             |
| PA_START_DT       | DATE      | Yes                  | -             |
| PA_END_DT         | DATE      | Yes                  | -             |
| PA_TYPE_FLAG      | CHAR(4)   | No                   | -             |
| PA_USAGE_FLG      | CHAR(2)   | No                   | ''            |
| PLA_PRICELIST_ID  | CHAR(10)  | Yes                  | -             |
| PA_PRICELIST_ID   | CHAR(10)  | Yes                  | -             |
| PRICELIST_ASGN_ID | CHAR(10)  | Yes                  | -             |
| PLA_START_DT      | DATE      | Yes                  | -             |
| PLA_END_DT        | DATE      | Yes                  | -             |
| PER_LEVEL         | NUMBER    | Yes                  | -             |
| PL_PRIORITY       | NUMBER    | Yes                  | -             |
| PL_LEVEL          | NUMBER    | Yes                  | -             |
| PLH_START_DT      | DATE      | Yes                  | -             |
| PLH_END_DT        | DATE      | Yes                  | -             |
| BUN_START_DT      | DATE      | Yes                  | -             |
| BUN_END_DT        | DATE      | Yes                  | -             |
| EFF_START_DT      | DATE      | Yes                  | -             |
| EFF_END_DT        | DATE      | Yes                  | -             |

**Indexes:**

| Sr. No. | Index Type       | Column Name       |
|---------|------------------|-------------------|
| 1       | NORMAL COMPOSITE | ACCT_ID           |
|         |                  | INIT_PRICEITEM_CD |
|         |                  | TOU_CD            |

## C.7 CI\_DISAGG\_BCHG\_DETAIL

**Purpose:** Used to store aggregated billable charges which will be affected due to disaggregation

**Total Number of Columns:** 16

**Data Migration Required:** Not applicable

**Primary Key:** None

### Column Details:

| Column Name         | Data Type | Nullable (Yes or No) | Default Value |
|---------------------|-----------|----------------------|---------------|
| TXN_DISAGG_REQ_ID   | CHAR(14)  | No                   | -             |
| BILLABLE_CHG_ID     | CHAR(12)  | Yes                  | -             |
| DO_NOT_AGG_SW       | CHAR(1)   | Yes                  | -             |
| DER_DIVISION        | CHAR(5)   | No                   | ''            |
| BILLABLE_CHG_ACT_CD | NUMBER(3) | No                   | -             |
| BO_STATUS_CD        | CHAR(1)   | No                   | -             |
| MESSAGE_CAT_NBR     | NUMBER(5) | Yes                  | 0             |
| MESSAGE_NBR         | NUMBER(5) | Yes                  | 0             |
| SW_PRM_ACCT_ID      | CHAR(10)  | Yes                  | -             |
| SW_PRM_CIS_DIVISION | CHAR(5)   | Yes                  | -             |
| SW_PRM_FREQUENCY    | CHAR(4)   | Yes                  | -             |
| SW_DISAGG_FROM_DT   | DATE      | Yes                  | -             |
| SYS_PROCESSING_DT   | DATE      | Yes                  | -             |
| PRICE_CURRENCY_CD   | CHAR(3)   | Yes                  | -             |
| SA_ID               | CHAR(10)  | Yes                  | -             |
| FINAL_PRICE_ITEM_CD | CHAR(10)  | Yes                  | -             |

### Indexes:

| Sr. No. | Index Type | Column Name     |
|---------|------------|-----------------|
| 1       | NORMAL     | BILLABLE_CHG_ID |
| 2       | NORMAL     | BO_STATUS_CD    |

