Oracle® Revenue Management and Billing

Version 2.5.0.2.0

Upgrade Guide

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ORACLE

Oracle Revenue Management and Billing Upgrade Guide

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Preface

About This Document

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

Intended Audience

This document is intended for the following audience:

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

Organization of the Document

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

Section No.	Section Name	Description
Section 1	Preparing for Upgrade	Provides an overview of the upgrade process. It also lists the prerequisites for upgrading the application.
Section 2	Upgrading from ORMB Version 2.5.0.1.0 to 2.5.0.2.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0.
Section 3	Additional Tasks	Lists and describes the additional tasks that you need to perform after upgrading the application.
Appendix A	ORMB 2.5.0.2.0 Patch Numbers	Lists the ORMB Version 2.5.0.2.0 domain-specific patch numbers along with its contents.
Appendix B	Known Issues	Lists the known issues in the current release of the Oracle Revenue Management and Billing application.
Appendix C	Third Party Software Upgrade	Provides a list of third party software that you need to upgrade before upgrading the application.
Appendix D	New Tables Added in 2.5.0.2.0	Lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 2.5.0.2.0 database.

Section No.	Section Name	Description
Appendix E	Existing Tables Modified in 2.5.0.2.0	Lists the existing tables and their columns that are modified in the Oracle Revenue Management and Billing Version 2.5.0.2.0 database.
Appendix F	Algorithms and Algorithm Types Dropped in 2.5.0.2.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.5.0.2.0.
Appendix G	Parameters Added or Removed from Algorithm Types in 2.5.0.2.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 2.5.0.2.0.
Appendix H	Option Types Added or Removed from Feature Configurations in 2.5.0.2.0	Lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 2.5.0.2.0.
Appendix I	Characteristic Types Dropped in 2.5.0.2.0	Lists the characteristic types which are dropped in Oracle Revenue Management and Billing Version 2.5.0.2.0.
Appendix J	SQL Statements for 2.5.0.1.0 to 2.5.0.2.0 Data Migration	Lists and describes the SQL queries which are used for migrating data from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0.
Appendix K	Changing the DB User Password	Explains how to change the database user password.

Related Documents

You can refer to the following documents for more information:

Document	Description
Oracle Revenue Management and Billing Version 2.5.0.2.0 Release Notes	Provides a brief description about the new features, enhancements, UI and database level changes, supported platforms, framework upgrade, supported upgrades, and technology upgrade made in this release. It also highlights the discontinued features, bug fixes, and known issues in this release.
Oracle Revenue Management and Billing Upgrade Path Guide	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.

Change Log

Revision	Last Update	Updated Section	Comments
9.1	16-Sep-2016	Section 2.3.1: Installing Rollup Pack for OUAF Version 4.3.0.1.0	Updated Information
		Section 2.3.2: Generating Security for Database Objects	Updated Information
	03-Oct-2016	Section 2.6.2: Applying the 23189556 Patch	Updated Information
		Section 2.6.3: Generating Security for Database Objects	Updated Information
9.2	20-Aug-2019	Section 2: Upgrading from ORMB Version 2.5.0.1.0 to 2.5.0.2.0	Added Information about the Single-Step Utility

Contents

1. Preparing for Upgrade

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

1.1 Upgrade Overview

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

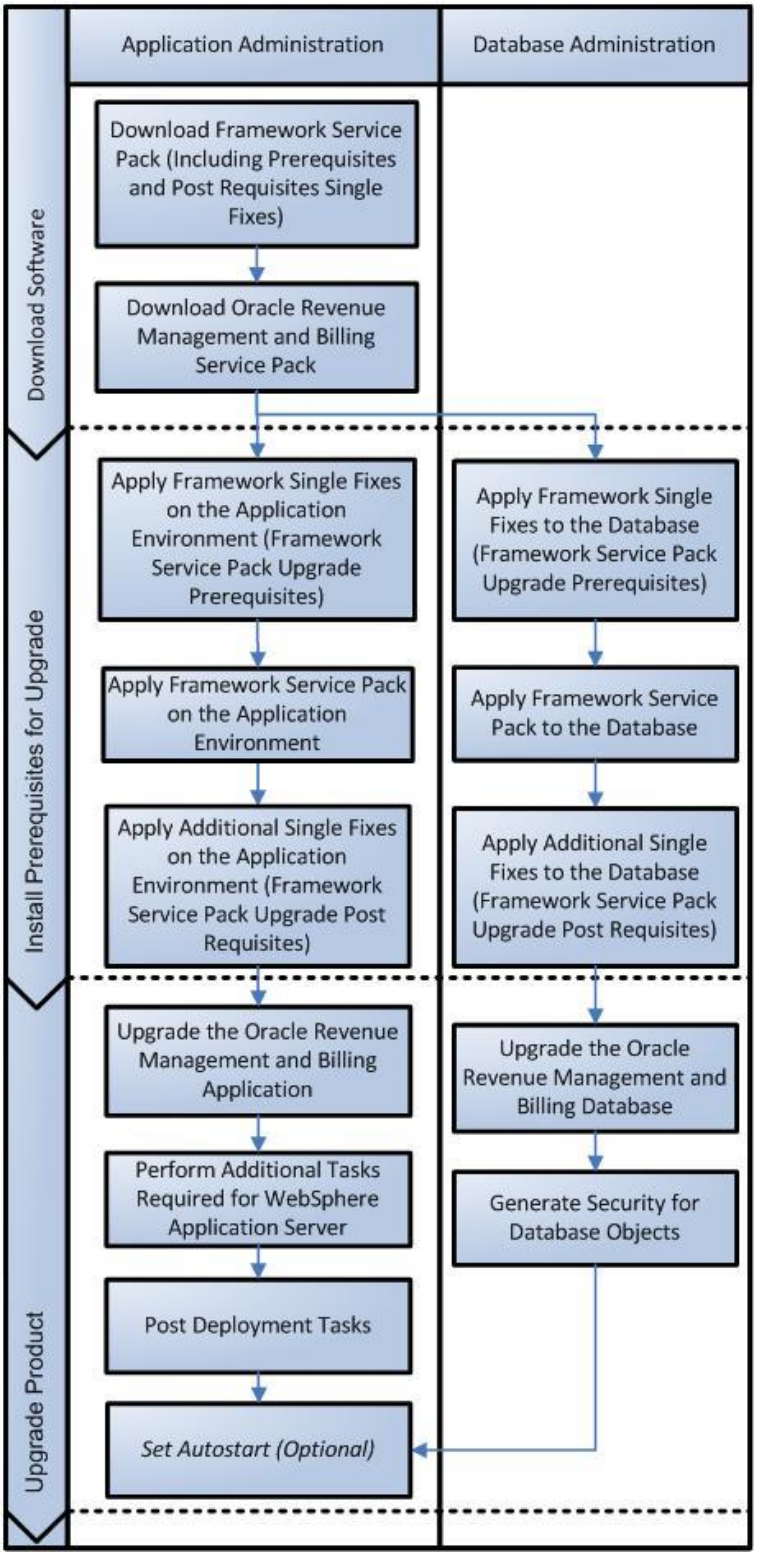

Figure 1 : Upgrade Process

1.2 Upgrade Pre-requisites

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

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

1.3 Supported Upgrades

In this release, we support the following upgrades:

- Upgrade from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0

Note: For upgrading from any other version of Oracle Revenue Management and Billing other than 2.5.0.1.0, consult with Oracle Support, Oracle Partner, or Oracle Consulting that may be supporting your implementation and upgrade process.

2. Upgrading from ORMB Version 2.5.0.1.0 to 2.5.0.2.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0. The high-level steps include:

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

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

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

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

2.1 Prerequisites

If you are already using the Transaction Feed Management feature and want to upgrade to Oracle Revenue Management and Billing Version 2.5.0.2.0, 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 2.5.0.1.0 will not happen successfully.
- Transactions which are uploaded using 2.5.0.1.0 must not be in the **Initial Product Determined (INPD)** status. They can be in the **Uploaded (UPLD)**, **Invalid (INVL)**, **Error (EROR**), **Completed (COMP)**, or **Cancelled (CNCL)** status.
- Equal to (=) or tilde (~) symbol is not used in any existing price item parameter code or value. Otherwise, erroneous results might occur.

2.2 Downloading the ORMB Patches

For upgrading from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0, you must download the following patches from My Oracle Support:

- RMB V2.5.0.2.0 - <Domain>

Note: For more details about the patch number, refer to Appendix A: ORMB 2.5.0.2.0 Patch Numbers.

- ACCOUNT BO ERROR IN REPLACE MODE (Patch Number: 22062220)
- UPGRADE FROM 2.5.0.1.0 to 2.5.0.2.0 (Patch Number: 23013891)
- COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER (Patch Number: 22907009)
- LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY (Patch Number: 22905679)
- UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG (Patch Number: 22899521)
- MANDATORY PATCH FOR ORMB 2.5.0.2.0 (Patch Number: 23189556)
- UPDATE 2.5.0.2.0 ONLINE HELP patch (Patch Number: 23194062)

The downloaded files will be in the ZIP format.

2.3 Upgrading Framework on the Database

While upgrading from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0, you need to install the following on the database:

1. Rollup Pack for Oracle Utilities Application Framework (OUAF) Version 4.3.0.1.0

To install the framework service pack on the database, you must have the following:

- Oracle Database Client 12.1.0.2 installed on the Windows machine from where you want to install the framework service pack
- Ability to connect to the database

2.3.1 Installing Rollup Pack for OUAF Version 4.3.0.1.0

You can install the rollup pack for Oracle Utilities Application Framework Version 4.3.0.1.0 from a Windows machine and UNIX Standalone server. To install the rollup pack for Oracle Utilities Application Framework (OUAF) Version 4.3.0.1.0 on the database:

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

   ```
   mkdir TEMPDIR
   ```

3. Copy the RMB V2.5.0.2.0 - <Domain> 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.

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

   AIX, Linux:

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

   Windows:

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

5. Unzip the RMB V2.5.0.2.0 - <Domain> patch using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. For more information about the contents of the RMB V2.5.0.2.0 - <Domain> patch, refer to Appendix A: ORMB 2.5.0.2.0 Patch Numbers.

6. Change to <DESTINATION_FOLDER_1> using the following command:

   AIX, Linux:

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

   Windows:

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

7. Unzip the RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform file using the following command:

   AIX, Linux:

   ```
   unzip RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_2>
   ```

   Windows:

   ```
   unzip RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_2>
   ```

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_2> folder. The contents include the ORMB-V25020-FW-PREREQ-MultiPlatform.jar file.

