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Upgrade Guide

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Preface

About This Document

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

Intended Audience

This document is intended for the following audience:

- End-Users
- 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 5.0.0.0.0 to 5.1.0.0.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0.
Section 3	Additional Tasks	Lists and describes the additional tasks that you need to perform after upgrading the application.
Appendix A	Known Issues	Lists the known issues in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix B	Third-Party Software Upgrade	Provides a list of third-party software that you need to upgrade before upgrading the application.
Appendix C	New Tables Added in ORMB Version 5.1.0.0.0	Lists and describes the tables that are newly added in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix D	Existing Tables Modified in ORMB Version 5.1.0.0.0	Lists the existing tables and their columns that are modified in Oracle Revenue Management and Billing Version 5.1.0.0.0.

Section No.	Section Name	Description
Appendix E	Algorithms and Algorithm Types Dropped in ORMB Version 5.1.0.0.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix F	Parameters Added or Removed from Batch Controls in ORMB Version 5.1.0.0.0	Lists the parameters which are added or removed from the batch controls in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix G	Parameters Added or Removed from Algorithm Types in ORMB Version 5.1.0.0.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix H	Option Types Added or Removed from Feature Configurations in ORMB Version 5.1.0.0.0	Lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix I	Characteristic Types Dropped in ORMB Version 5.1.0.0.0	Lists the characteristic types which are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix J	Batch Controls Dropped in ORMB Version 5.1.0.0.0	Lists the batch controls which are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.
Appendix K	Changing the DB User Password	Explains how to change the database user password.
Appendix L	ORMB V5.1.0.0.0 Rollup Packs	Lists the rollup packs available for Oracle Revenue Management and Billing Version 5.1.0.0.0. It also explains how to apply a rollup pack on the application environment and database.
Appendix M	New Tables Added in OUAF Version 4.5.0.0.0	Lists and describes the tables that are newly added in Oracle Utilities Application Framework Version 4.5.0.0.0.
Appendix N	Existing Tables Modified in OUAF Version 4.5.0.0.0	Lists the existing tables and their columns that are modified in Oracle Utilities Application Framework Version 4.5.0.0.0.
Appendix O	SQL Statements for 5.0.0.0.0 to 5.1.0.0.0 Data Migration	Lists and describes the query which is used for migrating data from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0.

Conventions

The following conventions are used across the document:

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

Acronyms

The following acronyms are used in this document:

Acronym	Meaning
ORMB	Oracle Revenue Management and Billing
OUIAF	Oracle Utilities Application Framework
FW	Framework
INPD	Initial Product Determined
UPLD	Uploaded
INVL	Invalid
EROR	Error
COMP	Completed
CNCL	Cancelled
FTP	File Transfer Protocol

Related Documents

You can refer to the following documents for more information:

Document Name	Description
<i>Oracle Revenue Management and Billing Version 5.1.0.0.0 Release Notes</i>	Provides a brief description about the new features, enhancements, and UI level changes introduced in the current release. The new features and enhancements are classified under three distinct heads – Generic (which is intended for both domains), Financial Services, and Health Insurance. It also contains high-level information about the supported platforms, framework upgrade, supported upgrades, and documentation updates. In addition, it contains a list of discontinued features, planned deprecation notices, customer bugs fixed or forward ported and known issues in the current release.
<i>Oracle Revenue Management and Billing Upgrade Path Guide</i>	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.
<i>Oracle Revenue Management and Billing Direct Database Upgrade Guide</i>	Explains how to directly upgrade the ORMB database from 2.5.0.1.0 or any later version to the current release. It also highlights any known issues during direct database upgrade and how to handle these issues in the database.

Change Log

Revision	Last Update	Updated Section	Comments
24.1	24-Apr-2023	Section 2.5.2: Applying the Release-Specific Patches	Updated Information
		Section 2.6: Upgrading the ORMB Database	Updated Information
		Section 2.6.2: Applying the Release-Specific Patches	Updated Information
		Appendix L: ORMB V5.1.0.0.0 Rollup Packs	Updated Information
		Appendix L.1: Applying a Rollup Pack on the Application Environment	Updated Information
		Appendix L.2: Applying a Rollup Pack on the Database	Updated Information
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		Section 2.5.4: Setting the C1-CFS Feature Configuration	Added Section

Revision	Last Update	Updated Section	Comments
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		Section 2.2.1: Downloading the OUAF Packages	Updated Information
		Section 2.2.2: Downloading the ORMB Packages	Updated Information
		Section 2.3.1: Pre-requisites	Added Section
		Section 2.3.2: Installing Rollup Pack for OUAF Version 4.5.0.0.0	Updated Information
		Section 2.4.2: Installing Rollup Pack for OUAF Version 4.5.0.0.0	Updated Information
		Section 2.5: Installing the ORMB Application	Updated Information
		Section 2.5.1: Installing ORMB Version 5.1.0.0.0	Updated Information
		Section 2.5.2: Applying the Release-Specific Patches	Updated Information
		Section 2.6.1: Installing ORMB Version 5.1.0.0.0	Updated Information
24.5	05-Jan-2024	Section 2.5.4: Setting the C1-CFS Feature Configuration	Updated Information
		Section 2.5.5: Setting the C1-REPORTVW Feature Configuration	Updated Information
		Section 2.5.6: Setting the C1-FLUPLD Feature Configuration	Updated Information

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1. Preparing for Upgrade

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

1.1 Upgrade Overview

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

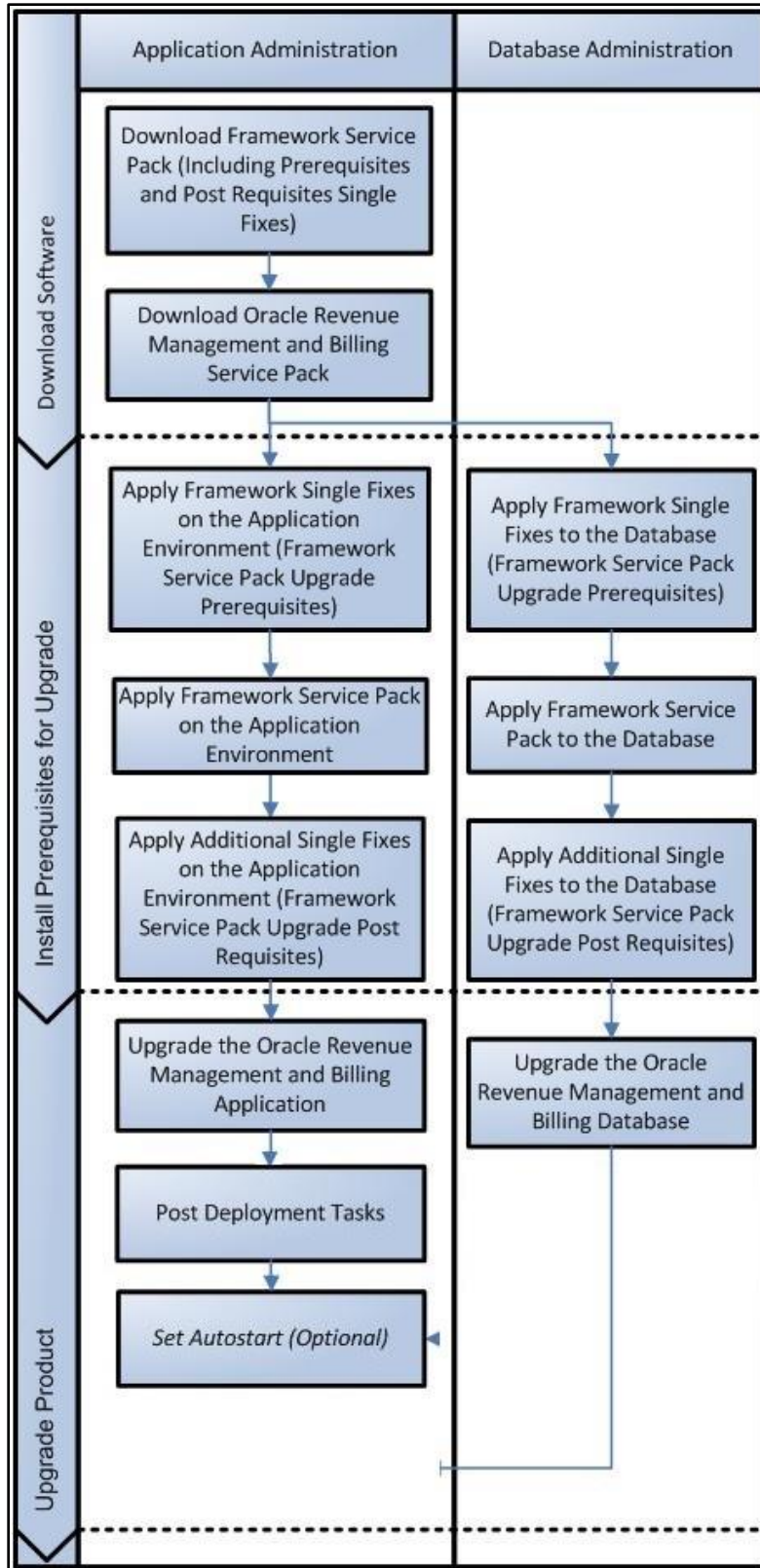


Figure 1: Upgrade Process

1.2 Upgrade Pre-requisites

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

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

1.3 Supported Upgrades

In this release, we support the following upgrades:

- Upgrade from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0

2. Upgrading from ORMB Version 5.0.0.0.0 to 5.1.0.0.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0. The high-level steps include:

1. [Downloading the OUAF and ORMB Packages](#)
2. [Upgrading Framework on the Database](#)
3. [Installing Framework on the Application Environment](#)
4. [Installing the ORMB Application](#)
5. [Upgrading the ORMB Database](#)
6. [Migrating Data](#)

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

2.1 Prerequisites

If you are already using the Transaction Feed Management feature and want to upgrade to Oracle Revenue Management and Billing Version 5.1.0.0.0, then you need to ensure the following (before upgrading):

- All bills generated in the system are in the **Complete** status. In other words, there should not be any bills in the **Pending** status. If there are any bills in the **Pending** status or if any billable charge (generated through TFM) is not yet billed, disaggregation and cancellation of transactions which are uploaded using 5.0.0.0.0 will not happen successfully.
- Transactions which are uploaded using 5.0.0.0.0 must not be in the **Initial Product Determined (INPD)** status. They can be in the **Uploaded (UPLD)**, **Invalid (INVL)**, **Error (EROR)**, **Completed (COMP)**, or **Cancelled (CNCL)** status.
- Equal to (=) or tilde (~) symbol is not used in any existing price item parameter code or value. Otherwise, erroneous results might occur.