## C.8 CI\_DISAGG\_TXN\_PRITM\_DETAIL

**Purpose:** Used to store transaction legs which will be affected due to disaggregation

**Total Number of Columns:** 25

**Data Migration Required:** Not applicable

**Primary Key:** None

**Column Details:**

| Column Name           | Data Type  | Nullable (Yes or No) | Default Value |
|-----------------------|------------|----------------------|---------------|
| TXN_DISAGG_REQ_ID     | CHAR(14)   | No                   | -             |
| TXN_DETAIL_ID         | NUMBER(15) | No                   | -             |
| SEQ_NO                | NUMBER(5)  | No                   | -             |
| DER_DIVISION          | CHAR(5)    | No                   | ''            |
| ACCT_ID               | CHAR(10)   | No                   | -             |
| INITIAL_PRICE_ITEM_CD | CHAR(10)   | No                   | -             |
| INITIAL_TOU_CD        | CHAR(8)    | Yes                  | -             |
| BILLABLE_CHG_ID       | CHAR(12)   | Yes                  | -             |
| DO_NOT_AGG_SW         | CHAR(1)    | Yes                  | -             |
| PRICEITEM_PARM_GRP_ID | NUMBER(22) | Yes                  | -             |
| TXN_PRITM_STATUS_CD   | NUMBER(3)  | Yes                  | -             |
| TXN_ACT_CD            | NUMBER(3)  | No                   | -             |
| BILLABLE_CHG_ACT_CD   | NUMBER(3)  | Yes                  | 0             |
| BO_STATUS_CD          | CHAR(1)    | No                   | -             |
| MESSAGE_CAT_NBR       | NUMBER(5)  | Yes                  | 0             |
| MESSAGE_NBR           | NUMBER(5)  | Yes                  | 0             |
| SW_PRM_ACCT_ID        | CHAR(10)   | Yes                  | -             |
| SW_PRM_CIS_DIVISION   | CHAR(5)    | Yes                  | -             |
| SW_PRM_FREQUENCY      | CHAR(4)    | Yes                  | -             |
| PROCESSING_DT         | DATE       | Yes                  | -             |
| SW_DISAGG_FROM_DT     | DATE       | Yes                  | -             |
| SYS_PROCESSING_DT     | DATE       | Yes                  | -             |
| CURR_SYS_PRCS_DT      | DATE       | Yes                  | -             |

| Column Name    | Data Type | Nullable (Yes or No) | Default Value |
|----------------|-----------|----------------------|---------------|
| SRC_TABLE_NAME | NUMBER(2) | Yes                  | -             |
| TXN_DTTM       | DATE      | Yes                  | -             |

**Indexes:**

| Sr. No. | Index Type | Column Name     |
|---------|------------|-----------------|
| 1       | NORMAL     | TXN_DETAIL_ID   |
|         |            | SEQ_NO          |
| 2       | NORMAL     | BO_STATUS_CD    |
| 3       | NORMAL     | BILLABLE_CHG_ID |

## C.9 CI\_ROLLBACK\_TXN\_DETAIL

**Purpose:** Used to store transactions (with the **Error** and **Ignore** statuses) which you want to rollback

**Total Number of Columns:** 8

**Data Migration Required:** Yes

**Indexes:** None

**Column Details:**

| Column Name       | Data Type    | Nullable (Yes or No) | Default Value |
|-------------------|--------------|----------------------|---------------|
| TXN_DETAIL_ID     | NUMBER(15)   | No                   | -             |
| TXN_DTTM          | DATE         | No                   | -             |
| CURR_SYS_PRCES_DT | DATE         | No                   | -             |
| BO_STATUS_CD      | CHAR(12)     | No                   | -             |
| TXN_HEADER_ID     | CHAR(14)     | No                   | -             |
| TXN_SOURCE_CD     | VARCHAR2(30) | No                   | -             |
| CIS_DIVISION      | CHAR(5)      | No                   | -             |
| DISAGG_SW         | CHAR(1)      | No                   | -             |

**Primary Key:**

| Key Type  | Column Name   |
|-----------|---------------|
| COMPOSITE | TXN_DETAIL_ID |
|           | BO_STATUS_CD  |