8. Change to <DESTINATION_FOLDER_2> using the following command:

   AIX, Linux:

   ```
   cd <PATH>/<DESTINATION_FOLDER_2>
   ```

Windows:

```
cd <PATH>\<DESTINATION_FOLDER_2>
```

9. Decompress the JAR file using the following command:

   ```
   jar -xvf ORMB-V25020-FW-PREREQ-MultiPlatform.jar
   ```

   A sub-directory named `FW-V4.3.0.1.0-Rollup` is extracted. It contains the following two sub-folders:

   - Application
   - Database

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

    AIX, Linux:

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

    Windows:

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

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

    ```
    mkdir dbpatch_tools
    ```

12. Copy the `db_patch_standalone.jar` file to the `dbpatch_tools` folder using the following command:

    AIX, Linux:

    ```
    cp <DESTINATION_FOLDER_2>/FW-V4.3.0.1.0-
    Rollup/Database/db_patch_standalone.jar TEMPDIR/dbpatch_tools
    ```

    Windows:

    ```
    copy <DESTINATION_FOLDER_2>\FW-V4.3.0.1.0-
    Rollup\Database\db_patch_standalone.jar TEMPDIR\dbpatch_tools
    ```

Note: The `<DESTINATION_FOLDER_2>` folder is the location where you have extracted the contents of the `ORMB-V25020-FW-PREREQ-MultiPlatform.jar` file.

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

    AIX, Linux:

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

    Windows:

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

14. Decompress the JAR file using the following command:

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

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

    - bin
    - config

- lib

15. Set the TOOLSBIN environment variable using the following command:

    AIX, Linux:

    ```
    export TOOLSBIN=/TEMPDIR/dbpatch_tools/bin
    ```

    Windows:

    ```
    SET TOOLSBIN=TEMPDIR\dbpatch_tools\bin
    ```

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

    AIX, Linux:

    ```
    cd <DESTINATION_FOLDER_2>/FW-V4.3.0.1.0-Rollup/Database
    ```

    Windows:

    ```
    cd <DESTINATION_FOLDER_2>\FW-V4.3.0.1.0-Rollup\Database
    ```

Note: The <DESTINATION_FOLDER_2> folder is the location where you have extracted the contents of the ORMB-V25020-FW-PREREQ-MultiPlatform.jar file.

17. Execute the ouafDatabasePatch utility using the following command:

    AIX, Linux:

    ```
    ouafDatabasePatch.sh
    ```

    Windows:

    ```
    ouafDatabasePatch.cmd
    ```

Note:

In the previous versions of Oracle Revenue Management and Billing, you used to execute the cdxpatch utility while installing the rollup pack for Oracle Utilities Application Framework. Henceforth, the cdxpatch utility is no longer supported and you need to use the ouafDatabasePatch utility.

When you execute the ouafDatabasePatch utility from the Window 32-bit or 64-bit desktop, ensure that the Windows desktop has Oracle Database Client 12.1.0.2 (32-bit) and Java Development Kit Version 7.0 installed. The database must be listed in the tnsnames.ora file on your local machine.

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

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

Parameter	Value
Enter the name of the Oracle Database Connection String	<DB_Server:DBPORT:ORACLE_SID>

Note: If you have changed the database user password, you will not be able to install the rollup pack for Oracle Utilities Application Framework Version 4.3.0.1.0. You will have to first change the database user password. For more information on how to change the database user password, refer to Appendix K : Changing the DB User Password.

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

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

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

2.3.2 Generating Security for Database Objects

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

To generate security for all database objects:

1. Unzip the RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform file using the following command:

   ```
   unzip RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform.zip –d <PATH>\<DESTINATION_FOLDER_3>
   ```

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_3> folder. The contents include the following sub-folders:

   - Demo_dump
   - FW
   - RMB

Note: The RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform.zip file is available at the location where you have extracted the contents of the RMB V2.5.0.2.0 - <Domain> patch.

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

   ```
   cd <DESTINATION_FOLDER_3>\FW\FW43010\Install-Upgrade
   ```

3. Execute the OraGenSec utility using the following command:

   ```
   OraGenSec -d <DB_USER>,<DB_USER_PASSWORD>,<DB_NAME> -u <DB_USER_READ_WRITE>,<DB_USER_READ> -q -a A -f oragensec.txt -l oragensec.log
   ```

Note: Ensure that you execute the OraGenSec utility from the Window 32-bit or 64-bit desktop that has Oracle Database Client 12.1.0.2 (32-bit) and Java Development Kit Version 7.0 installed. The database must be listed in the tnsnames.ora file on your local machine.

A message appears indicating that the database connection is established and security is defined for all objects in the database.

2.4 Installing Framework on the Application Environment

Once you install the framework service pack on the database and define security for all database objects, you must install the framework and its service packs on the application environment. You need to install the following on the application environment:

1. Oracle Utilities Application Framework (OUAF) Version 4.3.0.1.0
2. Rollup Pack for Oracle Utilities Application Framework (OUAF) Version 4.3.0.1.0

You cannot perform these steps on the existing environments. You need to create new development and production/UAT environments on the application server and then perform the steps listed in this section.

2.4.1 Installing OUAF Version 4.3.0.1.0

To install Oracle Utilities Application Framework (OUAF) Version 4.3.0.1.0 on the application environment:

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

   ```
   mkdir TEMPDIR
   ```

3. Copy the RMB V2.5.0.2.0 - <Domain> 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.

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

   AIX, Linux:

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

   Windows:

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

5. Unzip the RMB V2.5.0.2.0 - <Domain> 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. For more information about the contents of the RMB V2.5.0.2.0 - <Domain> patch, refer to Appendix A: ORMB 2.5.0.2.0 Patch Numbers.

6. Unzip the FW-V4.3.0.1.0-MultiPlatform file using the following command:

   AIX, Linux:

   ```
   unzip FW-V4.3.0.1.0-MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_1>
   ```

   Windows:

   ```
   unzip FW-V4.3.0.1.0-MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_1>
   ```

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. The contents include FW-V4.3.0.1.0-MultiPlatform.jar file.

7. Decompress the FW-V4.3.0.1.0-MultiPlatform.jar file using the following command:

   ```
   jar -xvf FW-V4.3.0.1.0-MultiPlatform.jar
   ```

   The contents of the JAR file include a folder named FW-V4.3.0.1.0-SP1.

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

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

9. Set the Java Home path using the following command:

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

Note:

The <Java_Home> is the location where you have installed Java 1.7.

The above command is applicable only for UNIX platform.

10. Change to the FW-V4.3.0.1.0-SP1 folder using the following command:

    AIX, Linux:

    ```
    cd <DESTINATION_FOLDER_1>/FW-V4.3.0.1.0-SP1
    ```

    Windows:

    ```
    cd <DESTINATION_FOLDER_1>\FW-V4.3.0.1.0-SP1
    ```

Note: The <DESTINATION_FOLDER_1> folder is the location where you have extracted the contents of the FW-V4.3.0.1.0-MultiPlatform.jar file.

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

    AIX, Linux:

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

    Windows:

    ```
    install.cmd
    ```

    The following message appears in the command line:

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

12. Type <ORACLE_CLIENT_HOME>, and then press Enter. The following options appear in the command line:
    - `1. Environment ID, Roles, Third Party Software Configuration`
    - `2.` Keystore Options
    - `50. Environment Installation Options`

Note:

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

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

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

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

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

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

17. Type **50** to define values for the environment installation options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
18. Specify the required value for menu options, and then press **Enter**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

Note:

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

Before you specify the environment installation options, ensure that you have created an output directory named Log File Mount Point. If this output directory does not exist, the installation will not be successfully executed.

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

19. Type **P** to proceed with the installation. The following options appear in the command line:
    - 1. Environment Description
    - 2. Business Application Server Configuration
    - 3. Web Application Server Configuration
    - 4. Database Configuration
    - 5. General Configuration Options
    - 6. SSL Certificate Keystore

Note: The options appear depending on the type of application server that you have selected while configuring the environment installation options. The above options appear when you set the **Web Application Server Type** parameter to **WLS** (i.e. WebLogic). If you set the **Web Application Server Type** parameter to **WAS** (i.e. WebSphere), the following options appear in the command line:

→ 1. Environment Description

→ 2. Business Application Server Configuration

→ 3. Web Application Server Configuration

→ 4. Database Configuration

→ 5. General Configuration Options

However, if you set the **Web Application Server Type** parameter to **WASND** (i.e. WebSphere ND), the following options appear in the command line:

→ 1. Environment Description

→ 2. Business Application Server Configuration

→ 3. Web Application Server Configuration

→ 4. Database Configuration

→ 5. General Configuration Options

For more information about the menu options that you need to set for each option, refer to the respective worksheet in the Installation and Configuration Worksheets section in *Oracle Revenue Management and Billing Installation Guide*.

20. Type **1,** and then press **Enter**. The utility prompts you to enter the environment description.
21. Specify the environment description, and then press **Enter**.

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

22. Type **2** to define values for the business application server configuration, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
23. Specify the required value for menu options, and then press **Enter**.
24. Type **3** to define values for the web application server configuration, and then press **Enter**. The utility prompts you to enter values for a list of menu options.

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

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

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

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

30. Type **6** to define values for the SSL certificate keystore options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
31. Specify the required value for menu options, and then press **Enter**.

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

32. Type **P** to proceed with the installation. The Oracle Utilities Application Framework Version 4.3.0.1.0 is installed on the application server.

Note:

The utility contains default values for some of the parameters. If required, you can change these parameter values. While executing the `install` utility, you must set the value for all parameters. Otherwise, the installation process will not be completed successfully.

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

1. `initialSetup` - The `initialSetup` utility updates the configuration files including the WAR files on the system. On the UNIX machine, this utility is available in the `$SPLEBASE/bin` directory. And, on the Windows machine, this utility is available in the `%SPLEBASE%\bin` directory.
2. `splenviron` – The `splenviron` utility sets the environment variables using the `ENVIRON.INI` file. On the UNIX machine, this utility is available in the `$SPLEBASE/bin` directory. And, on the Windows machine, this utility is available in the `%SPLEBASE%\bin` directory. The following are some of the key environment variables that are set using the `splenviron` utility:
   - → $PATH
   - → $SPLEBASE (%SPLEBASE%) – Indicates the <SPLDIR>/<SPLENVIRON> directory
   - → $SPLOUTPUT (%SPLOUTPUT%) - Indicates the <SPLDIROUT>/<SPLENVIRON> directory
   - → $SPLENVIRON (%SPLENVIRON%) – Indicates the environment name

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

AIX, Linux:

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

Windows:

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

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

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

2.4.2 Installing Rollup Pack for OUAF Version 4.3.0.1.0

To install the rollup pack for Oracle Utilities Application Framework Version 4.3.0.1.0 on the application environment:

1. Unzip the `RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform` file using the following command:

   AIX, Linux:

   ```
   unzip RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_2>
   ```

   Windows:

   ```
   unzip RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_2>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include the `ORMB-V25020-FW-PREREQ-MultiPlatform.jar` file.

Note: The `RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform.zip` file is available at the location where you have extracted the contents of the RMB V2.5.0.2.0 - <Domain> patch.

2. Decompress the JAR file using the following command:

   ```
   jar -xvf ORMB-V25020-FW-PREREQ-MultiPlatform.jar
   ```

   A sub-directory named `FW-V4.3.0.1.0-Rollup` is extracted. It contains the following two sub-folders:

   - Application
   - Database

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

   AIX, Linux:

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

   Windows:

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

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

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_2>/FW-V4.3.0.1.0-Rollup/Application
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_2>\FW-V4.3.0.1.0-Rollup\Application
   ```

Note: The `<DESTINATION_FOLDER_2>` folder is the location where you have extracted the contents of the `ORMB-V25020-FW-PREREQ-MultiPlatform.jar` file.