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

2.2 Downloading the OUAF and ORMB Packages

For upgrading from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0, you must download the following packages from the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0** or **Oracle Insurance Revenue Management and Billing 5.1.0.0.0** media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Utilities Application Framework (4.5.0.0.0) Single Fix Prerequisite Rollup
- Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Multiplatform

- Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Database

You must also download the following package from the **Oracle Utilities Application Framework 4.5.0.0.0** media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media

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

- UPGRADE FROM 5.0.0.0.0 TO 5.1.0.0.0 (Patch Number: 35168757)

The downloaded files will be in the ZIP format.

2.2.1 Downloading the OUAF Packages

Oracle Utilities Application Framework 4.5.0.0.0 media pack can be installed on the following supported platforms:

- AIX (64-bit)
- Microsoft Windows (64-bit)
- Linux (64-bit)

The media pack includes the following packages - **Oracle Utilities Application Framework 4.5.0.0.0 - Database Installation Media** and **Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media**.

To download the OUAF packages:

1. Login to [Oracle Software Delivery Cloud](#).
2. Select the **Release** option from the **All Categories** list.
3. Type **Oracle Utilities Application Framework** in the corresponding text box.
4. Click **Search**. A list of media packs appears in the search results.
5. Click the **Select** (👁️) icon corresponding to the **Oracle Utilities Application Framework 4.5.0.0.0** media pack.
6. If required, you can verify the media pack which is selected by clicking the **View Items** link.
7. Click the **Continue** link. A page appears.
8. Select the required platform from the **Platforms/Languages** list.
9. Click **Continue**. A page appears with the license agreement.
10. Scroll and read the entire license agreement and then click the **I reviewed and accept the Oracle License Agreement** option.
11. Click **Continue**. The **File Download** page appears.
12. Select the **Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media** package from the media pack and then click **Download**. An executable file is downloaded on your local machine.
13. Run the executable file. The **Oracle Download Manager** window appears.
14. Browse to the location where you want to download the package and then click **Next**. The package is downloaded on your local machine.


2.2.2 Downloading the ORMB Packages

Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 and Oracle Insurance Revenue Management and Billing 5.1.0.0.0 media packs can be installed on the following supported platforms:

- AIX (64-bit)
- Microsoft Windows (64-bit)
- Linux (64-bit)

The media pack includes multiple packages. For more information, refer to the **Media Pack Contents** section in the *Oracle Revenue Management and Billing Version 5.1.0.0.0 Quick Installation Guide*.

To download the ORMB packages:

1. Login to [Oracle Software Delivery Cloud](#).
2. Select the **Release** option from the **All Categories** list.
3. Type **Oracle Financial Services Revenue Management and Billing** or **Oracle Insurance Revenue Management and Billing** in the corresponding text box.
4. Click **Search**. A list of media packs appears in the search results.
5. Click the **Select** () icon corresponding to the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0** or **Oracle Insurance Revenue Management and Billing 5.1.0.0.0** media pack.
6. If required, you can verify the media pack which is selected by clicking the **View Items** link.
7. Click the **Continue** link. A page appears.
8. Select the required platform from the **Platforms/Languages** list.
9. Click **Continue**. A page appears with the license agreement.
10. Scroll and read the entire license agreement and then click the **I reviewed and accept the Oracle License Agreement** option.
11. Click **Continue**. The **File Download** page appears.
12. Select the following packages from the media pack:
 - Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Utilities Application Framework (4.5.0.0.0) Single Fix Prerequisite Rollup
 - Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Multiplatform
 - Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Database
13. Click **Download**. An executable file is downloaded on your local machine.
14. Run the executable file. The **Oracle Download Manager** window appears.
15. Browse to the location where you want to download the packages and then click **Next**. The packages are downloaded on your local machine.

2.3 Upgrading Framework on the Database

While upgrading from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0, you need to install the following on the database:

1. [Rollup Pack for Oracle Utilities Application Framework \(OUAF\) Version 4.5.0.0.0](#)

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

2.3.1 Pre-requisites

Before installing Oracle Utilities Application Framework Version 4.5.0.0.0, you need to do the following:

- Set the **MAX_STRING_SIZE** parameter to **EXTENDED** – For more information, refer to the **Setting the MAX_STRING_SIZE Parameter to EXTENDED** topic of the **Initial Install or Installing Version 5.1.0.0.0 for the First Time** section in the *Oracle Revenue Management and Billing Database Administrator's Guide*.
- Assign the **Execute** privilege for the **DBMS_CRYPTO** package to the **CISADM** user - For more information, refer to the **Enabling the DBMS_CRYPTO Package** topic of the **Initial Install or Installing Version 5.1.0.0.0 for the First Time** section in the *Oracle Revenue Management and Billing Database Administrator's Guide*.
- Set the interval partitioning for the **F1_MO_UPD** and **F1_MO_UPD_BACKLOG** tables – For more information, refer to the **Partitioning F1_MO_UPD and F1_MO_UPD_BACKLOG Tables** section of the *Oracle Revenue Management and Billing Database Administrator's Guide*.

2.3.2 Installing Rollup Pack for OUAF Version 4.5.0.0.0

You can install the rollup pack for Oracle Utilities Application Framework Version 4.5.0.0.0 from a Windows machine or UNIX Standalone server. To install the rollup pack for Oracle Utilities Application Framework (OUAF) Version 4.5.0.0.0 on the database:

1. Login to the database server using the administrator's credentials.
2. Copy the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Utilities Application Framework (4.5.0.0.0) Single Fix Prerequisite Rollup** package to the **TEMPDIR** folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

4. Unzip the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Utilities Application Framework (4.5.0.0.0) Single Fix Prerequisite Rollup** package using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. The contents include the `ORMB-V51000-FW-PREREQ-MultiPlatform.jar` file.

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

AIX, Linux:

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

Windows:

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

6. Decompress the JAR file using the following command:

```
jar -xvf ORMB-V51000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V4.5.0.0.0-Rollup` is extracted. It contains the following two sub-folders:

- `Application`
- `Database`

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

AIX, Linux:

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

Windows:

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

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

```
mkdir dbpatch_tools
```

9. Create the `db_patch_standalone.jar` file on the application server. For more information, refer to the **Database Patching Process** section in the *Oracle Revenue Management and Billing Installation Guide*.

10. Copy the `db_patch_standalone.jar` file from the `SPLEBASE/tools/dbstandalone` folder to the `dbpatch_tools` folder.

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

AIX, Linux:

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

Windows:

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

12. 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`

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

AIX, Linux:

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

Windows:

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

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

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/FW-V4.5.0.0.0-Rollup/Database
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW-V4.5.0.0.0-Rollup\Database
```

Note: The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `ORMB-V51000-FW-PREREQ-MultiPlatform.jar` file.

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

AIX, Linux:

```
ouafDatabasePatch.sh
```

Windows:

```
ouafDatabasePatch.cmd
```

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

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

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 4.5.0.0.0. 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](#).

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

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

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

2.4 Installing Framework on the Application Environment

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

1. [Oracle Utilities Application Framework \(OUAF\) Version 4.5.0.0.0](#)
2. [Rollup Pack for Oracle Utilities Application Framework \(OUAF\) Version 4.5.0.0.0](#)

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

2.4.1 Installing OUAF Version 4.5.0.0.0

To install Oracle Utilities Application Framework (OUAF) Version 4.5.0.0.0 on the application environment:

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

```
mkdir TEMPDIR
```

- Copy the **Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media** package to the `TEMPDIR` folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

- Unzip the **Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media** package using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_1>` folder. The contents include a directory named `FW-V4.5.0.0.0`.

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

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

- Set the `Java_Home` path using the following command:

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

Points to Note:

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

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

- Change to the `FW-V4.5.0.0.0` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/FW-V4.5.0.0.0
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW-V4.5.0.0.0
```

Note: The <DESTINATION_FOLDER_1> folder is the location where you have extracted the contents of the **Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media** package.

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

AIX, Linux:

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

Windows:

```
install.cmd
```

The following message appears in the command line:

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

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

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

Points to 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.

11. 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.
12. Specify the required value for menu options, and then press **Enter**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

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

13. 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.
14. Specify the required value for menu options, and then press **Enter**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

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

15. 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.

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

Points to Note:

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

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

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

17. Type **P** to proceed with the installation. The following environment configuration menus appear in the command line:

- 1. Environment Description
- 2. Business Application Server Configuration
- 3. Web Application Server Configuration
- 4. Database Configuration
- 5. General Configuration Options
- 6. OUAF TrustStore Options

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

19. Specify the environment description, and then press **Enter**. The specified values are stored in the `$(SPLEBASE)/etc/ENVIRON.INI` file.

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

20. 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.

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

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

22. 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.

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

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

24. 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.

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

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

26. 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.
27. Specify the required value for menu options, and then press **Enter**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

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

28. Type **6** to define values for the OUAF TrustStore Options, and then press **Enter**. The utility prompts you to enter values for a list of menu options.
29. Specify the required value for menu options, and then press **Enter**. The specified values are stored in the `$SPLEBASE/etc/ENVIRON.INI` file.

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

30. Type **P** to proceed with the installation. The Oracle Utilities Application Framework Version 4.5.0.0.0 is installed on the application server.

Points to Note:

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

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

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

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

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

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

AIX, Linux:

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

Windows:

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

You need to execute this script each time you want to be connected to the specific environment before performing manual operations such as shutdown, start-up 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 4.5.0.0.0

To install the rollup pack for Oracle Utilities Application Framework Version 4.5.0.0.0 on the application environment:

1. Copy the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Utilities Application Framework (4.5.0.0.0) Single Fix Prerequisite Rollup** package to the `TEMPDIR` folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

3. Unzip the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Utilities Application Framework (4.5.0.0.0) Single Fix Prerequisite Rollup** package using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include the `ORMB-V51000-FW-PREREQ-MultiPlatform.jar` file.

- Decompress the JAR file using the following command:

```
jar -xvf ORMB-V51000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V4.5.0.0.0-Rollup` is extracted. It contains the following two sub-folders:

- Application
- Database

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

AIX, Linux:

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

Windows:

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

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

AIX, Linux:

```
cd <DESTINATION_FOLDER_2>/FW-V4.5.0.0.0-Rollup/Application
```

Windows:

```
cd <DESTINATION_FOLDER_2>\FW-V4.5.0.0.0-Rollup\Application
```

Note: The `<DESTINATION_FOLDER_2>` folder is the location where you have extracted the contents of the `ORMB-V51000-FW-PREREQ-MultiPlatform.jar` file.