## C.10 CI\_TXN\_DETAIL\_STG

**Purpose:** Used to store uploaded transactions

**Total Number of Columns:** 81

**Data Migration Required:** Yes

**Primary Key:** None

### Column Details:

| Column Name        | Data Type     | Nullable (Yes or No) | Default Value |
|--------------------|---------------|----------------------|---------------|
| TXN_DETAIL_ID      | NUMBER(15)    | No                   | -             |
| TXN_HEADER_ID      | CHAR(14)      | No                   | -             |
| TXN_SOURCE_CD      | VARCHAR2(30)  | No                   | -             |
| TXN_REC_TYPE_CD    | VARCHAR2(30)  | No                   | -             |
| TXN_DTTM           | DATE          | No                   | -             |
| EXT_TXN_NBR        | VARCHAR2(256) | No                   | ''            |
| CUST_REF_NBR       | VARCHAR2(256) | No                   | ''            |
| CIS_DIVISION       | CHAR(5)       | No                   | -             |
| ACCT_ID            | CHAR(10)      | No                   | -             |
| TXN_VOL            | NUMBER(36,18) | No                   | 0             |
| TXN_AMT            | NUMBER(36,18) | No                   | 0             |
| CURRENCY_CD        | CHAR(3)       | No                   | ''            |
| MANUAL_SW          | CHAR(1)       | No                   | 'N'           |
| USER_ID            | CHAR(8)       | No                   | -             |
| HOW_TO_USE_TXN_FLG | CHAR(1)       | No                   | ''            |
| MESSAGE_CAT_NBR    | NUMBER(5)     | No                   | 0             |
| MESSAGE_NBR        | NUMBER(5)     | No                   | 0             |
| UDF_CHAR_1         | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_2         | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_3         | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_4         | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_5         | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_6         | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_7         | VARCHAR2(60)  | No                   | ''            |

| Column Name       | Data Type     | Nullable (Yes or No) | Default Value |
|-------------------|---------------|----------------------|---------------|
| UDF_CHAR_8        | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_9        | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_10       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_11       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_12       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_13       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_14       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_15       | VARCHAR2(60)  | No                   | ''            |
| UDF_NBR_1         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_2         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_3         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_4         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_5         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_6         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_7         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_8         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_9         | NUMBER(36,18) | No                   | 0             |
| UDF_NBR_10        | NUMBER(36,18) | No                   | 0             |
| UDF_AMT_1         | NUMBER(36,18) | No                   | 0             |
| UDF_CURRENCY_CD_1 | CHAR(3)       | No                   | ''            |
| UDF_AMT_2         | NUMBER(36,18) | No                   | 0             |
| UDF_CURRENCY_CD_2 | CHAR(3)       | No                   | ''            |
| UDF_AMT_3         | NUMBER(36,18) | No                   | 0             |
| UDF_CURRENCY_CD_3 | CHAR(3)       | No                   | ''            |
| UDF_AMT_4         | NUMBER(36,18) | No                   | 0             |
| UDF_CURRENCY_CD_4 | CHAR(3)       | No                   | ''            |
| UDF_AMT_5         | NUMBER(36,18) | No                   | 0             |
| UDF_CURRENCY_CD_5 | CHAR(3)       | No                   | ''            |
| UDF_DTTM_1        | DATE          | Yes                  | -             |
| UDF_DTTM_2        | DATE          | Yes                  | -             |
| UDF_DTTM_3        | DATE          | Yes                  | -             |

| Column Name       | Data Type     | Nullable (Yes or No) | Default Value |
|-------------------|---------------|----------------------|---------------|
| UDF_DTTM_4        | DATE          | Yes                  | -             |
| UDF_DTTM_5        | DATE          | Yes                  | -             |
| BUS_OBJ_CD        | CHAR(30)      | No                   | ''            |
| BO_STATUS_CD      | CHAR(12)      | No                   | ''            |
| STATUS_UPD_DTTM   | DATE          | Yes                  | -             |
| VERSION           | NUMBER(5)     | No                   | 1             |
| DO_NOT_AGG_SW     | CHAR(1)       | No                   | 'Y'           |
| TXN_UPLOAD_DTTM   | DATE          | Yes                  | -             |
| ACCT_NBR_TYPE_CD  | CHAR(8)       | No                   | ''            |
| ACCT_NBR          | VARCHAR2(30)  | No                   | ''            |
| UDF_CHAR_16       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_17       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_18       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_19       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_20       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_21       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_22       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_23       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_24       | VARCHAR2(60)  | No                   | ''            |
| UDF_CHAR_25       | VARCHAR2(60)  | No                   | ''            |
| RULE_CD           | CHAR(12)      | No                   | ''            |
| MESSAGE_DESC      | VARCHAR2(300) | Yes                  | -             |
| DISAGG_SW         | CHAR(1)       | Yes                  | 'N'           |
| DISAGG_CNT        | NUMBER(3)     | Yes                  | -             |
| PROCESSING_DT     | DATE          | Yes                  | -             |
| LAST_SYS_PRCES_DT | DATE          | Yes                  | -             |