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

   AIX, Linux:

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

   Windows:

   ```
   installSFgroup.cmd
   ```

   The following message appears in the command line:

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

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

2.5 Installing the ORMB Application

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

1. Oracle Revenue Management and Billing (ORMB) Version 2.5.0.2.0

When you install 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.

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

2.5.1 Installing ORMB Version 2.5.0.2.0

To install Oracle Revenue Management and Billing (ORMB) Version 2.5.0.2.0 on the application environment:

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

   AIX, Linux:

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

   Windows:

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


3. Stop the application environment using the following command:

   AIX, Linux:

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

   Windows:

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

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

```
$WAS_HOME/bin/stopServer.sh <Server_Name>
```

4. Set the Java Home path using the following command:

   AIX, Linux:

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

Note:

The <Java_Home> is the location where you have installed Java 1.7.

The above command is applicable only for UNIX platform.

5. Unzip the RMB-V2.5.0.2.0-MultiPlatform file using the following command:

   AIX, Linux:

   ```
   unzip RMB-V2.5.0.2.0-MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_3>
   ```

   Windows:

   ```
   unzip RMB-V2.5.0.2.0-MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_3>
   ```

Note: The RMB-V2.5.0.2.0-MultiPlatform.zip file is available at the location where you have extracted the contents of the RMB V2.5.0.2.0 - <Domain> patch.

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_3> folder. The contents include ORMB.V2.5.0.2.0 folder.

6. Change to the ORMB.V2.5.0.2.0 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_3>/ORMB.V2.5.0.2.0
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_3>\ORMB.V2.5.0.2.0
   ```

7. Execute the install utility using the following command:

   AIX, Linux:

   ```
   ./install.sh
   ```


Windows:

```
install.cmd
```

The following message appears in the command line:

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

8. Type **Y** and then press **Enter**. A message appears informing you to type P if you want to proceed with the installation.
9. Type **P**, and then press **Enter**. The installation process might take some time to generate the WAR files. Once the build is deployed successfully, the following message appears in the command line:

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

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

Note:

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

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

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

If you type **Y**, the installation script will deploy the application on the WebSphere application server using wsadmin tool. If you type **N,** you need to deploy the application on the WebSphere application server manually using WebSphere admin console, or by executing the `genwasdeploy` utility.

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

AIX, Linux:

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

Windows:

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

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

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

    AIX, Linux:

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

    Windows:

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


12. If you are using demo certificates, execute the following commands before starting the environment:

    AIX, Linux:

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

    Windows:

    ```
    cd %SPLEBASE%\bin
    perl demo_gen_cert.plx
    ```

2.5.2 Post Installation Tasks

Once you install Oracle Revenue Management and Billing (ORMB) Version 2.5.0.2.0, you need to apply the following patches on the application environment:

- ACCOUNT BO ERROR IN REPLACE MODE (Patch Number: 22062220)
- COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER (Patch Number: 22907009)
- LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY (Patch Number: 22905679)
- UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG (Patch Number: 22899521)
- MANDATORY PATCH FOR ORMB 2.5.0.2.0 (Patch Number: 23189556)
- UPDATE 2.5.0.2.0 ONLINE HELP patch (Patch Number: 23194062)

2.5.2.1 Applying the 22062220 Patch

The ACCOUNT BO ERROR IN REPLACE MODE patch is mandatory and must be applied to resolve the following error:

- AN ERROR OCCURS WHEN THE ACCOUNT BUSINESS OBJECT IS INVOKED FROM THE USER INTERFACE IN THE REPLACE MODE

Note: Before you install the ACCOUNT BO ERROR IN REPLACE MODE patch (Patch Number: 22062220), you need to ensure that all pre-requisite patches are installed on the application and database environments.

To apply the ACCOUNT BO ERROR IN REPLACE MODE patch:

1. Copy the ACCOUNT BO ERROR IN REPLACE MODE 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 ACCOUNT BO ERROR IN REPLACE MODE patch using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_4> folder. The contents include three files - README.txt, MultiPlatform.zip, and Bug 22062220 Product Fix Design.pdf.

4. Unzip the MultiPlatform file using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_5> folder. The contents include the V4.3.0.1.0-22062220_MultiPlatform folder.

5. Change to the V4.3.0.1.0-22062220_MultiPlatform folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_5>/V4.3.0.1.0-22062220_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_5>\V4.3.0.1.0-22062220_MultiPlatform
   ```

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

   The contents include two files - IR_22062220.prereq and FW.V4.3.0.1.0-22062220.jar.

6. Decompress the FW.V4.3.0.1.0-22062220.jar file using the following command:

   ```
   jar -xvf FW.V4.3.0.1.0-22062220.jar
   ```

   The contents include two folders - META-INF and FW.V4.3.0.1.0-22062220.

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

   AIX, Linux:

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

   Windows:

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

8. Change to the FW.V4.3.0.1.0-22062220 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_5>/V4.3.0.1.0-
   22062220_MultiPlatform/FW.V4.3.0.1.0-22062220
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_5>\V4.3.0.1.0-
   22062220_MultiPlatform\FW.V4.3.0.1.0-22062220
   ```

Note: The V4.3.0.1.0-22062220_MultiPlatform folder is the location where you have extracted the contents of the FW.V4.3.0.1.0-22062220.jar file.

9. Install the patch using the following command:

   AIX, Linux:

   ```
   ./installSF.sh
   ```

   Windows:

   ```
   installSF.cmd
   ```

2.5.2.2 Applying the 22907009 Patch

The COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER patch is mandatory and must be applied to resolve the following error:

- COLUMN WIDTH IS RESIZED WHEN THE RESPECTIVE COLUMN HEADER IS CLICKED FOR SORTING THE DATA

Note: Before you install the COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER patch (Patch Number: 22907009), you need to ensure that all pre-requisite patches are installed on the application and database environments.

To apply the COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER patch:

1. Copy the COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER 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 COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER patch using the following command:

   AIX, Linux:

   ```
   unzip <filename>.zip –d <PATH>/<DESTINATION_FOLDER_6>
   ```

   Windows:

   ```
   unzip <filename>.zip –d <PATH>\<DESTINATION_FOLDER_6>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_6>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug 22907009 Product Fix Design.pdf`.

4. Unzip the `MultiPlatform` file using the following command:

   AIX, Linux:

   ```
   unzip <DESTINATION_FOLDER_6>/MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_7>
   ```

   Windows:

   ```
   unzip <DESTINATION_FOLDER_6>\MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_7>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_7>` folder. The contents include the `V4.3.0.1.0-22907009_MultiPlatform` folder.

5. Change to the `V4.3.0.1.0-22907009_MultiPlatform` folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_7>/V4.3.0.1.0-22907009_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_7>\V4.3.0.1.0-22907009_MultiPlatform
   ```


Note: The <DESTINATION_FOLDER_7> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

The contents include three files - IR_22907009.prereq, IR_22907009.coreq, and FW.V4.3.0.1.0-22907009.jar.

6. Decompress the FW.V4.3.0.1.0-22907009.jar file using the following command:

   ```
   jar -xvf FW.V4.3.0.1.0-22907009.jar
   ```

   The contents include two folders - META-INF and FW.V4.3.0.1.0-22907009.

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

   AIX, Linux:

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

   Windows:

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

8. Change to the FW.V4.3.0.1.0-22907009 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_7>/V4.3.0.1.0-
   22907009_MultiPlatform/FW.V4.3.0.1.0-22907009
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_7>\V4.3.0.1.0-
   22907009_MultiPlatform\FW.V4.3.0.1.0-22907009
   ```

Note: The V4.3.0.1.0-22907009_MultiPlatform folder is the location where you have extracted the contents of the FW.V4.3.0.1.0-22907009.jar file.

9. Install the patch using the following command:

   AIX, Linux:

   ```
   ./installSF.sh
   ```

   Windows:

   ```
   installSF.cmd
   ```

2.5.2.3 Applying the 22905679 Patch

The LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY patch is mandatory and must be applied to resolve the following error:

- LOG ZONE IS NOT UPDATED PROPERLY WHEN THE RESPECTIVE OBJECT IS EDITED MULTIPLE TIMES IN THE SYSTEM

Note: Before you install the LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY patch (Patch Number: 22905679), you need to ensure that all pre-requisite patches are installed on the application and database environments.

To apply the LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY patch:

1. Copy the LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY 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 LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY patch using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_8>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug 22905679 Product Fix Design.pdf`.

4. Unzip the `MultiPlatform` file using the following command:

   AIX, Linux:

   ```
   unzip <DESTINATION_FOLDER_8>/MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_9>
   ```

   Windows:

   ```
   unzip <DESTINATION_FOLDER_8>\MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_9>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_9>` folder. The contents include the `V4.3.0.1.0-22905679_MultiPlatform` folder.

5. Change to the `V4.3.0.1.0-22905679_MultiPlatform` folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_9>/V4.3.0.1.0-22905679_MultiPlatform
   ```


Windows:

```
cd <DESTINATION_FOLDER_9>\V4.3.0.1.0-22905679_MultiPlatform
```

Note: The <DESTINATION_FOLDER_9> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

The contents include three files - IR_22905679.prereq, IR_22905679.coreq, and FW.V4.3.0.1.0-22905679.jar.

6. Decompress the FW.V4.3.0.1.0-22905679.jar file using the following command:

   ```
   jar -xvf FW.V4.3.0.1.0-22905679.jar
   ```

   The contents include two folders - META-INF and FW.V4.3.0.1.0-22905679.

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

   AIX, Linux:

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

   Windows:

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

8. Change to the FW.V4.3.0.1.0-22905679 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_9>/V4.3.0.1.0-
   22905679_MultiPlatform/FW.V4.3.0.1.0-22905679
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_9>\V4.3.0.1.0-
   22905679_MultiPlatform\FW.V4.3.0.1.0-22905679
   ```

Note: The V4.3.0.1.0-22905679_MultiPlatform folder is the location where you have extracted the contents of the FW.V4.3.0.1.0-22905679.jar file.

9. Install the patch using the following command:

   AIX, Linux:

   ```
   ./installSF.sh
   ```

   Windows:

   ```
   installSF.cmd
   ```

2.5.2.4 Applying the 22899521 Patch

The UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG patch is mandatory and must be applied to resolve the following error:

- UI MAP OPENED THROUGH A BPA SCRIPT IS DRAGGED OUT OF THE SCREEN WHEN YOU MOVE THE MOUSE

Note: Before you install the UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG patch (Patch Number: 22899521), you need to ensure that all pre-requisite patches are installed on the application and database environments.

To apply the UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG patch:

1. Copy the UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG 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 UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG patch using the following command:

   AIX, Linux:

   ```
   unzip <filename>.zip –d <PATH>/<DESTINATION_FOLDER_10>
   ```

   Windows:

   ```
   unzip <filename>.zip –d <PATH>\<DESTINATION_FOLDER_10>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_10>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug 22899521 Product Fix Design.pdf`.

4. Unzip the `MultiPlatform` file using the following command:

   AIX, Linux:

   ```
   unzip <DESTINATION_FOLDER_10>/MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_11>
   ```

   Windows:

   ```
   unzip <DESTINATION_FOLDER_10>\MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_11>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_11>` folder. The contents include the `V4.3.0.1.0-22899521_MultiPlatform` folder.