- 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)
```

- 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:

- [Oracle Revenue Management and Billing \(ORMB\) Version 5.1.0.0.0](#)
- [Oracle Revenue Management and Billing \(ORMB\) Version 5.1.0.0.0 Post Requisite Patches](#)

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

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

After accessing the application, you need to set the following feature configurations:

- [C1-CFS](#)
- [C1-REPORTVW](#)
- [C1-FLUPLD](#)

2.5.1 Installing ORMB Version 5.1.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 5.1.0.0.0 on the application environment:

1. Login to the application server using the administrator's credentials.
2. Copy the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Multiplatform** package to the `TEMPDIR` folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

4. Unzip the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Multiplatform** package using the following command:

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_3>` folder. The contents include `ORMB.v5.1.0.0.0` folder.

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

AIX, Linux:

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

Windows:

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

6. Stop the managed server where the application is hosted using the Oracle WebLogic Console.
7. Change to the `ORMB.V5.1.0.0.0` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_3>/ORMB.V5.1.0.0.0
```

Windows:

```
cd <DESTINATION_FOLDER_3>\ORMB.V5.1.0.0.0
```

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

AIX, Linux:

```
./install.sh
```

Windows:

```
install.cmd
```

The following message appears in the command line:

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

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

Points to Note:

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

AIX, Linux:

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

Windows:

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

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

2.5.2 Applying the Release-Specific Patches

Once you install Oracle Revenue Management and Billing (ORMB) Version 5.1.0.0.0, you need to apply the release-specific patches on the application environment. To view the list of patches that you need to apply on the application environment, refer to the [ORMB V5.1.0.0.0 Patch Guide](#) (Document ID: 2941754.1) on [My Oracle Support](#).

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to [Appendix L: ORMB V5.1.0.0.0 Rollup Packs](#).

To apply a patch:

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_4> folder. The contents include three files - README.txt, MultiPlatform.zip, and Bug_<PATCH_NUMBER>_Product_Fix_Design.pdf.

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_5> folder. The contents include the V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform folder.

4. Change to the V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_5>/V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

Windows:

```
cd <DESTINATION_FOLDER_5>\V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

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

The contents include a file named CCB.V5.1.0.0.0-<PATCH_NUMBER>.jar and a directory named database.

5. Decompress the CCB.V5.1.0.0.0-<PATCH_NUMBER>.jar file using the following command:

```
jar -xvf CCB.V5.1.0.0.0-<PATCH_NUMBER>.jar
```

The contents include two sub-folders - META-INF and CCB.V5.1.0.0.0-<PATCH_NUMBER>.

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

AIX, Linux:

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

Windows:

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

Where,

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

- Change to the `CCB.V5.1.0.0.0-<PATCH_NUMBER>` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_5>/V5.1.0.0.0-  
<PATCH_NUMBER>_MultiPlatform/CCB.V5.1.0.0.0-<PATCH_NUMBER>
```

Windows:

```
cd <DESTINATION_FOLDER_5>\V5.1.0.0.0-  
<PATCH_NUMBER>_MultiPlatform\CCB.V5.1.0.0.0-<PATCH_NUMBER>
```

- Install the patch using the following command:

AIX, Linux:

```
./installSF.sh
```

Windows:

```
installSF.cmd
```

- Start the managed server using the Oracle WebLogic Console.

2.5.3 Accessing the ORMB Application

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

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

2.5.4 Setting the C1-CFS Feature Configuration

The **C1-CFS** feature configuration enables you to indicate whether the application environment should use the file object storage service of Oracle Cloud Infrastructure (OCI). If the file object storage service of OCI is used, you need to specify the buckets or containers within the Object Storage namespace from where you need to read files for the On Demand Billing and Payment Upload features. Before specifying the buckets to read files from the external location for the On Demand Billing and Payment Upload features, you need to define a file storage extendable lookup value using the **File Storage Configuration (F1-FileStorage)** extendable lookup where the file adapter is set to **Oracle Cloud Object Storage**. For more information on how to define a file storage extendable lookup value, refer to the **Oracle Utilities Application Framework Administrative Processes → Configuration Tools → Miscellaneous Topics → Referencing URIs → External File Storage** in *Oracle Revenue Management and Billing Online Help*.

To set the **C1-CFS** feature configuration:

1. Login to Oracle Revenue Management and Billing Version 5.1.0.0.0.
2. Click the **Admin** link in the **Application** toolbar. A list appears.
3. From the **Admin** menu, select **F** and then click **Feature Configuration**. A sub-menu appears.
4. Click the **Search** option from the **Feature Configuration** sub-menu. The **Feature Configuration Query** screen appears.
5. In the **Feature Configuration Search** zone, enter **C1-CFS** in the **Feature Name** field.
6. Click **Search**. A list of feature configurations that meet the search criteria appears in the search results.
7. In the **Search Results** section, click the link in the **Description** column corresponding to the feature configuration whose details you want to edit. The **Feature Configuration** screen appears. It contains the following option types:

Option Type	Description	Mandatory (Yes or No)
File Object Storage Usage	<p>Used to indicate whether the application environment should use the file object storage service of Oracle Cloud Infrastructure (OCI). The valid values are:</p> <ul style="list-style-type: none"> • Y • N <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Points to Note:</p> <p>By default, the value is set to N.</p> <p>You must ensure that the value of this option type is set to N in the On Premise and Cloud Service environments.</p> <p>If the value of this option type is set to Y, you need to accordingly specify the directory paths while executing the DWLDBILC, C1-PUPSG, C1-APACK, and C1-RECUP batches. For more information, refer to the <i>Oracle Revenue Management and Billing Batch Guide</i>.</p> </div>	Yes
ODB Extendable Lookup and Bucket	<p>Used to specify the following information in the <File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while uploading the files through the On Demand Billing feature. 	Yes (Conditional)

Option Type	Description	Mandatory (Yes or No)
	<ul style="list-style-type: none"> The bucket or container from where you want to upload the file using the On Demand Billing feature. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Note: This option type is required only when the File Object Storage Usage option type is set to Y and you want to use the On Demand Billing feature.</p> </div>	
Payment Upld Extendable Lookup and Bucket	<p>Used to specify the following information in the <File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while uploading the files through the Payment Upload feature. The bucket or container from where you want to upload the file using the Payment Upload feature. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Note: This option type is required only when the File Object Storage Usage option type is set to Y and you want to use the Payment Upload feature.</p> </div>	Yes (Conditional)

- Set the **File Object Storage Usage** option type to **N**.
- Click the **Save** button in the **Page Title** area. The changes made to the feature configuration are saved.

2.5.5 Setting the C1-REPORTVW Feature Configuration

You need to set the **C1-REPORTVW** feature configuration only when you are using the Apache FOP Reporting framework in ORMB. It enables you to define the following properties which were earlier derived from the `spl.properties` file:

- `ouaf.runtime.billView.directoryPath`
- `ouaf.runtime.reportView.directoryPath`
- `ouaf.application.reportingDir`

To set the **C1-REPORTVW** feature configuration:

- Login to Oracle Revenue Management and Billing Version 5.1.0.0.0.
- Click the **Admin** link in the **Application** toolbar. A list appears.
- From the **Admin** menu, select **F** and then click **Feature Configuration**. A sub-menu appears.
- Click the **Search** option from the **Feature Configuration** sub-menu. The **Feature Configuration Query** screen appears.

5. In the **Feature Configuration Search** zone, enter **C1-REPORTVW** in the **Feature Name** field.
6. Click **Search**. A list of feature configurations that meet the search criteria appears in the search results.
7. In the **Search Results** section, click the link in the **Description** column corresponding to the feature configuration whose details you want to edit. The **Feature Configuration** screen appears. It contains the following option types:

Option Type	Description	Mandatory (Yes or No)
Report Download HTTP URL	<p>Used to specify the HTTP servlet using which you want to download and view the FOP reports that are generated in the online mode. You must specify the URL in the following format:</p> <p>https://ipaddress:port/ouaf/reportView</p> <p>Note: You must override the default value as per the requirement.</p>	Yes
Report Generation (FOP) File Path	<p>Used to specify the directory or bucket where you want to store the FOP reports which are generated either from the user interface or through a batch process.</p> <p>If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path:</p> <ul style="list-style-type: none"> • @SHARED_DIR – Used when you want to store the FOP reports in the shared directory on the server. <p>For example, you can set the value to @SHARED_DIR/output.</p> <p>However, if the application environment is a Cloud Service Premium Edition environment, you must specify the following information in the file-storage://<File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while storing the FOP reports on OCI • The bucket or container where you want the system to store the FOP reports which are generated in the different formats. 	Yes

Option Type	Description	Mandatory (Yes or No)
	<p>Points to Note:</p> <p>By default, the value is set to @SHARED_DIR/splapp/reporting/output. You must change the value as per the requirement.</p> <p>The shared directory variable (i.e. SHARED_DIR) is case-sensitive.</p>	
Report Generation XSL Template File Path	<p>Used to specify the directory or bucket from where the respective XSL file should be fetched while generating the FOP report.</p> <p>If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path:</p> <ul style="list-style-type: none"> • @SHARED_DIR – Used when you want to fetch the XSL file from the shared directory on the server. <p>For example, you can set the value to @SHARED_DIR/xsl.</p> <p>However, if the application environment is a Cloud Service Premium Edition environment, you must specify the following information in the file-storage://<File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while fetching the XSL file for an FOP report. • The bucket or container from where you want the system to fetch the XSL file while generating the FOP report. <p>Points to Note:</p> <p>By default, the value is set to @SHARED_DIR/splapp/reporting/xsl. You must change the value as per the requirement.</p> <p>The shared directory variable (i.e. SHARED_DIR) is case-sensitive.</p> <p>Before generating an FOP report, you need to ensure that the XSL files are copied from the</p>	Yes

Option Type	Description	Mandatory (Yes or No)
	<p>@INSTALL_DIR/splapp/reporting/xsl directory to the specified shared directory.</p>	
Report Generation XML Data File Path	<p>Used to specify the directory or bucket where you want to extract the data from the system in the XML format for an FOP report.</p> <p>If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path:</p> <ul style="list-style-type: none"> • @SHARED_DIR – Used when you want to store the XML file in the shared directory on the server. <p>For example, you can set the value to @SHARED_DIR/extractxml.</p> <p>However, if the application environment is a Cloud Service Premium Edition environment, you must specify the following information in the file-storage://<File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while storing the XML file on OCI. • The bucket or container where you want the system to store the XML file for an FOP report. <div data-bbox="505 1339 1068 1629" style="border: 1px solid black; padding: 5px;"> <p>Points to Note:</p> <p>By default, the value is set to @SHARED_DIR/splapp/reporting/extractxml. You must change the value as per the requirement.</p> <p>The shared directory variable (i.e. SHARED_DIR) is case-sensitive.</p> </div>	Yes

8. Enter the values for the required option types in the **Feature Configuration** screen.
9. Click the **Save** button in the **Page Title** area. The changes made to the feature configuration are saved.