**Indexes:**

| Sr. No. | Index Type       | Column Name     |
|---------|------------------|-----------------|
| 1       | NORMAL COMPOSITE | TXN_DETAIL_ID   |
|         |                  | TRUNC(TXN_DTTM) |

| Sr. No. | Index Type | Column Name |
|---------|------------|-------------|
|         |            | DISAGG_SW   |

## C.11 CI\_TXN\_DTL\_PRITM\_STG

**Purpose:** Used to store legs of disaggregated transactions which are not affected due to disaggregation

**Total Number of Columns:** 21

**Data Migration Required:** Not applicable

**Primary Key:** None

### Column Details:

| Column Name           | Data Type    | Nullable (Yes or No) | Default Value |
|-----------------------|--------------|----------------------|---------------|
| TXN_DETAIL_ID         | NUMBER(15)   | No                   | -             |
| INITIAL_PRICE_ITEM_CD | CHAR(10)     | No                   | -             |
| INITIAL_TOU_CD        | CHAR(8)      | No                   | ''            |
| CIS_DIVISION          | CHAR(5)      | No                   | -             |
| ACCT_ID               | CHAR(10)     | No                   | -             |
| VERSION               | NUMBER(5)    | No                   | 1             |
| TXN_DTTM              | DATE         | No                   | -             |
| PRICE_SRCH_DT         | DATE         | Yes                  | -             |
| SEQ_NO                | NUMBER(5)    | No                   | 1             |
| TXN_HEADER_ID         | CHAR(14)     | No                   | ''            |
| TXN_SOURCE_CD         | VARCHAR2(30) | No                   | ''            |
| ACCT_NBR_TYPE_CD      | CHAR(8)      | No                   | ''            |
| ACCT_NBR              | VARCHAR2(30) | No                   | ''            |
| BILLABLE_CHG_ID       | CHAR(12)     | No                   | ''            |
| PRICEITEM_PARM_GRP_ID | NUMBER(22)   | Yes                  | -             |
| DO_NOT_AGG_SW         | CHAR(1)      | Yes                  | ''            |
| TXN_PRITM_STATUS_CD   | NUMBER(3)    | Yes                  | -             |
| IS_DISAGG             | CHAR(1)      | Yes                  | -             |
| PROCESSING_DT         | DATE         | Yes                  | -             |
| ORG_DIVISION          | CHAR(5)      | Yes                  | -             |
| LAST_SYS_PRCS_DT      | DATE         | Yes                  | -             |

**Indexes:**

| Sr. No. | Index Type       | Column Name           |
|---------|------------------|-----------------------|
| 1       | NORMAL COMPOSITE | ACCT_ID               |
|         |                  | INITIAL_PRICE_ITEM_CD |
|         |                  | INITIAL_TOU_CD        |
|         |                  | PRICEITEM_PARM_GRP_ID |
|         |                  | TXN_DTTM              |
| 2       | NORMAL           | BILLABLE_CHG_ID       |
| 3       | NORMAL           | TXN_DETAIL_ID         |

## Appendix D : Existing Tables Modified in V2.3.0.1.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing V2.3.0.1.0. It also indicates the columns that are newly added and modified in these tables.

### D.1 CI\_ADJ\_APREQ

The following table lists the columns that are either newly added or modified in the CI\_ADJ\_APREQ table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

### D.2 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 V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | BATCH_CD    | Newly Added       | -                       | CHAR(8)                 | No                                  | -                                 |
| 2       | BATCH_NBR   | Newly Added       | -                       | NUMBER(10)              | No                                  | -                                 |

| Sr. No. | Column Name     | Modification Type | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-----------------|-------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 3       | BATCH_RERUN_NBR | Newly Added       | -                       | NUMBER(10)              | No                                  | -                                 |

### D.3 CI\_BCHG\_UP\_XTYP\_L

The following table lists the columns that are either newly added or modified in the CI\_BCHG\_UP\_XTYP\_L table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | DESCR50     | Increased Column Length | VARCHAR2(50)            | VARCHAR2(100)           | No                                  | -                                 |

### D.4 CI\_BILL\_ROUTING

The following table lists the columns that are either newly added or modified in the CI\_BILL\_ROUTING table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.5 CI\_ENRL\_ADDR

The following table lists the columns that are either newly added or modified in the CI\_ENRL\_ADDR table.