5. Change to the V4.3.0.1.0-22899521_MultiPlatform folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_11>/V4.3.0.1.0-22899521_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_11>\V4.3.0.1.0-22899521_MultiPlatform
   ```

Note: The <DESTINATION_FOLDER_11> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

   The contents include three files - IR_22899521.prereq, IR_22899521.coreq, and FW.V4.3.0.1.0-22899521.jar.

6. Decompress the FW.V4.3.0.1.0-22899521.jar file using the following command:

   ```
   jar -xvf FW.V4.3.0.1.0-22899521.jar
   ```

   The contents include two folders - META-INF and FW.V4.3.0.1.0-22899521.

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

   AIX, Linux:

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

   Windows:

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

8. Change to the FW.V4.3.0.1.0-22899521 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_11>/V4.3.0.1.0-
   22899521_MultiPlatform/FW.V4.3.0.1.0-22899521
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_11>\V4.3.0.1.0-
   22899521_MultiPlatform\FW.V4.3.0.1.0-22899521
   ```

Note: The V4.3.0.1.0-22899521_MultiPlatform folder is the location where you have extracted the contents of the FW.V4.3.0.1.0-22899521.jar file.

9. Install the patch using the following command:

   AIX, Linux:

   ```
   ./installSF.sh
   ```

   Windows:

   ```
   installSF.cmd
   ```

2.5.2.5 Applying the 23189556 Patch

Once you install the above framework patches, you need to apply the MANDATORY PATCH FOR ORMB 2.5.0.2.0 (Patch Number: 23189556). To apply the MANDATORY PATCH FOR ORMB 2.5.0.2.0:

1. Copy the MANDATORY PATCH FOR ORMB 2.5.0.2.0 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 MANDATORY PATCH FOR ORMB 2.5.0.2.0 using the following command:

   AIX, Linux:

   ```
   unzip <filename>.zip –d <PATH>/<DESTINATION_FOLDER_12>
   ```

   Windows:

   ```
   unzip <filename>.zip –d <PATH>\<DESTINATION_FOLDER_12>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_12>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug 23189556 Product Fix Design.pdf`.

4. Unzip the `MultiPlatform` file using the following command:

   AIX, Linux:

   ```
   unzip <DESTINATION_FOLDER_12>/MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_13>
   ```

   Windows:

   ```
   unzip <DESTINATION_FOLDER_12>\MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_13>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_13>` folder. The contents include the `V2.5.0.2.0-23189556_MultiPlatform` folder.

5. Change to the V2.5.0.2.0-23189556_MultiPlatform folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_13>/V2.5.0.2.0-23189556_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_13>\V2.5.0.2.0-23189556_MultiPlatform
   ```

Note: The <DESTINATION_FOLDER_13> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

   The contents include a file named CCB.V2.5.0.2.0-23189556_Multiplatform.jar and a folder named database.

6. Decompress the CCB.V2.5.0.2.0-23189556_Multiplatform.jar file using the following command:

   ```
   jar -xvf CCB.V2.5.0.2.0-23189556_Multiplatform.jar
   ```

   The contents include two folders - META-INF and CCB.V2.5.0.2.0-23189556.

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

   AIX, Linux:

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

   Windows:

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

8. Change to the CCB.V2.5.0.2.0-23189556 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_13>/V2.5.0.2.0-
   23189556_MultiPlatform/CCB.V2.5.0.2.0-23189556
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_13>\V2.5.0.2.0-
   23189556_MultiPlatform\CCB.V2.5.0.2.0-23189556
   ```

Note: The V2.5.0.2.0-23189556_MultiPlatform folder is the location where you have extracted the contents of the CCB.V2.5.0.2.0-23189556_Multiplatform.jar file.

9. Install the patch using the following command:

   AIX, Linux:

   ```
   ./installSF.sh
   ```

   Windows:

   ```
   installSF.cmd
   ```


2.5.2.6 Applying the 23194062 Patch

Once you apply the MANDATORY PATCH FOR ORMB 2.5.0.2.0, you need to apply the UPDATE 2.5.0.2.0 ONLINE HELP patch (Patch Number: 23194062). To apply the UPDATE 2.5.0.2.0 ONLINE HELP patch:

1. Copy the UPDATE 2.5.0.2.0 ONLINE HELP 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 UPDATE 2.5.0.2.0 ONLINE HELP patch using the following command:

   AIX, Linux:

   ```
   unzip <filename>.zip –d <PATH>/<DESTINATION_FOLDER_14>
   ```

   Windows:

   ```
   unzip <filename>.zip –d <PATH>\<DESTINATION_FOLDER_14>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_14>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug 23194062 Product Fix Design.pdf`.

4. Unzip the `MultiPlatform` file using the following command:

   AIX, Linux:

   ```
   unzip <DESTINATION_FOLDER_14>/MultiPlatform.zip –d
   <PATH>/<DESTINATION_FOLDER_15>
   ```

   Windows:

   ```
   unzip <DESTINATION_FOLDER_14>\MultiPlatform.zip –d
   <PATH>\<DESTINATION_FOLDER_15>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_15>` folder. The contents include the `V2.5.0.2.0-23194062_MultiPlatform` folder.

5. Change to the V2.5.0.2.0-23194062_MultiPlatform folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_15>/V2.5.0.2.0-23194062_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_15>\V2.5.0.2.0-23194062_MultiPlatform
   ```

Note: The <DESTINATION_FOLDER_15> folder is the location where you have extracted the contents of the MultiPlatform.zip file.

   The contents include a file named CCB.V2.5.0.2.0-23194062_Multiplatform.jar.

6. Decompress the CCB.V2.5.0.2.0-23194062_Multiplatform.jar file using the following command:

   ```
   jar -xvf CCB.V2.5.0.2.0-23194062_Multiplatform.jar
   ```

   The contents include two folders - META-INF and CCB.V2.5.0.2.0-23194062.

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

   AIX, Linux:

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

   Windows:

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

8. Change to the CCB.V2.5.0.2.0-23194062 folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_15>/V2.5.0.2.0-
   23194062_MultiPlatform/CCB.V2.5.0.2.0-23194062
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_15>\V2.5.0.2.0-
   23194062_MultiPlatform\CCB.V2.5.0.2.0-23194062
   ```

Note: The V2.5.0.2.0-23194062_MultiPlatform folder is the location where you have extracted the contents of the CCB.V2.5.0.2.0-23194062_Multiplatform.jar file.

9. Install the patch using the following command:

   AIX, Linux:

   ```
   ./installSF.sh
   ```

   Windows:

   ```
   installSF.cmd
   ```


10. Start the application environment using the following command:

    AIX, Linux:

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

    Windows:

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

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

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

```
$WAS_HOME/bin/startServer.sh <Server_Name>
```

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

2.5.3 Additional Tasks Required for WebSphere Application Server

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

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

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

2.5.3.1 Deploying the SPLService.ear File

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

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Install New Application** link. The **Preparing for the application installation** page appears in the right pane.
4. Select the **Remote file system** option. The **Browse Remote Filesystems** page appears in the right pane.
5. Browse to the `$SPLEBASE\splapp\applications` location. The `applications` folder includes all `WAR` and `EAR` files.

6. Select the **SPLService.ear** option and click **OK**. The **Preparing for the application installation** page appears in the right pane.
7. Click **Next**. The **Install New Application** wizard appears in the right pane.
8. Click **Next**. The **Map modules to servers** wizard page appears.
9. Select the clusters or servers on which you want to install the modules that are contained in the application.
10. Select the check box corresponding to the module named **ServiceBean**. This indicates that you want to install the **ServiceBean** module on the selected server.
11. Click **Apply**. The module is mapped to the selected servers.
12. Click **Next**. The **Provide JNDI names for beans** wizard page appears.
13. Enter the Java Naming and Directory Interface (JNDI) name for the **ServiceBean** module. Use the following naming convention:

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

2.5.3.2 Deploying the SPLWeb.ear File

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

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Install New Application** link. The **Preparing for the application installation** page appears in the right pane.
4. Select the **Remote file system** option. The **Browse Remote Filesystems** page appears in the right pane.
5. Browse to the `$SPLEBASE\splapp\applications` location. The `applications` folder includes all `WAR` and `EAR` files.
6. Select the **SPLWeb.ear** option and click **OK**. The **Preparing for the application installation** page appears in the right pane.
7. Select the **Show me all installation options and parameters** option and then click **Next**. Additional installation options and parameters appear in the right pane.
8. Click **Next**. The **Install New Application** wizard appears in the right pane.
9. Select the **Precompile JavaServer Pages files** check box and then click **Next**. The **Map modules to servers** wizard page appears.
10. Select the clusters or servers on which you want to install the modules that are contained in the application.
11. Select the check box corresponding to all modules, such as SPLApp.war, XAIApp.war, appViewer.war, and help.war. This indicates that you want to deploy all WAR files on the selected server.
12. Click **Apply**. The modules are mapped to the selected server.

13. Click **Next**. The **Provide options to compile JSPs** wizard page appears.
14. Enter `15` in the **JDK Source Level** field corresponding to all URIs.
15. Click **Next**. The **Provide JSP reloading options for Web modules** wizard page appears.
16. Click **Next**. The **Map shared libraries** wizard page appears.
17. Click **Next**. The **Initialize parameters for servlets** wizard page appear.
18. Click **Next**. The **Map virtual hosts for Web modules** wizard page appears.
19. Click **Next**. The **Map context roots for Web modules** wizard page appears.
20. Click **Next**. The **Map environment entries for Web modules** wizard page appears.
21. Click **Next**. The **Map security roles to users or groups** wizard page appears.
22. Click **Next**. The **Summary** wizard page appears.
23. Click **Finish**. The deployment process starts. It takes some time. A message appears indicating that the `SPLWeb.ear` file is deployed successfully on WebSphere application server.
24. Click the **Save** link to reflect the changes in the master configuration files.

2.5.3.3 Configuring the SPLService.ear File

To configure the `SPLService.ear` file:

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

2.5.3.4 Configuring the SPLWeb.ear File

To configure the `SPLWeb.ear` file:

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Enterprise Applications** link. The **Enterprise Applications** page appears in the right pane.
4. Click the application (**SPLWeb-<Server Name>**) link. The **Configuration** tab appears where you can define settings of the application or its modules.
5. Under the **Detail Properties** section, click the **Startup behavior** link.
6. Enter `2` in the **Startup order** field. This helps to indicate the order in which the application should be started.
7. Click **OK**. The **Configuration** tab appears.
8. Under the **Detail Properties** section, click the **Class loading and update detection** link.
9. Enter `0` in the **Polling interval for updated files** field. This helps to indicate the seconds within which the application file system should be scanned for updated files.
10. Click the **Classes loaded with application class loader first** option to indicate that you want class loader to first search application class loader to load a class.
11. Click **OK**. The **Configuration** tab appears.
12. Under the **Modules** section, click the **Manage Modules** link. The **Manage Modules** page appears.
13. Click the **SPLApp.war** link. The **Configuration** tab appears where you can define settings of the module.
14. Enter `10000` in the **Starting weight** field. This helps to indicate the startup priority for the module compared to other modules while starting a server.
15. Select the **Classes loaded with application class loader first** option from the **Class loader order** list. This helps to indicate that you want class loader to first search application class loader to load a class.
16. Click **OK**. The **Manage Modules** page appears.
17. Click the **XAIApp.war** link. The **Configuration** tab appears where you can define settings of the module.
18. Enter `10000` in the **Starting weight** field.
19. Select the **Classes loaded with application class loader first** option from the **Class loader order** list.
20. Click **OK**. The **Manage Modules** page appears.
21. Click the **appViewer.war** link. The **Configuration** tab appears where you can define settings of the module.
22. Enter `10000` in the **Starting weight** field.
23. Select the **Classes loaded with application class loader first** option from the **Class loader order** list.
24. Click **OK**. The **Manage Modules** page appears.