2.5.6 Setting the C1-FLUPLD Feature Configuration

You need to set the **C1-FLUPLD** feature configuration only when you want to decrypt the encrypted files on the SFTP server while uploading and transforming the files through the **C1-FTRAN** batch. The **C1-FRDALG** algorithm is used to decrypt the file using the keystore. Earlier, the following properties were derived from the `FW_spl.properties.keystore.truststore.include` file to encrypt or decrypt the files using the keystore:

- `com.oracle.ouaf.system.keystore.file`
- `com.oracle.ouaf.system.keystore.passwordFileName`
- `com.oracle.ouaf.system.keystore.type`
- `com.oracle.ouaf.system.keystore.padding`
- `com.oracle.ouaf.system.keystore.mode`
- `com.oracle.ouaf.system.keystore.alias`
- `ouaf.system.fileupload.pgp.pvt.key.filepath`

Now, the **C1-FLUPLD** feature configuration enables you to specify the required details to encrypt or decrypt the files using the keystore.

To set the **C1-FLUPLD** feature configuration:

1. Login to Oracle Revenue Management and Billing Version 5.1.0.0.0.
2. Click the **Admin** link in the **Application** toolbar. A list appears.
3. From the **Admin** menu, select **F** and then click **Feature Configuration**. A sub-menu appears.
4. Click the **Search** option from the **Feature Configuration** sub-menu. The **Feature Configuration Query** screen appears.
5. In the **Feature Configuration Search** zone, enter **C1-FLUPLD** in the **Feature Name** field.
6. Click **Search**. A list of feature configurations that meet the search criteria appears in the search results.
7. In the **Search Results** section, click the link in the **Description** column corresponding to the feature configuration whose details you want to edit. The **Feature Configuration** screen appears. It contains the following option types:

Option Type	Description	Mandatory (Yes or No)
File Decryption Key Alias	Used to specify the alias (i.e. key defined in the keystore) using which you want to encrypt or decrypt the files. Note: By default, the value is set to ouaf.system . You can change the value as per the requirement.	Yes
Key Store File Path	Used to specify the directory or bucket from where you want to fetch the keystore file. If the application environment is an On Premise or Cloud Service environment, you can specify	Yes

Option Type	Description	Mandatory (Yes or No)
	<p>the directory name along with the following relative path:</p> <ul style="list-style-type: none"> • @SHARED_DIR – Used when you want to fetch the keystore file from the shared directory on the server. <p>For example, you can set the value to @SHARED_DIR/.ouaf_keystore.</p> <p>However, if the application environment is a Cloud Service Premium Edition environment, you must specify the following information in the file-storage://<File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while fetching the keystore file on OCI. • The bucket or container from where you want the system to fetch the keystore file. <div data-bbox="537 1016 1122 1272" style="border: 1px solid black; padding: 5px;"> <p>Points to Note:</p> <p>By default, the value is set to @SHARED_DIR/ks/.ouaf_keystore. You must change the value as per the requirement.</p> <p>The shared directory variable (i.e. SHARED_DIR) is case-sensitive.</p> </div>	
Key Store Mode	<p>Used to specify the mode using which you want to encrypt or decrypt the files.</p> <div data-bbox="545 1381 1114 1461" style="border: 1px solid black; padding: 5px;"> <p>Note: By default, the value is set to CBC (i.e. Cipher-block Chaining).</p> </div>	Yes
Key Store Padding	<p>Used to specify the padding using which you want to encrypt or decrypt the files.</p> <div data-bbox="545 1577 1114 1656" style="border: 1px solid black; padding: 5px;"> <p>Note: By default, the value is set to PKCS5Padding.</p> </div>	Yes
Key Store Password File Path	<p>Used to specify the directory or bucket from where you want to fetch the keystore password file.</p> <p>If the application environment is an On Premise or Cloud Service environment, you can specify</p>	Yes

Option Type	Description	Mandatory (Yes or No)
	<p>the directory name along with the following relative path:</p> <ul style="list-style-type: none"> • @SHARED_DIR – Used when you want to fetch the keystore password file from the shared directory on the server. <p>For example, you can set the value to @SHARED_DIR/.ouaf_storepass.</p> <p>However, if the application environment is a Cloud Service Premium Edition environment, you must specify the following information in the file-storage://<File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while fetching the keystore password file on OCI. • The bucket or container from where you want the system to fetch the keystore password file. <div data-bbox="537 1018 1122 1270" style="border: 1px solid black; padding: 5px;"> <p>Points to Note:</p> <p>By default, the value is set to @SHARED_DIR/ks/.ouaf_storepass. You must change the value as per the requirement.</p> <p>The shared directory variable (i.e. SHARED_DIR) is case-sensitive.</p> </div>	
Key Store Type	<p>Used to indicate the type of keystore file.</p> <div data-bbox="537 1350 1114 1392" style="border: 1px solid black; padding: 2px;"> <p>Note: By default, the value is set to JCEKS.</p> </div>	Yes
Private Key File Path	<p>Used to specify the directory or bucket from where you want to fetch the private key file.</p> <p>If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path:</p> <ul style="list-style-type: none"> • @SHARED_DIR – Used when you want to fetch the private key file from the shared directory on the server. <p>For example, you can set the value to @SHARED_DIR/.ouaf_storepass.</p>	Yes

Option Type	Description	Mandatory (Yes or No)
	<p>However, if the application environment is a Cloud Service Premium Edition environment, you must specify the following information in the file-storage://<File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while fetching the private key file on OCI. • The bucket or container from where you want the system to fetch the private key file. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Points to Note:</p> <p>By default, the value is set to @SHARED_DIR/ks/.ouaf_storepass. You must change the value as per the requirement.</p> <p>The shared directory variable (i.e. SHARED_DIR) is case-sensitive.</p> </div>	

8. Enter the values for the required option types in the **Feature Configuration** screen.
9. Click the **Save** button in the **Page Title** area. The changes made to the feature configuration are saved.

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 5.0.0.0.0 to 5.1.0.0.0, you need to install the following on the database:

1. [Oracle Revenue Management and Billing \(ORMB\) Version 5.1.0.0.0](#)
2. [Oracle Revenue Management and Billing \(ORMB\) Version 5.1.0.0.0 Post Requisite Patches](#)

Points to Note:

To view the list of patches that you need to apply on the database, refer to the [ORMB V5.1.0.0.0 Patch Guide](#) (Document ID: 2941754.1) on [My Oracle Support](#).

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to [Appendix L: ORMB V5.1.0.0.0 Rollup Packs](#).

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

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

2.6.1 Installing ORMB Version 5.1.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 5.1.0.0.0:

1. Login to the database server using the administrator's credentials.
2. Copy the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Database** package to the `TEMPDIR` folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

4. Unzip the **Oracle Financial Services Revenue Management and Billing 5.1.0.0.0 - Oracle Database** package using the following command:

AIX, Linux:

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

Windows:

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

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

- RMB

Note:

There might be situations when you do not want to recreate one or more table indexes. You can skip the recreation process of one or more table indexes by adding the following line in the `<DESTINATION_FOLDER_3>/RMB/Upgrade/Oracle/Install-Upgrade/CDXSchUpg.inp` file:

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

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

5. Set the `JAVA_HOME` environment variable using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

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

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

AIX, Linux:

```
export CLASS_PATH=$JAR_PATH/commons-cli-1.4-c12260c.jar:$JAR_PATH/commons-codec-1.15.jar:$JAR_PATH/commons-collections-3.2.2.jar:$JAR_PATH/jackson-annotations-2.14.0-rc2.jar:$JAR_PATH/jackson-core-2.14.0-rc2.jar:$JAR_PATH/jackson-databind-2.14.0-rc2.jar:$JAR_PATH/log4j-api-2.17.1.jar:$JAR_PATH/log4j-core-2.17.1.jar:$JAR_PATH/ojdbc8-19.3.0.0.0.jar:$JAR_PATH/spl-oradbi-4.5.0.0.1.jar:$JAR_PATH/spl-shared-4.5.0.0.0.jar
```

Windows:

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

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

AIX, Linux:

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

Windows:

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

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

AIX, Linux:

```
$JAVA_HOME/bin/java -Xmx1500M -cp $CLASS_PATH
com.oracle.ouaf.oem.install.OraDBI -d jdbc:oracle:thin:
@<DB_SERVER_NAME>:<DB_PORT>:<DB_NAME>, <SCHEMA_NAME>,
<SCHEMA_PASSWORD>, <READWRITE_USER>, <READONLY_USER>,
<READWRITE_ROLE>, <READONLY_ROLE>, <SCHEMA_NAME> -p
<READWRITE_USER_PASSWORD>, <READONLY_USER_PASSWORD> -l 1,2 -q
true
```

Windows:

```
%JAVA_HOME%\bin\java -Xmx1500M -cp %CLASS_PATH%
com.oracle.ouaf.oem.install.OraDBI -d jdbc:oracle:thin:
@<DB_SERVER_NAME>:<DB_PORT>:<DB_NAME>, <SCHEMA_NAME>,
<SCHEMA_PASSWORD>, <READWRITE_USER>, <READONLY_USER>,
<READWRITE_ROLE>, <READONLY_ROLE>, <SCHEMA_NAME> -p
```

```
<READWRITE_USER_PASSWORD>, <READONLY_USER_PASSWORD> -l 1,2 -q  
true
```

The following message appears in the command line:

```
Ready to upgrade the target database from V5.0.0.0.0 to  
V5.1.0.0.0, do you want to continue (Y/N)?
```

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

2.6.2 Applying the Release-Specific Patches

Once you install Oracle Revenue Management and Billing Version 5.1.0.0.0, you need to apply all patches listed in the [ORMB V5.1.0.0.0 Patch Guide](#) (Document ID: 2941754.1). You can apply a patch from a Windows machine or UNIX Standalone server.