| Sr. No. | Column Name  | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|--------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | CITY_UPR     | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 3       | ADDRESS3     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 4       | COUNTY       | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 5       | ADDRESS4     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 6       | CITY         | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 7       | ADDRESS1     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 8       | ADDRESS1_UPR | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.6 CI\_EXT\_STMT\_LOG

The following table lists the columns that are either newly added or modified in the CI\_EXT\_STMT\_LOG table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | DESCRLONG   | Increased Column Length | VARCHAR2(2000)          | VARCHAR2(4000)          | No                                  | -                                 |

## D.7 CI\_PER

The following table lists the columns that are either newly added or modified in the CI\_PER table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.8 CI\_PER\_ADDR

The following table lists the columns that are either newly added or modified in the CI\_PER\_ADDR table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | POSTAL      | Increased Column Length | VARCHAR2(10)            | VARCHAR2(12)            | No                                  | -                                 |
| 2       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 4       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 5       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 6       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 7       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.9 CI\_PER\_ADDR\_OVRD

The following table lists the columns that are either newly added or modified in the CI\_PER\_ADDR\_OVRD table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.10 CI\_PER\_ADDR\_SEAS

The following table lists the columns that are either newly added or modified in the CI\_PER\_ADDR\_SEAS table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.11 CI\_PREM

The following table lists the columns that are either newly added or modified in the CI\_PREM table.

| Sr. No. | Column Name  | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|--------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | CITY_UPR     | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 3       | ADDRESS3     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 4       | COUNTY       | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 5       | ADDRESS4     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 6       | CITY         | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 7       | ADDRESS1     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 8       | ADDRESS1_UPR | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.12 CI\_PRM\_ALT\_ADDR

The following table lists the columns that are either newly added or modified in the CI\_PRM\_ALT\_ADDR table.

| Sr. No. | Column Name  | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|--------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | CITY_UPR     | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 3       | ADDRESS3     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 4       | COUNTY       | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 5       | ADDRESS4     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 6       | CITY         | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 7       | ADDRESS1     | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 8       | ADDRESS1_UPR | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.13 CI\_QUOTE\_RTG

The following table lists the columns that are either newly added or modified in the CI\_QUOTE\_RTG table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.14 CI\_SPR\_L

The following table lists the columns that are either newly added or modified in the CI\_SPR\_L table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | DESCR50     | Increased Column Length | VARCHAR2(50)            | VARCHAR2(100)           | No                                  | -                                 |

## D.15 CI\_SS\_ADDR\_OVRD

The following table lists the columns that are either newly added or modified in the CI\_SS\_ADDR\_OVRD table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | ADDRESS2    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 2       | ADDRESS3    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 3       | COUNTY      | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 4       | ADDRESS4    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |
| 5       | CITY        | Increased Column Length | VARCHAR2(30)            | VARCHAR2(90)            | No                                  | -                                 |
| 6       | ADDRESS1    | Increased Column Length | VARCHAR2(64)            | VARCHAR2(254)           | No                                  | -                                 |

## D.16 CI\_STM\_CNST

The following table lists the columns that are either newly added or modified in the CI\_STM\_CNST table.

| Sr. No. | Column Name | Modification Type       | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration |
|---------|-------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------|
| 1       | DESCR50     | Increased Column Length | VARCHAR2(50)            | VARCHAR2(100)           | No                                  | -                                 |

## D.17 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 V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                                                                                                                                            |
|---------|-------------------|-------------------|-------------------------|-------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | DISAGG_SW         | Newly Added       | -                       | CHAR(1)                 | Yes                                 | N                                                                                                                                                                                                                                                                                                            |
| 2       | DISAGG_CNT        | Newly Added       | -                       | NUMBER(3)               | Yes                                 | 0                                                                                                                                                                                                                                                                                                            |
| 3       | PROCESSING_DT     | Newly Added       | -                       | DATE                    | No                                  | -                                                                                                                                                                                                                                                                                                            |
| 4       | CURR_SYS_PRCES_DT | Newly Added       | -                       | DATE                    | Yes                                 | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).<br>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then CURR_SYS_PRCES_DT is set to 01-01-2012. |

| Sr. No. | Column Name       | Modification Type | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                                                                                                                                            |
|---------|-------------------|-------------------|-------------------------|-------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5       | LAST_SYS_PRCES_DT | Newly Added       | -                       | DATE                    | Yes                                 | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).<br>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then LAST_SYS_PRCES_DT is set to 01-01-2012. |