25. Click the **help.war** link. The **Configuration** tab appears where you can define settings of the module.
26. Enter `10000` in the **Starting weight** field.
27. Select the **Classes loaded with application class loader first** option from the **Class loader order** list.
28. Click **OK**. The **Manage Modules** page appears.
29. Click **OK**. The **Configuration** tab appears where you can define settings of the application or its modules.
30. Click **OK**.
31. Click the **Save** link to reflect the changes in the master configuration files.

2.5.3.5 Mapping Users or Groups to a Security Role

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

1. Login to the Integrated Solutions Console using the administrator's credentials.
2. In the left pane, click the **Applications** option. A list appears.
3. Click the **Enterprise Applications** link. The **Enterprise Applications** page appears in the right pane.
4. Click the application (**SPLService-<Server Name>**) link. The **Configuration** tab appears where you can define settings of the application or its modules.
5. Under the **Detail Properties** section, click the **Security role to user/group mapping** link.
6. Select the **All authenticated** check box corresponding to the `cisusers` role. This indicates that only authenticated users should be granted access to the `cisusers` role.
7. Select the **Select** check box corresponding to the `cisusers` role and then click **Look up users**. The **Look up users or groups** page appears.
8. Enter `SYSUSER` in the **Search String** field and then click **Search**. The user name appears in the **Available** list.
9. Select **SYSUSER** in the **Available** list and then click the **Move** () button. The selected user is moved to the **Selected** list.
10. Click **OK**. The user is mapped to the `cisusers` role.
11. Click **OK**. The **Configuration** tab appears where you can define settings of the application or its modules.
12. Click **OK**.
13. Click the **Save** link to reflect the changes in the master configuration files.
14. Similarly, repeat the steps from 5 to 13 for **SPLWeb-<Server Name>**.

2.5.4 Accessing the ORMB Application

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

Application Server	URL
WebLogic	https://<hostname>:<WebLogic_Port_Number>/ouaf/loginPage.jsp
WebSphere	https://<hostname>:<WC_defaulthost_secure>/<context_root>/loginPage.jsp For example, https://oracle:9081/ouaf/loginPage.jsp

2.6 Upgrading the ORMB Database

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

While upgrading from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0, you need to install the following on the database:

1. Oracle Revenue Management and Billing (ORMB) Version 2.5.0.2.0

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.

2.6.1 Installing ORMB Version 2.5.0.2.0

To install Oracle Revenue Management and Billing (ORMB) Version 2.5.0.2.0 on the database:

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

   ```
   cd <DESTINATION_FOLDER_3>\RMB\Upgrade\Oracle\Install-Upgrade
   ```

Note: The `<DESTINATION_FOLDER_3>` folder is the location where you have extracted the contents of the `RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform.zip` file.

3. Execute the `OraDBI` utility using the following command:

   ```
   OraDBI.exe
   ```

Note:

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

Ensure that you execute the `OraDBI` utility from the Window 32-bit or 64-bit desktop that has Oracle Database Client 12.1.0.2 (32-bit) and Java Development Kit Version 7.0 installed. The database must be listed in the `tnsnames.ora` file on your local machine.

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

Parameter	Value
Enter the name of the target database	<DB_NAME>
Enter your database username	<DB_USER> Example: CISADM
Enter your password username	<DB_USER_PASSWORD>
Enter the location for Java Home (e.g. C:\Java\jdk1.6.0_18)	..\jdk1.7.0_21
Enter the TUGBU jarfiles location (e.g. C:\Database-Install\Jarfiles)	..\RMB\jarfiles
Enter the Oracle user with read-write privileges to Database Schema	<DB_USER> Example: CISUSER
Enter the Oracle user with read-only privileges to Database Schema	<DB_USER> Example: CISREAD
Enter the database role with read-write privileges to Database Schema	<DB_USER_ROLE> Example: CIS_USER
Enter the database role with read-only privileges to Database Schema	<DB_USER_ROLE> Example: CIS_READ
Enter the name of the target Schema where you want to install or upgrade	<Schema_Name>
Enter the password for <DB_USER> schema (or hit ENTER to quit)	<DB_USER_PASSWORD>
Re-enter the value	<DB_USER_PASSWORD>

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

   ```
   Ready to upgrade the target database from V2.5.0.1.0 to V2.5.0.2.0, Do you want to continue (Y/N)?
   ```

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

   ```
   Ready to upgrade the target database, Do you want to continue? (Y/N)
   ```

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

2.6.2 Applying the 23189556 Patch

Once you install Oracle Revenue Management and Billing Version 2.5.0.2.0, you need to apply the MANDATORY PATCH FOR ORMB 2.5.0.2.0 (Patch Number: 23189556). You can apply this patch from a Windows machine and UNIX Standalone server.

Note: Before you install the MANDATORY PATCH FOR ORMB 2.5.0.2.0 (Patch Number: 23189556), you need to ensure that all pre-requisite patches (which have database component) related to the following framework patches are installed on the database environment:

>> ACCOUNT BO ERROR IN REPLACE MODE (Patch Number: 22062220)

>> COLUMN WIDTH CHANGE POST CLICKING COLUMN HEADER (Patch Number: 22907009)

>> LOG ENTRIES NOT VISIBLE WHEN EDITED MORE THAN ONCE SUCCESSIVELY (Patch Number: 22905679)

>> UI MAP DRAGGED INTERMITTENTLY ON MOUSE DRAG (Patch Number: 22899521)

To apply the MANDATORY PATCH FOR ORMB 2.5.0.2.0:

1. Copy the MANDATORY PATCH FOR ORMB 2.5.0.2.0 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 MANDATORY PATCH FOR ORMB 2.5.0.2.0 using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_4>` folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug 23189556 Product Fix Design.pdf`.

4. Unzip the `MultiPlatform` file using the following command:

   AIX, Linux:

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


Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_5> folder. The contents include the V2.5.0.2.0-23189556_MultiPlatform folder.

5. Change to the V2.5.0.2.0-23189556_MultiPlatform folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_5>/V2.5.0.2.0-23189556_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_5>\V2.5.0.2.0-23189556_MultiPlatform
   ```

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

   The contents include a file named CCB.V2.5.0.2.0-23189556_Multiplatform.jar and a folder named database.

6. Change to the ORACLE folder using the following command:

   AIX, Linux:

   ```
   cd database/ORACLE
   ```

   Windows:

   ```
   cd database\ORACLE
   ```

   The contents include a zip file named CDXPatch.

7. Unzip the CDXPatch file using the following command:

   AIX, Linux:

   ```
   unzip CDXPatch.zip –d <PATH>/<DESTINATION_FOLDER_6>
   ```

   Windows:

   ```
   unzip CDXPatch.zip –d <PATH>\<DESTINATION_FOLDER_6>
   ```

   The contents of the zip file are extracted in the <DESTINATION_FOLDER_6> folder. The contents include a utility named ouafDatabasePatch.

8. Ensure that TOOLSBIN environment variable is set using the following command:

   AIX, Linux:

   ```
   export TOOLSBIN=/TEMPDIR/dbpatch_tools/bin
   ```

   Windows:

   ```
   SET TOOLSBIN=TEMPDIR\dbpatch_tools\bin
   ```

Note: dbpatch_tools folder is the location where you have extracted the contents of db_patch_standalone.jar file.

9. Change to <DESTINATION_FOLDER_6> using the following command:

   AIX, Linux:

   ```
   cd <PATH>/<DESTINATION_FOLDER_6>
   ```

   Windows:

   ```
   cd <PATH>\<DESTINATION_FOLDER_6>
   ```

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

    AIX, Linux:

    ```
    ouafDatabasePatch.sh
    ```

    Windows:

    ```
    ouafDatabasePatch.cmd
    ```

2.6.3 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_3>\RMB\Upgrade\Oracle\Install-Upgrade
   ```

Note: The `<DESTINATION_FOLDER_3>` folder is the location where you have extracted the contents of the `RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform.zip` file.

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

   ```
   OraGenSec -d <DB_USER>,<DB_USER_PASSWORD>,<DB_NAME> -u <DB_USER_READ_WRITE>,<DB_USER_READ> -q -a A -f oragensec.txt -l oragensec.log
   ```

Note: Ensure that you execute the `OraGenSec` utility from the Window 32-bit or 64-bit desktop that has Oracle Database Client 12.1.0.2 (32-bit) and Java Development Kit Version 7.0 installed. The database must be listed in the `tnsnames.ora` file on your local machine.

   A message appears indicating that the database connection is established and security is defined for all objects in the database.

2.7 Migrating Data

Once you upgrade the database, you can migrate the data from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0 using the PostProcessingScript query which is available in the UPGRADE FROM 2.5.0.1.0 to 2.5.0.2.0 patch.

To migrate the data from ORMB Version 2.5.0.1.0 to 2.5.0.2.0:

1. Copy the UPGRADE FROM 2.5.0.1.0 to 2.5.0.2.0 patch to the `TEMPDIR` folder using the following command:

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

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

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

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

3. Unzip the UPGRADE FROM 2.5.0.1.0 to 2.5.0.2.0 patch using the following command:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_4>` folder. The contents include two files - `README.txt` and `deploy.zip`.

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

   ```
   unzip <DESTINATION_FOLDER_4>\deploy.zip –d
   <PATH>\<DESTINATION_FOLDER_5>
   ```

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_5>` folder. The contents include a folder named `Migration_From_V2.5.0.1.0_To_V2.5.0.2.0`. This folder contains one file named `PostProcessingScript.sql`.

5. Change to the `Migration_From_V2.5.0.1.0_To_V2.5.0.2.0` folder using the following command:

   ```
   cd <DESTINATION_FOLDER_5>\Migration_From_V2.5.0.1.0_To_V2.5.0.2.0
   ```

6. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, `CISADM`) credentials.
7. Execute the following query from the `Migration_From_V2.5.0.1.0_To_V2.5.0.2.0` folder:

   ```
   PostProcessingScript.sql
   ```

Note: For more information about the query, refer to the PostProcessingScript.sql section in Appendix J: SQL Statements for 2.5.0.1.0 to 2.5.0.2.0 Data Migration.

3. Additional Tasks

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

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

3.1 Generating the Application Viewer

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

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

   AIX, Linux:

   `$SPLEBASE/bin/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.