To apply a patch:

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_3> folder. The contents include three files - README.txt, MultiPlatform.zip, and Bug_<PATCH_NUMBER>_Product_Fix_Design.pdf.

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

AIX, Linux:

```
unzip <DESTINATION_FOLDER_3>/MultiPlatform.zip -d  
<PATH>/<DESTINATION_FOLDER_4>
```

Windows:

```
unzip <DESTINATION_FOLDER_3>\MultiPlatform.zip -d  
<PATH>\<DESTINATION_FOLDER_4>
```

The contents of the zip file are extracted in the <DESTINATION_FOLDER_4> folder. The contents include the V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform folder.

4. Change to the V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_4>/V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

Windows:

```
cd <DESTINATION_FOLDER_4>\V5.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

Note: The `<DESTINATION_FOLDER_4>` folder is the location where you have extracted the contents of the `MultiPlatform.zip` file.

The contents include a file named `CCB.V5.1.0.0.0-<PATCH_NUMBER>.jar` and a folder named `database`.

5. 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`.

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_5>` folder. The contents include utility files and a folder named `<PATCH_NUMBER>`.

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

Windows:

```
ouafDatabasePatch.cmd
```

AIX, Linux:

```
ouafDatabasePatch.sh
```

2.7 Migrating Data

Once you upgrade the database, you can migrate the data from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0 using the `PostProcessingScript` query which is available in the **UPGRADE FROM 5.0.0.0.0 TO 5.1.0.0.0** patch.

To migrate the data from ORMB Version 5.0.0.0.0 to 5.1.0.0.0:

1. Copy the **UPGRADE FROM 5.0.0.0.0 TO 5.1.0.0.0** patch to the `TEMPDIR` folder using the following command:

AIX, Linux:

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

Windows:

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

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

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

AIX, Linux:

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

Windows:

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

3. Unzip the **UPGRADE FROM 5.0.0.0.0 TO 5.1.0.0.0** 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 two files - `README.txt` and `deploy.zip`.

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

AIX, Linux:

```
unzip <DESTINATION_FOLDER_6>/deploy.zip -d  
<PATH>/<DESTINATION_FOLDER_7>
```

Windows:

```
unzip <DESTINATION_FOLDER_6>\deploy.zip -d  
<PATH>\<DESTINATION_FOLDER_7>
```

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_7>` folder. The contents include a folder named `deploy`.

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

```
cd <DESTINATION_FOLDER_7>\deploy
```

The contents include a folder named `Migration_From_V5.0.0.0.0_To_5.1.0.0.0`. This folder contains one file named `PostProcessingScript.sql`.

6. Change to the `Migration_From_V5.0.0.0.0_To_5.1.0.0.0` folder using the following command:

```
cd  
<DESTINATION_FOLDER_7>\deploy\Migration_From_V5.0.0.0.0_To_5.1.0.  
0.0
```

7. Connect to the ORMB database using a utility named SQL*Plus and the administrator's (for example, `CISADM`) credentials.
8. Execute the following query from the `Migration_From_V5.0.0.0.0_To_5.1.0.0.0` folder:

```
PostProcessingScript.sql
```

Note: For more information about the query, refer to the [PostProcessingScript.sql](#) section in [Appendix O: SQL Statements for 5.0.0.0.0 to 5.1.0.0.0 Data Migration](#).

3. Additional Tasks

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

1. [Generating the Application Viewer](#)
2. [Starting the Thread Pool Worker](#)
3. [Building Javadoc Index](#)

3.1 Generating the Application Viewer

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

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

AIX, Linux:

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

Windows:

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

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

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

Windows:

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

Note: This command helps to process some tasks which require more memory. This command is only applicable for Windows and not for 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 a response code other than 0, it means an error has occurred while generating the application viewer. A log file is created in the `$SPLEBASE/logs` folder.

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

AIX, Linux:

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

Windows:

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

Where, `$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed. The `initialSetup` utility updates the configuration files including the WAR files on the system.

3.2 Starting the Thread Pool Worker

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

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

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

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

AIX, Linux:

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

Windows:

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

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

3.3 Building Javadoc Index

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

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

AIX, Linux:

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

Windows:

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

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

Appendix A : Known Issues

To view a list of known issues in the current release, refer to the *Oracle Revenue Management and Billing Version 5.1.0.0 Release Notes*.

Appendix B : Third-Party Software Upgrade

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

Appendix C : New Tables Added in ORMB Version 5.1.0.0.0

This section lists and describes the tables that are newly added in Oracle Revenue Management and Billing Version 5.1.0.0.0.

C.1 C1_DEAL_APROF_CRT_HCY

Purpose:	Used to store the approval level criteria of a deal approval profile.
Total Number of Columns:	12

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CRITERIA_SEQ_NO	NUMBER(5)	No	-
DEAL_APPR_PROF_CD	CHAR(8)	No	-
MAXIMUM_PROFIT	NUMBER(15,2)	Yes	-
MAXIMUM_REVENUE	NUMBER(15,2)	Yes	-
MAXIMUM_VARIATION	NUMBER(15,2)	Yes	-
MINIMUM_PROFIT	NUMBER(15,2)	Yes	-
MINIMUM_REVENUE	NUMBER(15,2)	Yes	-
MINIMUM_VARIATION	NUMBER(15,2)	Yes	-
OPERATOR_NAME	CHAR(8)	Yes	-
PROFITABILITY_TYPE	CHAR(8)	Yes	-
SEQNO	NUMBER(5, 0)	No	-
VARIATION_TYPE	CHAR(8)	Yes	-

Primary Key:

Key Type	Column Name
Composite	CRITERIA_SEQ_NO
	DEAL_APPR_PROF_CD
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM572P0	Unique	CRITERIA_SEQ_NO
			DEAL_APPR_PROF_CD
			SEQNO

C.2 C1_DEAL_TYPE_PC_COLMN_CONFIG

Purpose:	Used to store a list of columns which are configurable for a deal (created using a particular deal type) while viewing its pricing and commitments details.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
DEAL_TYPE_CD	VARCHAR2(20)	No	-
PNC_COLUMN_NAME_FLG	CHAR(4)	No	-
SELECTION_TYPE_FLG	CHAR(4)	No	-
SEQUENCE_NUM	NUMBER(5,0)	No	-

Primary Key:

Key Type	Column Name
Composite	DEAL_TYPE_CD
	PNC_COLUMN_NAME_FLG
	SELECTION_TYPE_FLG
	SEQUENCE_NUM

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM910P0	Unique	DEAL_TYPE_CD
			PNC_COLUMN_NAME_FLG

C.3 C1_MODEL_ADHOC_PRICEITEM

Purpose:	Used to store the details of additional price items included in a deal.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CRE_DTTM	DATE	No	-
DEAL_ENTITY_ID	CHAR(10)	No	-
DEAL_ENTITY_TYPE_FLG	CHAR(4)	No	-
MODEL_ID	CHAR(10)	No	-
PRICEITEM_CD	CHAR(30)	No	-
PRICEITEM_PARM_GRP_ID	NUMBER(22,0)	No	-
VERSION	NUMBER(5,0)	No	-

Primary Key:

Key Type	Column Name
Composite	CRE_DTTM
	DEAL_ENTITY_ID
	DEAL_ENTITY_TYPE_FLG
	MODEL_ID
	PRICEITEM_CD
	PRICEITEM_PARM_GRP_ID
	VERSION

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM811P0	Unique	MODEL_ID
			PRICEITEM_CD
			PRICEITEM_PARM_GRP_ID

C.4 C1_MODEL_STND_PRICEASGN

Purpose:	Used to store all standard price item pricing of an entity for a deal version.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
DEAL_ENTITY_ID	CHAR(10)	No	-
DEAL_ENTITY_TYPE_FLG	CHAR(4)	No	-
MODEL_ID	CHAR(10)	No	-
PRICE_ASGN_ID	CHAR(10)	No	-
PRICEITEM_CD	CHAR(30)	No	-
PRICEITEM_PARM_GRP_ID	NUMBER(22,0)	No	-
STND_PRICELIST_ID	CHAR(10)	No	-

Primary Key:

Key Type	Column Name
Composite	DEAL_ENTITY_ID
	DEAL_ENTITY_TYPE_FLG
	MODEL_ID
	PRICE_ASGN_ID
	PRICEITEM_CD
	PRICEITEM_PARM_GRP_ID
	STND_PRICELIST_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM909P0	Unique	DEAL_ENTITY_ID
			DEAL_ENTITY_TYPE_FLG
			MODEL_ID
			PRICE_ASGN_ID

C.5 C1_MODEL_STND_PRICELIST

Purpose:	Used to store the details of a standard price list for a deal version.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
DEAL_ENTITY_ID	CHAR(10)	No	-
DEAL_ENTITY_TYPE_FLG	CHAR(4)	No	-
DEAL_ID	CHAR(10)	No	-
MODEL_ID	CHAR(10)	No	-
SEQNO	NUMBER(5,0)	No	-
STND_PRICELIST_ID	CHAR(10)	No	-

Primary Key:

Key Type	Column Name
Composite	DEAL_ENTITY_ID
	DEAL_ENTITY_TYPE_FLG
	DEAL_ID
	MODEL_ID
	SEQNO
	STND_PRICELIST_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM809P0	Unique	DEAL_ENTITY_ID
			DEAL_ENTITY_TYPE_FLG
			DEAL_ID
			MODEL_ID
			STND_PRICELIST_ID

C.6 C1_PRC_RULE_MEMB

Purpose:	Used to store pricing rule start and end dates for a particular membership.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BATCH_NBR	NUMBER(10,0)	No	-
MEMBERSHIP_ID	CHAR(15)	No	-
MEMBPR_END_DT	DATE	Yes	-
MEMBPR_START_DT	DATE	No	-
PRICING_RULE_ID	CHAR(15)	No	-
PRIMARY_PRICING_RULE_ID	CHAR(15)	No	-
STATUS	CHAR(1)	No	-

Primary Key:

Key Type	Column Name
Composite	BATCH_NBR
	MEMBERSHIP_ID
	MEMBPR_START_DT
	PRICING_RULE_ID
	PRIMARY_PRICING_RULE_ID
	STATUS

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM788P0	Unique	BATCH_NBR
			MEMBERSHIP_ID
			MEMBPR_START_DT
			PRICING_RULE_ID
			PRIMARY_PRICING_RULE_ID
			STATUS
2.	XM788S1	Non-Unique	MEMBERSHIP_ID
			STATUS

Sr. No.	Index Name	Index Type	Column Name
3.	XM788S2	Non-Unique	MEMBERSHIP_ID
			MEMBPR_START_DT
			PRIMARY_PRICING_RULE_ID

C.7 C1_PRICEITEM_REL_DIV

Purpose:	Used to store the details of price items which are associated to each other for relationship based pricing in a deal.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CIS_DIVISION	CHAR(5)	No	-
PRICEITEM_CHLD_CD	CHAR(30)	No	-
PRICEITEM_PAR_CD	CHAR(30)	No	-
PRICEITEM_PARM_GRP_ID	NUMBER(22,0)	No	-
PRICEITEM_REL_TYPE_FLG	CHAR(4)	No	-
START_DT	DATE	No	-

Primary Key:

Key Type	Column Name
Composite	CIS_DIVISION
	PRICEITEM_CHLD_CD
	PRICEITEM_PAR_CD
	PRICEITEM_PARM_GRP_ID
	PRICEITEM_REL_TYPE_FLG
	START_DT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM812P0	Unique	CIS_DIVISION
			PRICEITEM_CHLD_CD
			PRICEITEM_PAR_CD
			PRICEITEM_PARM_GRP_ID

Sr. No.	Index Name	Index Type	Column Name
			PRICEITEM_REL_TYPE_FLG
			START_DT

Appendix D : Existing Tables Modified in ORMB Version 5.1.0.0.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 5.1.0.0.0. It indicates the columns that are newly added, dropped, or modified in these tables.

D.1 C1_ACCUM_MIN_PREM_AMT

The following table lists the columns that are newly added, modified, or dropped from the C1_ACCUM_MIN_PREM_AMT table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CUL_SURPLUS_DEFICIT_AMT	Newly Added	-	NUMBER(36,18)	No	-
2.	EFFECTIVE_MPP_LIMIT	Newly Added	-	NUMBER(36,18)	No	-
3.	MONTHLY_MPP_LIMIT	Newly Added	-	NUMBER(36,18)	No	-
4.	ROLL_FWD_CHRG	Newly Added	-	NUMBER(36,18)	No	-

D.2 C1_DEAL_APROF_HCY

The following table lists the columns that are newly added, modified, or dropped from the C1_DEAL_APROF_HCY table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SELF_APP_REQ	Newly Added	-	CHAR(4)	Yes	The column value is set to Y.

D.3 C1_DEAL_COMMENTS

The following table lists the columns that are newly added, modified, or dropped from the C1_DEAL_COMMENTS table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DEAL_WITH_APPR	Newly Added	-	CHAR(4)	No	-

D.4 C1_DEAL_SIMULATION_DTL

The following table lists the columns that are newly added, modified, or dropped from the C1_DEAL_SIMULATION_DTL table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	LOCAL_PROFITABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-
2.	PROFITABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-

D.5 C1_DEAL_SIMULATION_SMRY

The following table lists the columns that are newly added, modified, or dropped from the C1_DEAL_SIMULATION_SMRY table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	LOCAL_PROFITABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-
2.	PROFITABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-

D.6 C1_DEAL_TYPE

The following table lists the columns that are newly added, modified, or dropped from the C1_DEAL_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SIML_STATS_TYPE_FLG	Newly Added	-	CHAR(4)	No	-
2.	STND_COMPARE_SW	Newly Added	-	CHAR(1)	No	-

D.7 C1_MODEL_FIN_SUMMARY

The following table lists the columns that are newly added, modified, or dropped from the C1_MODEL_FIN_SUMMARY table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	LOCAL_STND_COST	Newly Added	-	NUMBER(15,2)	No	-
2.	LOCAL_STND_PROFITABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-
3.	LOCAL_STND_REVENUE	Newly Added	-	NUMBER(15,2)	No	-
4.	PROF_DEVI_PROP_VS_STND	Newly Added	-	NUMBER(15,2)	No	-
5.	REVENUE_DEVI_PROP_VS_ACTIVE	Newly Added	-	NUMBER(15,2)	No	-
6.	REVENUE_DEVI_PROP_VS_STND	Newly Added	-	NUMBER(15,2)	No	-
7.	STND_COST	Newly Added	-	NUMBER(15,2)	No	-
8.	STND_PROFITABILITY	Newly Added	-	NUMBER(15,2)	No	-
9.	STND_PROFITABILITY_AMT	Newly Added	-	NUMBER(15,2)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
10.	STND_REVENUE	Newly Added	-	NUMBER(15,2)	No	-

D.8 C1_MODEL_RECM_PRICEASGN

The following table lists the columns that are newly added, modified, or dropped from the C1_MODEL_RECM_PRICEASGN table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
2.	PRICEITEM_PARM_GRP_ID	Newly Added	-	NUMBER(22)	No	-

D.9 CI_ACCT

The following table lists the columns that are newly added, modified, or dropped from the CI_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V5.0.0.0.0	Data Type in V5.1.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	RE_EVAL_APAY_SW	Newly Added	-	CHAR(1)	No	-

Appendix E : Algorithms and Algorithm Types Dropped in ORMB Version 5.1.0.0.0

This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.

E.1 Algorithm Types

No algorithm types are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.

E.2 Algorithms

No algorithms are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.

Appendix F : Parameters Added or Removed from Batch Controls in ORMB Version 5.1.0.0.0

This section lists the parameters which are newly added or removed from the existing batch controls in Oracle Revenue Management and Billing Version 5.1.0.0.0.

Batch Control	Parameters (Removed from 5.1.0.0.0)		Parameters (Added in 5.1.0.0.0)	
	Sequence Number	Parameter	Sequence Number	Parameter
BSGENREG	90	Thread Pool Name	100	Thread Pool Name
	-	-	90	Regenerate Bill Segment
C1-DISTA	20	Thread Pool Name	30	Thread Pool Name
	-	-	20	Disaggregate Transactions From Date
C1-DRSUA	-	-	90	Transaction Status
C1-FCADH	-	-	50	Division
C1-IDENT	-	-	100	Transaction Status
C1-PDTXN	-	-	80	Transaction Status
C1-TXNCU	-	-	110	Transaction Status
C1-TXNSQ	-	-	70	Transaction Disaggregation Review Required

Appendix G : Parameters Added or Removed from Algorithm Types in ORMB Version 5.1.0.0.0

No parameters are newly added or removed from the existing algorithm types in Oracle Revenue Management and Billing Version 5.1.0.0.0.

Appendix H : Option Types Added or Removed from Feature Configurations in ORMB Version 5.1.0.0.0

This section lists the option types which are newly added or removed from the existing feature configurations in Oracle Revenue Management and Billing Version 5.1.0.0.0.

Feature Configuration	Option Type (Removed from 5.1.0.0.0)	Option Type (Added in 5.1.0.0.0)
C1_PRICING	-	Associating Price Items For Relationship Type
C1-ADDRESS	-	Address Source for Refund Request
	-	Address Type for Refund Request
C1-ASOBLNG	-	Approval Workflow Group for MPP
C1-DEAL	-	Create Bespoke Price List during Orchestration
	-	Assignment Limit for Online Deal Orchestration
	-	Deal Pricing Download
SYSDT	Environment Type	-

Appendix I : Characteristic Types Dropped in ORMB Version 5.1.0.0.0

No characteristic types are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.

Appendix J : Batch Controls Dropped in ORMB Version 5.1.0.0.0

No batch controls are dropped in Oracle Revenue Management and Billing Version 5.1.0.0.0.

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 4.5.0.0.0:

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

AIX, Linux:

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

Windows:

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

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

AIX, Linux:

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

Windows:

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

Appendix L : ORMB V5.1.0.0.0 Rollup Packs

Instead of individually applying the patches, you can download and apply the release-specific rollup packs. To view the list of rollup packs that you need to apply on the application environment and database, refer to the [ORMB V5.1.0.0.0 Patch Guide](#) (Document ID: 2941754.1) on [My Oracle Support](#).

L.1 Applying a Rollup Pack on the Application Environment

Once you install Oracle Revenue Management and Billing Version 5.1.0.0.0, you need to apply the rollup packs listed in the [ORMB V5.1.0.0.0 Patch Guide](#) (Document ID: 2941754.1). To apply a rollup pack on the application environment:

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. The contents include the `README.txt` file and three folders named `RMB_V5.1.0.0.0_App_Rollup`, `RMB_V5.1.0.0.0_DB_Rollup`, and `RMB_V5.1.0.0.0_PFDs`.

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

AIX, Linux:

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

Windows:

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

Where,

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

4. Change to the `RMB_V5.1.0.0.0_App_Rollup` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/RMB_V5.1.0.0.0_App_Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_1>\RMB_V5.1.0.0.0_App_Rollup
```

Note: The <DESTINATION_FOLDER_1> folder is the location where you have extracted the contents of the rollup pack.

5. Install the patch using the following command:

AIX, Linux:

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

L.2 Applying a Rollup Pack on the Database

Once you install Oracle Revenue Management and Billing Version 5.1.0.0.0, you need to apply the rollup packs listed in the [ORMB V5.1.0.0.0 Patch Guide \(Document ID: 2941754.1\)](#). You can apply a rollup pack from a Windows machine or UNIX Standalone server. To apply a rollup pack on the database:

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

AIX, Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_1> folder. The contents include the `README.txt` file and three folders named `RMB_V5.1.0.0.0_App_Rollup`, `RMB_V5.1.0.0.0_DB_Rollup`, and `RMB_V5.1.0.0.0_PFDs`.