## D.18 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 V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                                                                                                                                                                   |                                               |                                                                |                  |    |
|-----------------------------------------------|----------------------------------------------------------------|-------------------|-------------------------|-------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------|------------------|----|
| 1                                             | TXN_PRITM_STATUS_CD                                            | Newly Added       | -                       | NUMBER(3)               | Yes                                 | <p>The column value is set based on the value of the BO_STATUS_CD column in the ORG_CI_TXN_DETAIL table.</p> <table border="1"> <tr> <td>If the value of the BO_STATUS_CD column is...</td> <td>Then the value of the TXN_PRITM_STAT US_CD column is set to...</td> </tr> <tr> <td>COMP (and if the</td> <td>40</td> </tr> </table> | If the value of the BO_STATUS_CD column is... | Then the value of the TXN_PRITM_STAT US_CD column is set to... | COMP (and if the | 40 |
| If the value of the BO_STATUS_CD column is... | Then the value of the TXN_PRITM_STAT US_CD column is set to... |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                     |                                               |                                                                |                  |    |
| COMP (and if the                              | 40                                                             |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                     |                                               |                                                                |                  |    |

| Sr. No.                                                                                                  | Column Name      | Modification Type | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
|----------------------------------------------------------------------------------------------------------|------------------|-------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--|----------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------|--|------|----|------|----|
|                                                                                                          |                  |                   |                         |                         |                                     | <table border="1"> <tr> <td>billable charge is generated for the transaction leg)</td> <td></td> </tr> <tr> <td>COMP (and if the billable charge is not generated for the transaction leg)</td> <td>20</td> </tr> <tr> <td colspan="2"> <b>Note:</b> This scenario will occur when one or more, but not all legs of the transaction are ignored.                 </td> </tr> <tr> <td>IGNR</td> <td>20</td> </tr> <tr> <td>EROR</td> <td>30</td> </tr> </table> | billable charge is generated for the transaction leg) |  | COMP (and if the billable charge is not generated for the transaction leg) | 20 | <b>Note:</b> This scenario will occur when one or more, but not all legs of the transaction are ignored. |  | IGNR | 20 | EROR | 30 |
| billable charge is generated for the transaction leg)                                                    |                  |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| COMP (and if the billable charge is not generated for the transaction leg)                               | 20               |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| <b>Note:</b> This scenario will occur when one or more, but not all legs of the transaction are ignored. |                  |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| IGNR                                                                                                     | 20               |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| EROR                                                                                                     | 30               |                   |                         |                         |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| 2                                                                                                        | IS_DISAGG        | Newly Added       | -                       | CHAR(1)                 | Yes                                 | N                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| 3                                                                                                        | PROCESSING_DT    | Newly Added       | -                       | DATE                    | No                                  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| 4                                                                                                        | ORG_DIVISION     | Newly Added       | -                       | CHAR(5)                 | Yes                                 | The column value is set to the value defined in the CIS_DIVISION column of the ORG_CI_TXN_DETAIL table.                                                                                                                                                                                                                                                                                                                                                         |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |
| 5                                                                                                        | CURR_SYS_PRCs_DT | Newly Added       | -                       | DATE                    | Yes                                 | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).                                                                                                                                                                                                                                                                   |                                                       |  |                                                                            |    |                                                                                                          |  |      |    |      |    |

| Sr. No. | Column Name       | Modification Type | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                                                                                                                                            |
|---------|-------------------|-------------------|-------------------------|-------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                   |                   |                         |                         |                                     | For example, if the transaction date (TXN_DTTM) is 03-01-2012, then CURR_SYS_PRCES_DT is set to 01-01-2012.                                                                                                                                                                                                  |
| 6       | LAST_SYS_PRCES_DT | Newly Added       | -                       | DATE                    | Yes                                 | The column value format is DD-MM-YYYY. Where, Date (DD) is set to 01, Month (MM) is set to month of TXN_DTTM (Transaction Date), and Year (YY) is set to year of TXN_DTTM (Transaction Date).<br>For example, if the transaction date (TXN_DTTM) is 03-01-2012, then LAST_SYS_PRCES_DT is set to 01-01-2012. |