3.2 Starting the Thread Pool Worker

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

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

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

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

AIX, Linux:

`$SPLEBASE/bin/threadpoolworker.sh`

Windows:

`%SPLEBASE%\bin\threadpoolworker.cmd`

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

3.3 Building Javadoc Index

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

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

AIX, Linux:

`$SPLEBASE/bin/buildJavadocsIndex.sh`

Windows:

`%SPLEBASE%\bin\buildJavadocsIndex.cmd`

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

Appendix A : ORMB 2.5.0.2.0 Patch Numbers

Oracle Revenue Management and Billing Version 2.5.0.2.0 application service pack (patch) is common for all platforms. The following table lists the contents of each domain-specific patch:

Domain	Patch Number	Contents Include
Banking	22964611	• FW-V4.3.0.1.0-MultiPlatform • RMB-V2.5.0.2.0-MultiPlatform • RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform • RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform
Insurance	22964584	• FW-V4.3.0.1.0-MultiPlatform • RMB-V2.5.0.2.0-MultiPlatform • RMB-V2.5.0.2.0-FW-PREREQ-MultiPlatform • RMB-V2.5.0.2.0-Oracle-Database-MultiPlatform

Appendix B : Known Issues

To view a list of known issues in the current release, refer to the *Oracle Revenue Management and Billing Version 2.5.0.2.0 Release Notes*.

Appendix C : Third Party Software Upgrade

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

Appendix D : New Tables Added in 2.5.0.2.0

This section lists and describes the tables that are newly added in the Oracle Revenue Management and Billing Version 2.5.0.2.0 database.

D.1 C1_ACCT_BAL_CNT

Purpose:	Used to store the usage amount and counter details of an account.
Total Number of Columns:	15

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BAL_CNT_ID	CHAR(30)	No	
ACCT_ID	CHAR(10)	No	' '
BAL_CNT_FLG	CHAR(4)	No	' '
BAL_CNT_TYPE	CHAR(4)	No	' '
EFF_DTTM	DATE	No	
BAL_CNT_VAL	NUMBER(36,18)	No	
CURRENCY_CD	CHAR(3)	Yes	
BUS_OBJ_CD	CHAR(30)	Yes	' '
BO_STATUS_CD	CHAR(12)	Yes	' '
BO_DATA_AREA	CLOB	Yes	
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	' '
STATUS_UPD_DTTM	DATE	Yes	
ILM_ARCH_SW	CHAR(1)	Yes	
ILM_DT	DATE	Yes	
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
SINGLE	BAL_CNT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF537P0	UNIQUE	BAL_CNT_ID
2.	XF537S1	UNIQUE	ACCT_ID
			EFF_DTTM
			BAL_CNT_FLG
			BAL_CNT_TYPE

D.2 C1_ACCT_BAL_CNT_CHAR

Purpose:	Used to store characteristics defined for each usage amount or counter record of an account.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BAL_CNT_ID	CHAR(30)	No	
CHAR_TYPE_CD	CHAR(8)	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR(16)	No	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	No	' '
CHAR_VAL_FK1	VARCHAR2(50)	No	' '
CHAR_VAL_FK2	VARCHAR2(50)	No	' '
CHAR_VAL_FK3	VARCHAR2(50)	No	' '
CHAR_VAL_FK4	VARCHAR2(50)	No	' '
CHAR_VAL_FK5	VARCHAR2(50)	No	' '
SRCH_CHAR_VAL	VARCHAR2(254)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF542P0	UNIQUE	BAL_CNT_ID
			CHAR_TYPE_CD
			EFFDT

D.3 C1_ACCT_BAL_CNT_K

Purpose:	Used to generate ID for each usage amount or counter record of an account.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BAL_CNT_ID	CHAR(30)	No	
ENV_ID	NUMBER(6,0)	No	

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF538P0	UNIQUE	BAL_CNT_ID
			ENV_ID

D.4 C1_ACCT_BAL_CNT_LOG

Purpose:	Used to store logs for each usage amount or counter record of an account.
Total Number of Columns:	20

Column Details:

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

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF543P0	UNIQUE	BAL_CNT_ID
			SEQNO

D.5 C1_ACCT_BAL_CNT_LOG_PARM

Purpose:	Used to store log parameters of each usage amount or counter record of an account.
Total Number of Columns:	6

Column Details:

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

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	SEQNO
	PARM_SEQ

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF544P0	UNIQUE	BAL_CNT_ID
			SEQNO
			PARM_SEQ

D.6 C1_PER_BAL_CNT

Purpose:	Used to store the usage amount and counter details of a person.
Total Number of Columns:	15

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BAL_CNT_ID	CHAR(30)	No	
PER_ID	CHAR(10)	No	' '
BAL_CNT_FLG	CHAR(4)	No	' '
BAL_CNT_TYPE	CHAR(4)	No	' '
EFF_DTTM	DATE	No	
BAL_CNT_VAL	NUMBER(36,18)	No	
CURRENCY_CD	CHAR(3)	Yes	
BUS_OBJ_CD	CHAR(30)	Yes	' '
BO_STATUS_CD	CHAR(12)	Yes	' '
BO_DATA_AREA	CLOB	Yes	
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	' '
STATUS_UPD_DTTM	DATE	Yes	
ILM_ARCH_SW	CHAR(1)	Yes	
ILM_DT	DATE	Yes	
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
SINGLE	BAL_CNT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF535P0	Unique	BAL_CNT_ID
2.	XF535S1	Unique	PER_ID
			EFF_DTTM
			BAL_CNT_FLG
			BAL_CNT_TYPE

D.7 C1_PER_BAL_CNT_CHAR

Purpose:	Used to store characteristics defined for each usage amount or counter record of a person.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BAL_CNT_ID	CHAR(30)	No	
CHAR_TYPE_CD	CHAR(8)	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR(16)	No	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	No	' '
CHAR_VAL_FK1	VARCHAR2(50)	No	' '
CHAR_VAL_FK2	VARCHAR2(50)	No	' '
CHAR_VAL_FK3	VARCHAR2(50)	No	' '
CHAR_VAL_FK4	VARCHAR2(50)	No	' '
CHAR_VAL_FK5	VARCHAR2(50)	No	' '
SRCH_CHAR_VAL	VARCHAR2(254)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF539P0	Unique	BAL_CNT_ID
			CHAR_TYPE_CD
			EFFDT

D.8 C1_PER_BAL_CNT_K

Purpose:	Used to generate ID for each usage amount or counter record of a person.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BAL_CNT_ID	CHAR(30)	No	
ENV_ID	NUMBER(6,0)	No	

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF536P0	UNIQUE	BAL_CNT_ID
			ENV_ID

D.9 C1_PER_BAL_CNT_LOG

Purpose:	Used to store logs for each usage amount or counter record of a person.
Total Number of Columns:	20

Column Details:

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

Column Name	Data Type	Nullable (Yes or No)	Default Value
MESSAGE_NBR	NUMBER(5,0)	Yes	
CHAR_TYPE_CD	CHAR(8)	Yes	' '
CHAR_VAL	CHAR(16)	Yes	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	Yes	
CHAR_VAL_FK1	VARCHAR2(50)	Yes	
CHAR_VAL_FK2	VARCHAR2(50)	Yes	
CHAR_VAL_FK3	VARCHAR2(50)	Yes	
CHAR_VAL_FK4	VARCHAR2(50)	Yes	
CHAR_VAL_FK5	VARCHAR2(50)	Yes	
SRCH_CHAR_VAL	VARCHAR2(254)	Yes	
USER_ID	CHAR(8)	Yes	
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	
VERSION	NUMBER(5,0)	No	1
LOG_DTTM	DATE	No	

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF540P0	UNIQUE	BAL_CNT_ID
			SEQNO

D.10 C1_PER_BAL_CNT_LOG_PARM

Purpose:	Used to store log parameters of each usage amount or counter record of a person.
Total Number of Columns:	6

Column Details:

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

Primary Key:

Key Type	Column Name
COMPOSITE	BAL_CNT_ID
	SEQNO
	PARM_SEQ

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF541P0	UNIQUE	BAL_CNT_ID
			SEQNO
			PARM_SEQ

D.11 C1_PRICECOMP_ELIG

Purpose:	Used to store eligibility criteria defined for a price component.
Total Number of Columns:	11

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRICECOMP_ID	CHAR(10)	No	
SEQUENCE_NUM	NUMBER(5,0)	No	
LHS_PRICE_PARM_CD	CHAR(30)	Yes	
OPERATOR	CHAR(10)	Yes	' '
RHS_PRICE_PARM_TYPE_FLG	CHAR(4)	Yes	
RHS_PRICE_PARM_CD	CHAR(30)	Yes	

Column Name	Data Type	Nullable (Yes or No)	Default Value
RHS_PRICE_PARM_VAL	VARCHAR2(254)	Yes	
TRUE_FLG	CHAR(4)	Yes	' '
FALSE_FLG	CHAR(4)	Yes	' '
INSF_FLG	CHAR(4)	Yes	' '
VERSION	NUMBER(5,0)	Yes	1

Primary Key:

Key Type	Column Name
COMPOSITE	PRICECOMP_ID
	SEQUENCE_NUM

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF545P0	UNIQUE	PRICECOMP_ID
			SEQUENCE_NUM

D.12 C1_PRICECOMP_L

Purpose:	Used to store description for a price component.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRICECOMP_ID	CHAR(10)	No	
LANGUAGE_CD	CHAR(3)	No	
DESCR	VARCHAR2(60)	Yes	
VERSION	NUMBER(5,0)	Yes	1

Primary Key:

Key Type	Column Name
COMPOSITE	PRICECOMP_ID
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF553P0	UNIQUE	PRICECOMP_ID
			LANGUAGE_CD

D.13 C1_PRODUCT

Purpose:	Used to store the details of a product.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRODUCT_CD	CHAR(30)	No	
BUS_OBJ_CD	CHAR(30)	No	
BO_DATA_AREA	CLOB	Yes	
BO_STATUS_CD	CHAR(12)	Yes	
BUNDLE_SW	CHAR(1)	Yes	'N'
BUNDLE_TYPE_FLG	CHAR(4)	Yes	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
SINGLE	PRODUCT_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF600P0	Unique	PRODUCT_CD

D.14 C1_PRODUCT_CHAR

Purpose:	Used to store characteristics defined for a product.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRODUCT_CD	CHAR(30)	No	
CHAR_TYPE_CD	CHAR(8)	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR(16)	Yes	
ADHOC_CHAR_VAL	VARCHAR2(254)	Yes	
CHAR_VAL_FK1	VARCHAR2(50)	Yes	
CHAR_VAL_FK2	VARCHAR2(50)	Yes	
CHAR_VAL_FK3	VARCHAR2(50)	Yes	
CHAR_VAL_FK4	VARCHAR2(50)	Yes	
CHAR_VAL_FK5	VARCHAR2(50)	Yes	
SRCH_CHAR_VAL	VARCHAR2(254)	Yes	
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	PRODUCT_CD
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF603P0	UNIQUE	PRODUCT_CD
			CHAR_TYPE_CD
			EFFDT

D.15 C1_PRODUCT_DIV

Purpose:	Used to store divisions associated with a product.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRODUCT_CD	CHAR(30)	No	
CIS_DIVISION	CHAR(5)	No	
DEFAULT_PL	CHAR(10)	No	
START_DT	DATE	No	
END_DT	DATE	Yes	
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	PRODUCT_CD
	CIS_DIVISION
	DEFAULT_PL
	START_DT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF604P0	Unique	PRODUCT_CD
			CIS_DIVISION
			DEFAULT_PL
			START_DT