3. Change to the `RMB_V5.1.0.0.0_DB_Rollup` folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_1>/RMB_V5.1.0.0.0_DB_Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_1>\RMB_V5.1.0.0.0_DB_Rollup
```

Note: The <DESTINATION_FOLDER_1> folder is the location where you have extracted the contents of the rollup pack.

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

Windows:

```
ouafDatabasePatch.cmd
```

AIX, Linux:

```
ouafDatabasePatch.sh
```

Appendix M : New Tables Added in OUAF Version 4.5.0.0.0

This section lists and describes the tables that are newly added in Oracle Utilities Application Framework Version 4.5.0.0.0.

M.1 CI_MD_IDX

Purpose:	Used to store the details of an index.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
IDX_CD	CHAR(12)	No	-
TBL_NAME	CHAR(30)	No	-
UNIQUE_SW	CHAR(1)	No	-
OWNER_FLG	CHAR(4)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Simple	IDX_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C799P0	Unique	IDX_CD

M.2 CI_MD_IDX_FLD

Purpose:	Used to store the fields that are used to create an index.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
IDX_CD	CHAR(12)	No	-
SEQ_NUM	NUMBER(3,0)	No	0

Column Name	Data Type	Nullable (Yes or No)	Default Value
FLD_NAME	CHAR(30)	No	-
OWNER_FLG	CHAR(4)	No	''
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	IDX_CD
	SEQ_NUM

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C800P0	Unique	IDX_CD
			SEQ_NUM
2.	F1C800S1	Unique	IDX_CD
			FLD_NAME

M.3 CI_MD_TBL_ADDTL

Purpose:	Used to store the additional attributes of a table.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
TBL_NAME	CHAR(30)	No	-
TBL_GEN_STATUS_FLG	CHAR(4)	No	''
OWNER_FLG	CHAR(4)	No	''
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Simple	TBL_NAME

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C906P0	Unique	TBL_NAME

M.4 F1_IWS_SVC_FLDTEXT

Purpose:	Used to store the help text fields of an inbound web service.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
IN_SVC_NAME	VARCHAR2(254)	No	-
TEXT_NAME	CHAR(30)	No	-
IWS_HELP_TEXT	VARCHAR2(4000)	No	-
EXAMPLE_TEXT	VARCHAR2(4000)	Yes	-
FLD_NAME	CHAR(30)	No	-
OWNER_FLG	CHAR(4)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	IN_SVC_NAME
	TEXT_NAME

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C903P0	Unique	IN_SVC_NAME
			TEXT_NAME

M.5 F1_IWS_SVC_OPER_L

Purpose:	Used to store the description of the inbound web service operation.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
IN_SVC_NAME	VARCHAR2(254)	No	-
OPERATION_NAME	VARCHAR2(254)	No	-
LANGUAGE_CD	CHAR(3)	No	-
DESCR	VARCHAR2(60)	No	''
DESCRLONG	VARCHAR2(4000)	Yes	-
OWNER_FLG	CHAR(4)	No	''
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	IN_SVC_NAME
	OPERATION_NAME
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C904P0	Unique	IN_SVC_NAME
			OPERATION_NAME
			LANGUAGE_CD

M.6 F1_IWS_SVC_OPER_OPT

Purpose:	Used to store the option details of an inbound web service operation.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
IN_SVC_NAME	VARCHAR2(254)	No	-
OPERATION_NAME	VARCHAR2(254)	No	-
IWS_OPR_OPT_FLG	CHAR(4)	No	' '
SEQ_NUM	NUMBER(3,0)	No	-
IWS_OPR_OPT_VAL	VARCHAR2(32000)	No	-
OWNER_FLG	CHAR(4)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	IN_SVC_NAME
	OPERATION_NAME
	IWS_OPR_OPT_FLG
	SEQ_NUM
	OWNER_FLG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C905P0	Unique	IN_SVC_NAME
			OPERATION_NAME
			IWS_OPR_OPT_FLG
			SEQ_NUM
			OWNER_FLG

M.7 F1_IWS_SVC_SCHEMA

Purpose:	Used to store the schema information of an inbound web service.
Total Number of Columns:	7

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
IN_SVC_NAME	VARCHAR2(254)	No	-
OPERATION_NAME	VARCHAR2(254)	No	-
IWS_OPR_OPT_FLG	CHAR(4)	No	' '
SEQ_NUM	NUMBER(3,0)	No	-
IWS_OPR_OPT_VAL	VARCHAR2(32000)	No	-
OWNER_FLG	CHAR(4)	No	' '
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	IN_SVC_NAME
	OPERATION_NAME
	IWS_OPR_OPT_FLG
	SEQ_NUM
	OWNER_FLG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C905P0	Unique	IN_SVC_NAME
			OPERATION_NAME
			IWS_OPR_OPT_FLG
			SEQ_NUM
			OWNER_FLG

M.8 F1_MO_UPD_BACKLOG

Purpose:	Used to store the details of a maintenance object.
Total Number of Columns:	8

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
MAINT_OBJ_CD	CHAR(12)	No	-
PK_VALUE1	VARCHAR2(254)	No	-
PK_VALUE2	VARCHAR2(254)	Yes	-
PK_VALUE3	VARCHAR2(254)	Yes	-
PK_VALUE4	VARCHAR2(254)	Yes	-
PK_VALUE5	VARCHAR2(254)	Yes	-
ENT_KEY_HASH	NUMBER(5,0)	No	-
REC_ROW_ID	VARCHAR2(100)	Yes	-

Primary Key:

None

Indexes:

None

M.9 F1_TAG

Purpose:	Used to store the details of an entity tag.
Total Number of Columns:	8

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ENTITY_TAG	VARCHAR2(30)	No	-
ENTITY_TAG_CLASS_FLG	CHAR(4)	No	''
TAG_STATUS_FLG	CHAR(4)	No	''
BUS_OBJ_CD	CHAR(30)	No	''
MAINT_OBJ_CD	CHAR(12)	Yes	''
OWNER_FLG	CHAR(4)	No	''
BO_DATA_AREA	CLOB	Yes	-

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

Primary Key:

Key Type	Column Name
Simple	ENTITY_TAG

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C795P0	Unique	ENTITY_TAG

M.10 F1_TAG_CHAR

Purpose:	Used to store the characteristics of an entity tag.
Total Number of Columns:	13

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ENTITY_TAG	VARCHAR2(30)	No	-
CHAR_TYPE_CD	CHAR(8)	No	-
SEQ_NUM	NUMBER(3,0)	No	-
CHAR_VAL	CHAR(16)	No	''
ADHOC_CHAR_VAL	VARCHAR2(254)	No	''
CHAR_VAL_FK1	VARCHAR2(50)	No	''
CHAR_VAL_FK2	VARCHAR2(50)	No	''
CHAR_VAL_FK3	VARCHAR2(50)	No	''
CHAR_VAL_FK4	VARCHAR2(50)	No	''
CHAR_VAL_FK5	VARCHAR2(50)	No	''
SRCH_CHAR_VAL	VARCHAR2(50)	No	''
OWNER_FLG	CHAR(4)	No	''
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	ENTITY_TAG
	CHAR_TYPE_CD
	SEQ_NUM

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C797P0	Unique	ENTITY_TAG
			CHAR_TYPE_CD
			SEQ_NUM

M.11 F1_TAG_L

Purpose:	Used to store the description of an entity tag.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ENTITY_TAG	VARCHAR2(30)	No	-
LANGUAGE_CD	CHAR(3)	No	''
DESCR100	VARCHAR2(100)	No	''
DESCRLONG	VARCHAR2(4000)	Yes	-
OWNER_FLG	CHAR(4)	No	''
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	ENTITY_TAG
	LANGUAGE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C796P0	Unique	ENTITY_TAG
			LANGUAGE_CD

M.12 F1_TAGGED_ENTITY

Purpose:	Used to store the details of an entity tagging.
Total Number of Columns:	11

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ENTITY_TAG	VARCHAR2(30)	No	-
OWNER_FLG	CHAR(4)	No	''
MAINT_OBJ_CD	CHAR(12)	No	''
PK_VALUE1	VARCHAR2(254)	No	''
PK_VALUE2	VARCHAR2(254)	Yes	-
PK_VALUE3	VARCHAR2(254)	Yes	-
PK_VALUE4	VARCHAR2(254)	Yes	-
PK_VALUES5	VARCHAR2(254)	Yes	-
KEYS	VARCHAR2(200)	No	-
REFERENCE_NAME	VARCHAR2(60)	Yes	-
VERSION	NUMBER(5,0)	No	1

Primary Key:

Key Type	Column Name
Composite	ENTITY_TAG
	OWNER_FLG
	MAINT_OBJ_CD
	KEYS

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C798P0	Unique	ENTITY_TAG
			OWNER_FLG
			MAINT_OBJ_CD
			KEYS
2.	F1C798S1	Non-Unique	MAINT_OBJ_CD

Sr. No.	Index Name	Index Type	Column Name
			PK_VALUE1
			PK_VALUE2
			PK_VALUE3
			PK_VALUE4
			PK_VALUE5

Appendix N : Existing Tables Modified in OUAF Version 4.5.0.0.0

This section lists the existing tables which are modified in Oracle Utilities Application Framework Version 4.5.0.0.0. It indicates the columns that are newly added, dropped, or modified in these tables.

N.1 CI_NT_XID

The following table lists the columns that are newly added, modified, or dropped from the CI_NT_XID table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.2 CI_NT_XID_L

The following table lists the columns that are newly added, modified, or dropped from the CI_NT_XID_L table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.3 CI_PORTAL_ZONE

The following table lists the columns that are newly added, modified, or dropped from the CI_PORTAL_ZONE table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ZONE_HEIGHT_FLG	Newly Added	-	CHAR(4)	No	-
2.	ZONE_LAYOUT	Newly Added	-	CHAR(4)	No	-
3.	ZONE_MAX_HEIGHT_PCT	Newly Added	-	NUMBER(3)	No	-
4.	ZONE_ROWS	Newly Added	-	CHAR(4)	No	-
5.	ZONE_WIDTH_FLG	Newly Added	-	CHAR(4)	No	-

N.4 CI_XAI_SENDER

The following table lists the columns that are newly added, modified, or dropped from the CI_XAI_SENDER table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.5 CI_XAI_SENDER_L

The following table lists the columns that are newly added, modified, or dropped from the CI_XAI_SENDER_L table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.6 CI_XAI_SNDR_CTX

The following table lists the columns that are newly added, modified, or dropped from the CI_XAI_SNDR_CTX table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.7 F1_BATCH_CONF_VW

The following table lists the columns that are newly added, modified, or dropped from the F1_BATCH_CONF_VW table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	AVG_ELAPSED	Newly Added	-	NUMBER	No	-