## D.19 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 V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                              |
|---------|-------------|-------------------|-------------------------|-------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | REQUEST_SRC | Newly Added       | -                       | CHAR(4)                 | Yes                                 | If the DISAGG_TRIGGER is set to <b>NULL</b> , then the column value is set to <b>AUTO</b> . And, if the DISAGG_TRIGGER is set to <b>DISAGG</b> , then the column value is set to <b>BACH</b> . |

## D.20 CI\_PRICEITEM\_PARM\_GRP\_K

The following table lists the columns that are either newly added or modified in the CI\_PRICEITEM\_PARM\_GRP\_K table.

| Sr. No. | Column Name | Modification Type | Data Type in V2.3.0.0.0 | Data Type in V2.3.0.1.0 | Data Migration Required (Yes or No) | Column Value After Data Migration                                                                                                                                                                                                                                                                                     |
|---------|-------------|-------------------|-------------------------|-------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | PARM_STR    | Newly Added       | -                       | VARCHAR2(4000)          | Yes                                 | The column value is a string that includes parameters and their values separated by a delimiter. The parameters appear in the string in the ascending order of the parameter code. The parameters with null values are ignored. The string is created in the following format:<br>CODE1=VAL1~CODE2=VAL2~CODE3=VAL3... |

## Appendix E : Before and After Data Migration

This section lists the tables which are affected due to data migration and explains the impact on these tables.

### E.1 CI\_TXN\_DETAIL

The following table indicates that before data migration all transactions were stored in the CI\_TXN\_DETAIL table:

| Before Data Migration |              |              |
|-----------------------|--------------|--------------|
| Table Name            | Column Name  | Column Value |
| CI_TXN_DETAIL         | BO_STATUS_CD | UPLD         |
|                       |              | INVL         |
|                       |              | EROR         |
|                       |              | IGNR         |
|                       |              | COMP         |
|                       |              | CNCL         |

The following table indicates that after data migration transactions with different statuses are stored in different tables:

| After Data Migration   |              |              |
|------------------------|--------------|--------------|
| Table Name             | Column Name  | Column Value |
| CI_TXN_DETAIL_STG      | BO_STATUS_CD | UPLD         |
| CI_ROLLBACK_TXN_DETAIL | BO_STATUS_CD | EROR         |
|                        |              | IGNR         |
| CI_TXN_DETAIL          | BO_STATUS_CD | INVL         |
|                        |              | EROR         |
|                        |              | IGNR         |
|                        |              | COMP         |
|                        |              | CNCL         |

## E.2 CI\_TXN\_DTL\_PRITM

The following table indicates that there is no change in the CI\_TXN\_DTL\_PRITM table. It stores the legs of all transactions which are in the CI\_TXN\_DETAIL table.

| Before and After Data Migration |              |              |
|---------------------------------|--------------|--------------|
| Table Name                      | Column Name  | Column Value |
| CI_TXN_DTL_PRITM                | BO_STATUS_CD | EROR         |
|                                 |              | IGNR         |
|                                 |              | COMP         |

## E.3 CI\_PRICEITEM\_PARM\_GRP\_K

The following table indicates that the columns that are affected in the CI\_PRICEITEM\_PARM\_GRP\_K table due to data migration:

| After Data Migration    |             |                                                                                                                                                                                                                                                                                                                       |
|-------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Table Name              | Column Name | Column Value                                                                                                                                                                                                                                                                                                          |
| CI_PRICEITEM_PARM_GRP_K | PARAM_COUNT | Number of parameters in the product parameter group which have not null values                                                                                                                                                                                                                                        |
|                         | PARAM_STR   | The column value is a string that includes parameters and their values separated by a delimiter. The parameters appear in the string in the ascending order of the parameter code. The parameters with null values are ignored. The string is created in the following format:<br>CODE1=VAL1~CODE2=VAL2~CODE3=VAL3... |

## E.4 CI\_TXN\_DISAGG\_REQ

The following table indicates that the columns that are affected in the CI\_TXN\_DISAGG\_REQ table due to data migration:

| After Data Migration |             |                                                                                                                                                                                                |
|----------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Table Name           | Column Name | Column Value                                                                                                                                                                                   |
| CI_TXN_DISAGG_REQ    | REQUEST_SRC | If the DISAGG_TRIGGER is set to <b>NULL</b> , then the column value is set to <b>AUTO</b> . And, if the DISAGG_TRIGGER is set to <b>DISAGG</b> , then the column value is set to <b>BACH</b> . |