D.16 C1_PRODUCT_L

Purpose:	Used to store description for a product.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRODUCT_CD	CHAR(30)	No	
LANGUAGE_CD	CHAR(3)	No	
DESCR	VARCHAR2(60)	No	

Column Name	Data Type	Nullable (Yes or No)	Default Value
DESCRLONG	VARCHAR2(4000)	Yes	
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	PRODUCT_CD
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF602P0	UNIQUE	PRODUCT_CD
			LANGUAGE_CD

D.17 C1_PRODUCT_REL

Purpose:	Used to store the details of product to product relationship.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRODUCT_PAR_CD	CHAR(30)	No	
PRODUCT_CHLD_CD	CHAR(30)	No	
PRODUCT_REL_TYPE_FLG	CHAR(4)	No	
START_DT	DATE	No	
END_DT	DATE	Yes	
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	PRODUCT_PAR_CD
	PRODUCT_CHLD_CD
	PRODUCT_REL_TYPE_FLG
	START_DT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF601P0	Unique	PRODUCT_PAR_CD
			PRODUCT_CHLD_CD
			PRODUCT_REL_TYPE_FLG
			START_DT

D.18 C1_UPLPAY_LOG

Purpose:	Used to store logs of a payment data file.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PAY_HSTG_ID	NUMBER(24,0)	No	
SEQNO	NUMBER(5,0)	No	
DESCRLONG	VARCHAR2(4000)	Yes	' '
MESSAGE_CAT_NBR	NUMBER(5,0)	Yes	
MESSAGE_NBR	NUMBER(5,0)	Yes	
USER_ID	CHAR(8)	No	
LOG_DTTM	DATE	No	
MESSAGE_PARM1	VARCHAR2(30)	No	' '
MESSAGE_PARM2	VARCHAR2(30)	No	' '
MESSAGE_PARM3	VARCHAR2(30)	No	' '
MESSAGE_PARM4	VARCHAR2(30)	No	' '
MESSAGE_PARM5	VARCHAR2(30)	No	' '

Primary Key:

Key Type	Column Name
COMPOSITE	PAY_HSTG_ID
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT531P0	UNIQUE	PAY_HSTG_ID
			SEQNO

D.19 CI_EXCHRATE_CHAR

Purpose:	Used to store characteristics defined for an exchange rate.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
EXCHRATE_ID	CHAR(10)	No	
CHAR_TYPE_CD	CHAR(8)	No	
EFFDT	DATE	No	
CHAR_VAL	CHAR(16)	No	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	No	' '
CHAR_VAL_FK1	VARCHAR2(50)	No	' '
CHAR_VAL_FK2	VARCHAR2(50)	No	' '
CHAR_VAL_FK3	VARCHAR2(50)	No	' '
CHAR_VAL_FK4	VARCHAR2(50)	No	' '
CHAR_VAL_FK5	VARCHAR2(50)	No	' '
SRCH_CHAR_VAL	VARCHAR2(254)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	EXCHRATE_ID
	CHAR_TYPE_CD
	EFFDT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF552P0	UNIQUE	EXCHRATE_ID
			CHAR_TYPE_CD
			EFFDT

D.20 CI_EXCHRATE_LOG

Purpose:	Used to store logs of an exchange rate.
Total Number of Columns:	20

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
EXCHRATE_ID	CHAR(10)	No	
SEQNO	NUMBER(5,0)	No	
LOG_DTTM	DATE	No	
LOG_ENTRY_TYPE_FLG	CHAR(4)	No	' '
DESCRLONG	VARCHAR2(4000)	No	' '
BO_STATUS_CD	CHAR(12)	No	' '
BO_STATUS_REASON_CD	VARCHAR2(30)	Yes	
MESSAGE_CAT_NBR	NUMBER(5,0)	No	0
MESSAGE_NBR	NUMBER(5,0)	No	0
CHAR_TYPE_CD	CHAR(8)	No	' '
CHAR_VAL	CHAR(16)	No	' '
ADHOC_CHAR_VAL	VARCHAR2(254)	No	' '
CHAR_VAL_FK1	VARCHAR2(50)	No	' '
CHAR_VAL_FK2	VARCHAR2(50)	No	' '
CHAR_VAL_FK3	VARCHAR2(50)	No	' '
CHAR_VAL_FK4	VARCHAR2(50)	No	' '
CHAR_VAL_FK5	VARCHAR2(50)	No	' '
USER_ID	CHAR(8)	No	' '
SRCH_CHAR_VAL	VARCHAR2(254)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	EXCHRATE_ID
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF550P0	UNIQUE	EXCHRATE_ID
			SEQNO

D.21 CI_EXCHRATE_LOG_PARM

Purpose:	Used to store exchange rates' log parameters.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
EXCHRATE_ID	CHAR(10)	No	
SEQNO	NUMBER(5,0)	No	
PARM_SEQ	NUMBER(3,0)	No	
MSG_PARM_TYP_FLG	CHAR(4)	No	' '
MSG_PARM_VAL	VARCHAR2(30)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
COMPOSITE	EXCHRATE_ID
	SEQNO
	PARM_SEQ

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF551P0	UNIQUE	EXCHRATE_ID
			SEQNO
			PARM_SEQ

D.22 CI_PRCE_CALC

Purpose:	Used to store details about the price calculation.
Total Number of Columns:	14

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRCE_CALC_ID	CHAR(22)	No	
ACCT_ID	CHAR(10)	No	
PRICEITEM_CD	CHAR(30)	Yes	
PRICE_ASGN_ID	CHAR(10)	Yes	
START_DT	DATE	Yes	
END_DT	DATE	Yes	
EFFDT	DATE	Yes	
RS_CD	CHAR(8)	Yes	
CALC_AMT	NUMBER(15,2)	Yes	
CURRENCY_CD	CHAR(3)	Yes	
DESCR_ON_BILL	VARCHAR2(80)	Yes	
RV_EFFDT	DATE	No	
CRE_DTTM	DATE	Yes	
VERSION	NUMBER(5,0)	Yes	

Primary Key:

Key Type	Column Name
SINGLE	PRCE_CALC_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT608P0	UNIQUE	PRCE_CALC_ID
2.	XT608P1	NORMAL	ACCT_ID
			PRICEITEM_CD
			PRICE_ASGN_ID
			EFFDT

D.23 CI_PRCE_CALC_K

Purpose:	Used to generate price calculation ID.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRCE_CALC_ID	CHAR(22)	No	
ENV_ID	NUMBER(6,0)	No	

Primary Key:

Key Type	Column Name
COMPOSITE	PRCE_CALC_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT606P0	UNIQUE	PRCE_CALC_ID
			ENV_ID

D.24 CI_PRCE_CALC_LN

Purpose:	Used to store the details of a price calculation line.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRCE_CALC_ID	CHAR(22)	No	
CURRENCY_CD	CHAR(3)	Yes	
RC_SEQ	NUMBER(3,0)	No	
CALC_AMT	NUMBER(36,18)	Yes	
VERSION	NUMBER(5,0)	Yes	
PRICECOMP_ID	CHAR(10)	Yes	

Primary Key:

Key Type	Column Name
COMPOSITE	PRCE_CALC_ID
	RC_SEQ

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT609P0	Unique	PRCE_CALC_ID
			RC_SEQ

D.25 CI_PRCE_CALC_PARAMS

Purpose:	Used to store all parameters using which the price is calculated.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PRCE_CALC_ID	CHAR(22)	No	
PARM_CD	VARCHAR2(100)	No	
PARM_VAL	VARCHAR2(100)	Yes	
VERSION	NUMBER(5,0)	Yes	

Primary Key:

Key Type	Column Name
COMPOSITE	PRCE_CALC_ID
	PARM_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT610P1	UNIQUE	PRCE_CALC_ID
			PARM_CD

D.26 CI_REPRC_ENTITY_DTL

Purpose:	Used to store the details of an entity for which the repricing must be triggered. At present, the system supports price list price assignment ID as the entity.
Total Number of Columns:	18

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PREPRCS_REQ_ID	NUMBER(15,0)	No	
ENTITY_TYPE	CHAR(4)	No	
REPRC_ENTITY_ID	VARCHAR2(100)	No	
CRE_DTTM	DATE	No	
EFF_DT	DATE	No	
UPDT_DTTM	DATE	Yes	
BO_STATUS_CD	CHAR(12)	No	
BATCH_CD	CHAR(8)	Yes	
BATCH_NBR	NUMBER(10,0)	Yes	
PRICEITEM_CD	CHAR(30)	Yes	
MESSAGE_NBR	NUMBER(5,0)	Yes	0
MESSAGE_CAT_NBR	NUMBER(5,0)	Yes	0
MESSAGE_PARM1	VARCHAR2(60)	Yes	
MESSAGE_PARM2	VARCHAR2(60)	Yes	
MESSAGE_PARM3	VARCHAR2(60)	Yes	
MESSAGE_PARM4	VARCHAR2(60)	Yes	
MESSAGE_PARM5	VARCHAR2(60)	Yes	
VERSION	NUMBER(5,0)	Yes	

Primary Key:

Key Type	Column Name
SINGLE	PREPRCS_REQ_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT604F0	NORMAL	ENTITY_TYPE
			REPRC_ENTITY_ID
			EFF_DT
			BO_STATUS_CD
			PRICEITEM_CD
2.	XT604P1	UNIQUE	PREPRCS_REQ_ID

D.27 CI_REPRC_ENTITY_DTL_K

Purpose:	Used to generate repricing entity request ID.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
PREPRCS_REQ_ID	NUMBER(15,0)	No	
ENV_ID	NUMBER(6,0)	No	

Primary Key:

There is no primary key for the CI_REPRC_ENTITY_DTL_K table.

Indexes:

There are no indexes for the CI_REPRC_ENTITY_DTL_K table.

D.28 CI_REPRC_REQ_DTL

Purpose:	Used to store the details of a repricing request which is created for an account.
Total Number of Columns:	17

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
REPRC_REQ_ID	NUMBER(22,0)	No	
ACCT_ID	CHAR(10)	No	
EFF_DT	DATE	No	
PRICEITEM_CD	CHAR(30)	Yes	
CRE_DTTM	DATE	No	
UPDT_DTTM	DATE	Yes	
BO_STATUS_CD	CHAR(12)	No	
BATCH_CD	CHAR(8)	Yes	
BATCH_NBR	NUMBER(10,0)	Yes	
MESSAGE_NBR	NUMBER(5,0)	Yes	0
MESSAGE_CAT_NBR	NUMBER(5,0)	Yes	0
MESSAGE_PARM1	VARCHAR2(60)	Yes	
MESSAGE_PARM2	VARCHAR2(60)	Yes	
MESSAGE_PARM3	VARCHAR2(60)	Yes	
MESSAGE_PARM4	VARCHAR2(60)	Yes	
MESSAGE_PARM5	VARCHAR2(60)	Yes	
VERSION	NUMBER(5,0)	Yes	

Primary Key:

Key Type	Column Name
SINGLE	REPRC_REQ_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XT602F0	NORMAL	ACCT_ID
			EFF_DT
			BO_STATUS_CD
			PRICEITEM_CD
2.	XT602P1	Unique	REPRC_REQ_ID

D.29 CI_REPRC_REQ_DTL_K

Purpose:	Used to generate the repricing request ID.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
REPRC_REQ_ID	NUMBER(22,0)	Yes	
ENV_ID	NUMBER(6,0)	No	

Primary Key:

There is no primary key for the CI_REPRC_REQ_DTL_K table.