2.	BATCH_CD	Newly Added	-	CHAR(8)	No	-
3.	BATCH_PERF_COUNT	Newly Added	-	NUMBER	No	-
4.	BEST_ELAPSED	Newly Added	-	NUMBER	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	CONFIDENCE	Newly Added	-	NUMBER	No	-
6.	MED_ELAPSED	Newly Added	-	NUMBER	No	-
7.	SAMPLE_SIZE	Newly Added	-	NUMBER	No	-
8.	STD_DEVIATION	Newly Added	-	NUMBER	No	-
9.	WORST_ELAPSED	Newly Added	-	NUMBER	No	-

N.8 F1_BATCH_RUN_HIST_VW

The following table lists the columns that are newly added, modified, or dropped from the F1_BATCH_RUN_HIST_VW table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BATCH_BUS_DT	Newly Added	-	DATE	No	-
2.	BATCH_CD	Newly Added	-	CHAR(8)	No	-
3.	BATCH_JOB_ID	Newly Added	-	CHAR(14)	No	-
4.	BATCH_NBR	Newly Added	-	NUMBER(10)	No	-
5.	BATCH_RERUN_NBR	Newly Added	-	NUMBER(10)	No	-
6.	BATCH_RUN_COUNT	Newly Added	-	NUMBER	No	-
7.	ELAPSED_TIME	Newly Added	-	NUMBER	No	-
8.	END_DTTM	Newly Added	-	DATE	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
9.	PROCESS_DT	Newly Added	-	DATE	No	-
10.	RUN_STATUS	Newly Added	-	CHAR(2)	No	-
11.	START_DTTM	Newly Added	-	DATE	No	-
12.	THREADPOOL	Newly Added	-	VARCHAR2(254)	No	-
13.	TOTAL_ERROR	Newly Added	-	NUMBER	No	-
14.	TOTAL_PROCESSED	Newly Added	-	NUMBER	No	-

N.9 F1_BATCH_THD_CAP_VW

The following table lists the columns that are newly added, modified, or dropped from the F1_BATCH_THD_CAP_VW table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BATCH_BUS_DT	Newly Added	-	DATE	No	-
2.	BATCH_CD	Newly Added	-	CHAR(8)	No	-
3.	BATCH_JOB_ID	Newly Added	-	CHAR(14)	No	-
4.	BATCH_NBR	Newly Added	-	NUMBER(10)	No	-
5.	BATCH_RERUN_NBR	Newly Added	-	NUMBER(10)	No	-
6.	BATCH_THREAD_CAP_COUNT	Newly Added	-	NUMBER	No	-
7.	BATCH_THREAD_NBR	Newly Added	-	NUMBER(10)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
8.	END_DT	Newly Added	-	DATE	No	-
9.	END_MINUTES	Newly Added	-	NUMBER	No	-
10.	JOB_END_MINS	Newly Added	-	NUMBER	No	-
11.	JOB_START_MINS	Newly Added	-	NUMBER	No	-
12.	START_DT	Newly Added	-	DATE	No	-
13.	START_MINUTES	Newly Added	-	NUMBER	No	-
14.	SUBMIT_METH_FLG	Newly Added	-	CHAR(4)	No	-
15.	SUBMIT_USER_ID	Newly Added	-	CHAR(8)	No	-
16.	THREAD_END_DTTM	Newly Added	-	DATE	No	-
17.	THREAD_START_DTTM	Newly Added	-	DATE	No	-
18.	THREADPOOL	Newly Added	-	VARCHAR2(254)	No	-

N.10 F1_BATCH_THD_HIST_VW

The following table lists the columns that are newly added, modified, or dropped from the F1_BATCH_THD_HIST_VW table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BATCH_BUS_DT	Newly Added	-	DATE	No	-
2.	BATCH_CD	Newly Added	-	CHAR(8)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
3.	BATCH_JOB_ID	Newly Added	-	CHAR(14)	No	-
4.	BATCH_NBR	Newly Added	-	NUMBER(10)	No	-
5.	BATCH_RERUN_NBR	Newly Added	-	NUMBER(10)	No	-
6.	BATCH_RUN_THD_COUNT	Newly Added	-	NUMBER	No	-
7.	BATCH_THREAD_NBR	Newly Added	-	NUMBER(10)	No	-
8.	ELAPSED_TIME	Newly Added	-	NUMBER	No	-
9.	PROCESS_DT	Newly Added	-	DATE	No	-
10.	RECS_PER_MINUTE	Newly Added	-	NUMBER	No	-
11.	RETRY_COUNT	Newly Added	-	NUMBER	No	-
12.	RUN_STATUS	Newly Added	-	CHAR(2)	No	-
13.	THREAD_END_DTTM	Newly Added	-	DATE	No	-
14.	THREAD_START_DTTM	Newly Added	-	DATE	No	-
15.	THREAD_STATUS	Newly Added	-	CHAR(2)	No	-
16.	THREADPOOL	Newly Added	-	VARCHAR2(254)	No	-
17.	TOTAL_ERROR	Newly Added	-	NUMBER	No	-
18.	TOTAL_PROCESSED	Newly Added	-	NUMBER	No	-

N.11 F1_BATCH_VOL_VW

The following table lists the columns that are newly added, modified, or dropped from the F1_BATCH_VOL_VW table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BATCH_CD	Newly Added	-	CHAR(8)	No	-
2.	BATCH_NBR	Newly Added	-	NUMBER(10)	No	-
3.	BATCH_RERUN_NBR	Newly Added	-	NUMBER(10)	No	-
4.	BATCH_THD_VOL_COUNT	Newly Added	-	NUMBER	No	-
5.	MAX_PROCESSED	Newly Added	-	NUMBER	No	-
6.	RECS_PER_MINUTE	Newly Added	-	NUMBER	No	-
7.	TOTAL_PROCESSED	Newly Added	-	NUMBER	No	-

N.12 F1_EXTSYS_OUTMSG_PROF

The following table lists the columns that are newly added, modified, or dropped from the F1_EXTSYS_OUTMSG_PROF table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.13 F1_IWS_SVC

The following table lists the columns that are newly added, modified, or dropped from the F1_IWS_SVC table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PUBLISH_FLG	Newly Added	-	CHAR(4)	No	-

N.14 F1_IWS_SVC_OPER

The following table lists the columns that are newly added, modified, or dropped from the F1_IWS_SVC_OPER table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MAINT_OBJ_CD	Newly Added	-	CHAR(12)	No	-
2.	SEQ_NUM	Newly Added	-	NUMBER(3)	No	-

N.15 CI_CNV_DUP_KEY

The following table lists the columns that are newly added, modified, or dropped from the CI_CNV_DUP_KEY table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CX_ID	Format Change	CHAR(14)	CHAR(30)	No	-

N.16 CI_CNV_KEY_TMP

The following table lists the columns that are newly added, modified, or dropped from the CI_CNV_KEY_TMP table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CI_ID	Format Change	CHAR(14)	CHAR(30)	No	-
2.	CX_ID	Format Change	CHAR(14)	CHAR(30)	No	-
3.	INIT_ID	Format Change	VARCHAR2(14)	VARCHAR2(30)	No	-

N.17 F1_MD_BI_TBL

The following table lists the columns that are newly added, modified, or dropped from the F1_MD_BI_TBL table:

Sr. No.	Column Name	Modification Type	Data Type in V4.4.0.3.0	Data Type in V4.5.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	F1_BI_HIER_DEFN	Format Change	VARCHAR2(4000)	VARCHAR2(32000)	No	-

Appendix O : SQL Statements for 5.0.0.0.0 to 5.1.0.0.0 Data Migration

This section describes the `PostProcessingScript` query which is used for migrating data from Oracle Revenue Management and Billing Version 5.0.0.0.0 to 5.1.0.0.0.

O.1 PostProcessingScript.sql

The `PostProcessingScript.sql` query does the following:

- Moves the profitability, profit, profit variation, and revenue details from the **C1_DEAL_APROF_HCY** table to the newly introduced table named **C1_DEAL_APROF_CRT_HCY**
- Sets the **SELF_APP_REQ** field corresponding to the existing records in the **C1_DEAL_APROF_HCY** table to **Y**

It updates the following column values of the records in the respective table:

Table Name	Column Name	Column Value After Data Migration
C1_DEAL_APROF_CRT_HCY	DEAL_APPR_PROF_CD	The column value is set to the value stored in the DEAL_APPR_PROF_CD column corresponding to the record in the C1_DEAL_APROF_HCY table.
	SEQNO	The column value is set to the value stored in the SEQNO column corresponding to the record in the C1_DEAL_APROF_HCY table.
	CRITERIA_SEQ_NO	The column value is set to 10 .
	PROFITABILITY_TYPE	If the data is present in the MIN_PROFIT_PERCENT and MAX_PROFIT_PERCENT columns of the C1_DEAL_APROF_HCY table, the column value is set to PERC corresponding to the record in the C1_DEAL_APROF_CRT_HCY table. However, if the data is not present in the MIN_PROFIT_PERCENT and MAX_PROFIT_PERCENT columns of the C1_DEAL_APROF_HCY table, the column value is set to FLAT corresponding to the record in the C1_DEAL_APROF_CRT_HCY table.
	MINIMUM_PROFIT	The column value is set to the value stored in the MIN_PROFIT_PERCENT or MIN_PROFIT_AMOUNT column (whichever is present) corresponding to the record in the C1_DEAL_APROF_HCY table.
	MAXIMUM_PROFIT	The column value is set to the value stored in the MAX_PROFIT_PERCENT or MAX_PROFIT_AMOUNT column (whichever is present) corresponding to the record in the C1_DEAL_APROF_HCY table.

Table Name	Column Name	Column Value After Data Migration
	VARIATION_TYPE	If the data is present in the MIN_DEVIATION_PERCENT and MAX_DEVIATION_PERCENT columns of the C1_DEAL_APROF_HCY table, the column value is set to PERC corresponding to the record in the C1_DEAL_APROF_CRT_HCY table. However, if the data is not present in the MIN_DEVIATION_PERCENT and MAX_DEVIATION_PERCENT columns of the C1_DEAL_APROF_HCY table, the column value is set to FLAT corresponding to the record in the C1_DEAL_APROF_CRT_HCY table.
	MINIMUM_VARIATION	The column value is set to the value stored in the MIN_DEVIATION_PERCENT or MIN_DEVIATION_AMOUNT column (whichever is present) corresponding to the record in the C1_DEAL_APROF_HCY table.
	MAXIMUM_VARIATION	The column value is set to the value stored in the MAX_DEVIATION_PERCENT or MAX_DEVIATION_AMOUNT column (whichever is present) corresponding to the record in the C1_DEAL_APROF_HCY table.
	MINIMUM_REVENUE	The column value is set to the value stored in the MINIMUM_REVENUE column corresponding to the record in the C1_DEAL_APROF_HCY table.
	MAXIMUM_REVENUE	The column value is set to the value stored in the MAXIMUM_REVENUE column corresponding to the record in the C1_DEAL_APROF_HCY table.
	OPERATOR_NAME	The column value is set to AND .
C1_DEAL_APROF_HCY	SELF_APP_REQ	The column value is set to Y .