Indexes:

There are no indexes for the CI_REPRC_REQ_DTL_K table.

Appendix E : Existing Tables Modified in 2.5.0.2.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 2.5.0.2.0. It also indicates the columns that are newly added, dropped, or modified in these tables.

E.1 CI_ACCT

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CRE_BY	Newly Added	-	CHAR(8)	No	-
2.	CRE_DTTM	Newly Added	-	DATE	No	-
3.	LAST_UPD_BY	Newly Added	-	CHAR(8)	No	-
4.	LAST_UPD_DTTM	Newly Added	-	DATE	No	-
5.	PRODUCT_CD	Newly Added	-	CHAR(30)	No	-
6.	REPRICING_SW	Newly Added	-	CHAR(1)	No	-

E.2 CI_B_CHG_LINE

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PRECS_CHARGE_AMT	Newly Added	-	NUMBER(36,18)	No	-

E.3 CI_EXCHRATE

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BO_DATA_AREA	Newly Added	-	CLOB	No	-
2.	BO_STATUS_CD	Newly Added	-	CHAR(12)	No	-
3.	BO_STATUS_REASON_CD	Newly Added	-	VARCHAR2(30)	No	-
4.	BUS_OBJ_CD	Newly Added	-	CHAR(30)	Yes	The column value is set to **C1-ExchangeRate** for all existing exchange rates.
5.	CRE_DTTM	Newly Added	-	DATE	No	-
6.	END_DTTM	Newly Added	-	DATE	Yes	The column value is set to the value defined in the END_DT column corresponding to the exchange rate in the CI_EXCHRATE table.
7.	EXCH_RATE_SRC_FLG	Newly Added	-	CHAR(4)	No	-
8.	ILM_ARCH_SW	Newly Added	-	CHAR(1)	No	-
9.	ILM_DT	Newly Added	-	DATE	No	-
10.	START_DTTM	Newly Added	-	DATE	Yes	The column value is set to the value defined in the EFFDT column corresponding to the exchange rate in the CI_EXCHRATE table.
11.	STATUS_UPD_DTTM	Newly Added	-	DATE	No	-

E.4 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 V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BIRTH_DT	Newly Added	-	DATE	No	-
2.	CRE_BY	Newly Added	-	CHAR(8)	No	-
3.	CRE_DTTM	Newly Added	-	DATE	No	-
4.	LAST_UPD_BY	Newly Added	-	CHAR(8)	No	-
5.	LAST_UPD_DTTM	Newly Added	-	DATE	No	-
6.	SINCE_DT	Newly Added	-	DATE	No	-

E.5 CI_PRICECOMP

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PRICECOMP_DISPLAY_SW	Newly Added	-	CHAR(1)	No	-
2.	PRICECOMP_SEQNO	Newly Added	-	NUMBER(5,0)	Yes	The column value is set to the value defined in the RC_SEQ column corresponding to the rate component map in the CI_RC_MAP table.

E.6 CI_PRICEITEM

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BEST_OF_FLG	Newly Added	-	CHAR(8)	No	-
2.	PRICEITEM_AVAIL_FOR	Newly Added	-	CHAR(4)	Yes	The column value is set to **PRBL** for all existing price items. This indicates that the price item is available for pricing and billing.
3.	PRICEITEM_TYPE	Newly Added	-	CHAR(30)	Yes	The column value is set to **FEES** for all existing price items. This indicates that the type of price item is **FEES**.

E.7 CI_PRICELIST

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PL_AVLBLTY_EN_DT	Newly Added	-	DATE	No	-
2.	PL_AVLBLTY_ST_DT	Newly Added	-	DATE	No	-
3.	PL_TYPE	Newly Added	-	CHAR(4)	Yes	The column value is set to **CISP** for all existing price lists. This indicates that the price list is a standard price list.

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
4.	PL_VALDTY_PER	Newly Added	-	NUMBER(5,0)	No	-

E.8 CI_PRICE_PARM

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PARM_AVL_PE_SW	Newly Added	-	CHAR(1)	No	-
2.	PARM_AVL_PI_SW	Newly Added	-	CHAR(1)	Yes	The column value is set to **Y** for all existing parameters. This indicates that you can associate the parameter with a price item.
3.	PARM_AVL_PLE_SW	Newly Added	-	CHAR(1)	No	-
4.	SOURCE_ENTITY_FLG	Newly Added	-	CHAR(4)	Yes	The column value is set to **TRN** for all existing parameters.
5.	SOURCE_TYPE_CD	Newly Added	-	VARCHAR2(30)	No	-
6.	SOURCE_TYPE_FLG	Newly Added	-	CHAR(4)	No	-
7.	PRICE_PARM_TYPE_FLG	Decreased Column Length	CHAR(30)	CHAR(4)	No	-

E.9 CI_TXN_CALC_LN

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PRECS_CALC_AMT	Newly Added	-	NUMBER(36,18)	No	-

E.10 CI_UPLD_FLTM

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

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CUSTOM_MOV_STAG_SW	Newly Added	-	CHAR(1)	No	-

E.11 C1_PAY_REQ

The following table lists the columns that are either newly added or modified in the C1_PAY_REQ table:

Sr. No.	Column Name	Modification Type	Data Type in V2.5.0.1.0	Data Type in V2.5.0.2.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	C1_PAY_REQ_TYPE_CD	Changed Data Type	VARCHAR2(30)	CHAR(30)	No	-

Appendix F : Algorithms and Algorithm Types Dropped in 2.5.0.2.0

This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 2.5.0.2.0.

F.1 Algorithm Type

No algorithm types are dropped in Oracle Revenue Management and Billing Version 2.5.0.2.0.

F.2 Algorithm

No algorithms are dropped in Oracle Revenue Management and Billing Version 2.5.0.2.0.

Appendix G : Parameters Added or Removed from Algorithm Types in 2.5.0.2.0

The following table lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 2.5.0.2.0:

Algorithm Type	Parameters (Removed from 2.5.0.2.0)	Parameters (Added in 2.5.0.2.0)
C1_ONLNBILL	-	Documaker Configuration Id
		Invocation Mode
C1_XLETOLALG	-	Documaker Configuration Id
		Invocation Mode
FTFREZGLEXTN	-	FT Types to be processed (Valid Values: BS, BX, AD, AX, PS, PX)

Appendix H : Option Types Added or Removed from Feature Configurations in 2.5.0.2.0

The following table lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 2.5.0.2.0:

Feature Configuration	Option Types (Removed from 2.5.0.2.0)	Option Types (Added in 2.5.0.2.0)
C1_PRICING	-	Default Contract Type
		Enable Service Logging
C1-PAYFLUPLD	C1-PYUP1 – Chunk Size	-
	C1-PYUP1 - Maximum Batch Count	
	C1-PYUP2 – Chunk Size	
	C1-PYUP2 - Maximum Batch Count	
	C1-PYUP2 – Thread Count	
	PUPL – Thread Count	
	User ID	

Appendix I : Characteristic Types Dropped in 2.5.0.2.0

No characteristic types are dropped in Oracle Revenue Management and Billing Version 2.5.0.2.0.

Appendix J : SQL Statements for 2.5.0.1.0 to 2.5.0.2.0 Data Migration

This section describes the following queries which are used for migrating data from Oracle Revenue Management and Billing Version 2.5.0.1.0 to 2.5.0.2.0:

- PostProcessingScript.sql

J.1 PostProcessingScript.sql

The PostProcessingScript.sql query does the following:

- Removes the following option types from the CI_WFM_OPT table:
    - C1-PYUP1 - Chunk Size
    - C1-PYUP1 - Maximum Batch Count
    - C1-PYUP2 - Chunk Size
    - C1-PYUP2 - Maximum Batch Count
    - C1-PYUP2 - Thread Count

  These option types will no longer be available in the C1-PAYFLUPLD feature configuration.
- Updates the column values of the records in the respective table:

Table Name	Column Name	Column Value After Data Migration
CI_EXCHRATE	BUS_OBJ_CD	The column value is set to **C1-ExchangeRate** for all existing exchange rates.
	START_DTTM	The column value is set to the value defined in the EFFDT column corresponding to the exchange rate in the CI_EXCHRATE table.
	END_DTTM	The column value is set to the value defined in the END_DT column corresponding to the exchange rate in the CI_EXCHRATE table.
CI_PRICEITEM	PRICEITEM_AVAIL_FOR	The column value is set to **PRBL** for all existing price items. This indicates that the price item is available for pricing and billing.
	PRICEITEM_TYPE	The column value is set to **FEES** for all existing price items. This indicates that the type of price item is **FEES**.
CI_PRICE_PARM	SOURCE_ENTITY_FLG	The column value is set to **TRN** for all existing parameters.

<table>
<tr><th>Table Name</th><th>Column Name</th><th>Column Value After Data Migration</th></tr>
<tr><td></td><td>PARM_AVL_PI_SW</td><td>The column value is set to Y for all existing parameters. This indicates that you can associate the parameter with a price item.</td></tr>
<tr><td>CI_PRICECOMP</td><td>PRICECOMP_SEQNO</td><td>The system sorts the rate components based on the sequence and then the PRICECOMP_SEQNO column corresponding to the price component defined for the lowest rate component sequence is set to 10 and then incremented by 10 for every subsequent price component in order of rate component sequence and lower limit defined in the tier range.
For example,
<table>
<tr><th>RC Sequence</th><th>Tier Range [Lowe Limit-Upper Limit]</th><th>Price Component Sequence</th></tr>
<tr><td>10,Flat</td><td>-</td><td>10</td></tr>
<tr><td>20,Threshold</td><td>1 – 2</td><td>20</td></tr>
<tr><td>20,Threshold</td><td>3 - 4</td><td>30</td></tr>
<tr><td>20,Threshold</td><td>5 – 6</td><td>40</td></tr>
<tr><td>30,Step</td><td>7 - 8</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>CI_PRICELIST</td><td>PL_TYPE</td><td>The column value is set to CISP for all existing price lists. This indicates that the price list is a standard price list.</td></tr>
<tr><td>CI_FEEDTYPE_LABEL</td><td>BASE_LABEL</td><td>If the value of the BASE_LABEL column corresponding to a record in the CI_FEEDTYPE_LABEL table is set to PRODUCT, then the column value is changed to PRICE ITEM.</td></tr>
<tr><td>CI_FILETYPE_MAPPING</td><td>BASE_LABEL</td><td>If the value of the BASE_LABEL column corresponding to a record in the CI_FILETYPE_MAPPING table is set to PRODUCT, then the column value is changed to PRICE ITEM.</td></tr>
</table>

Appendix K : Changing the DB User Password

If you have changed the database user password, you need to execute the following steps before installing the rollup pack for Oracle Utilities Application Framework Version 4.3.0.1.0:

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

    AIX, Linux:

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

    Windows:

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

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

    AIX, Linux:

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

    Windows:

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

