Oracle® Revenue Management and Billing

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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 4.0.0.0.0 to 5.0.0.0.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 4.0.0.0.0 to 5.0.0.0.0.
Section 3	Additional Tasks	Lists and describes the additional tasks that you need to perform after upgrading the application.
Appendix A	Known Issues	Lists the known issues in Oracle Revenue Management and Billing Version 5.0.0.0.0.
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 5.0.0.0.0	Lists and describes the tables that are newly added in Oracle Revenue Management and Billing Version 5.0.0.0.0.
Appendix D	Existing Tables Modified in ORMB Version 5.0.0.0.0	Lists the existing tables and their columns that are modified in Oracle Revenue Management and Billing Version 5.0.0.0.0.

Section No.	Section Name	Description
Appendix E	Algorithms and Algorithm Types Dropped in ORMB Version 5.0.0.0.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 5.0.0.0.0.
Appendix F	Parameters Added or Removed from Algorithm Types in ORMB Version 5.0.0.0.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 5.0.0.0.0.
Appendix G	Option Types Added or Removed from Feature Configurations in ORMB Version 5.0.0.0.0	Lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 5.0.0.0.0.
Appendix H	Characteristic Types Dropped in ORMB Version 5.0.0.0.0	Lists the characteristic types which are dropped in Oracle Revenue Management and Billing Version 5.0.0.0.0.
Appendix I	Changing the DB User Password	Explains how to change the database user password.
Appendix J	ORMB V5.0.0.0.0 Rollup Packs	Lists the rollup packs available for Oracle Revenue Management and Billing Version 5.0.0.0.0. It also explains how to apply a rollup pack on the application environment and database.
Appendix K	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 L	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.

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.
italic	Italic indicates a document or book title.
`monospace`	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
OUAF	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
Oracle Revenue Management and Billing Version 5.0.0.0.0 Release Notes	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.
Oracle Revenue Management and Billing Upgrade Path Guide	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.

Document Name	Description
Oracle Revenue Management and Billing Direct Database Upgrade Guide	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
23.1	17-Nov-2022	Section 2.3.2: Installing OUAF Version 4.5.0.0.0	Updated Information
		Section 2.6.1: Installing ORMB Version 5.0.0.0.0	Updated Information
23.2	06-Dec-2022	Section 2.5.2: Applying the Release-Specific Patches	Added Information
		Section 2.6: Upgrading the ORMB Database	Added Information
		Section 2.6.2: Applying the Release-Specific Patches	Added Information
		Appendix J: ORMB V5.0.0.0.0 Rollup Packs	Added Information
23.3	28-Apr-2023	Section 2.5: Installing the ORMB Application	Added Information
		Section 2.5.4: Setting the C1-CFS Feature Configuration	Added Section
		Section 2.5.5: Setting the C1-REPORTVW Feature Configuration	Added Section
		Section 2.5.6: Setting the C1-FLUPLD Feature Configuration	Added Section
23.4	8-May-2023	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
23.5	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

Contents

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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.
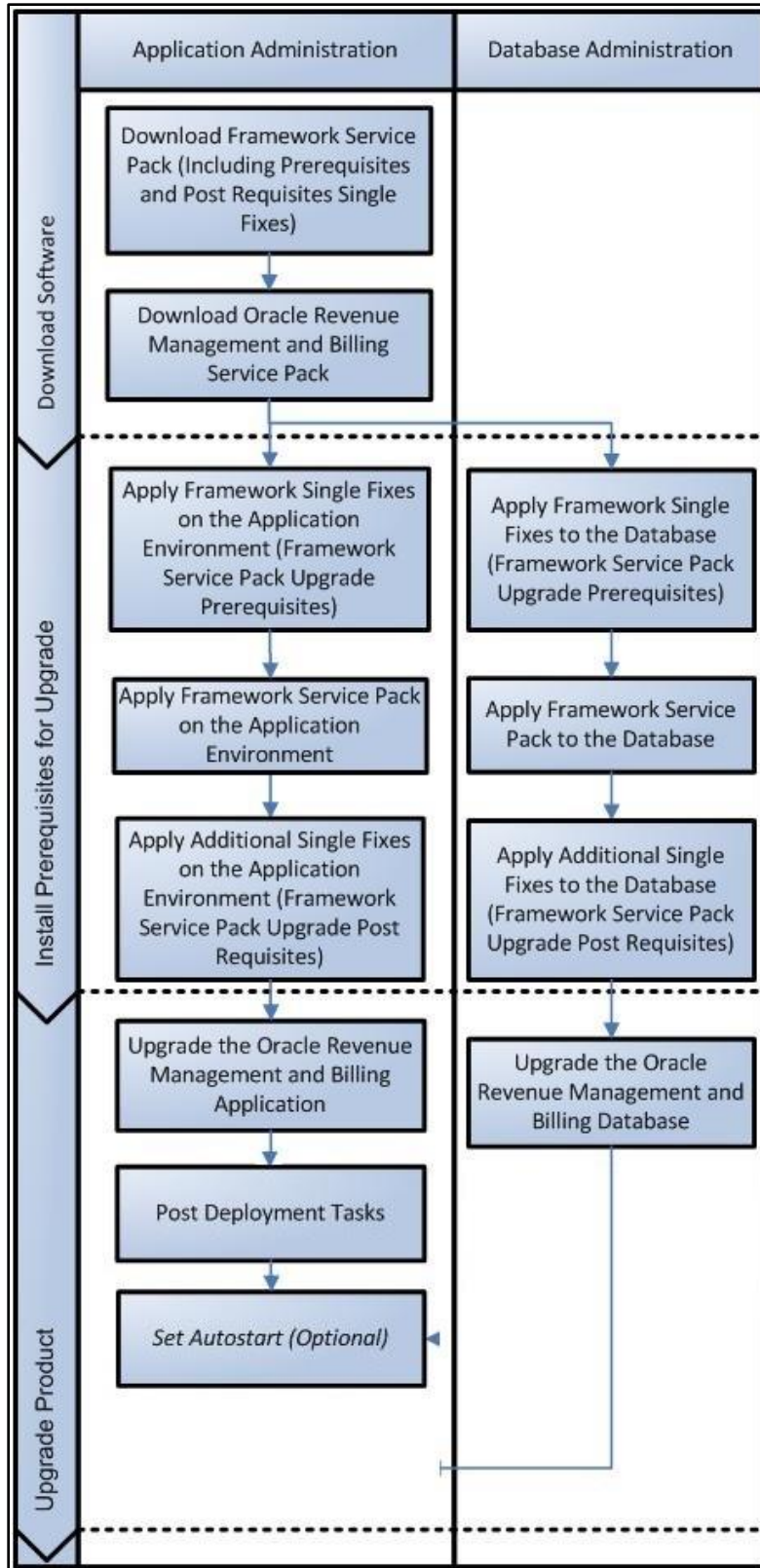
Figure 1: Upgrade Process

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 4.0.0.0.0 to 5.0.0.0.0

2. Upgrading from ORMB Version 4.0.0.0.0 to 5.0.0.0.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 4.0.0.0.0 to 5.0.0.0.0. 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 5.0.0.0.0, then you need to ensure the following (before upgrading):

- All bills generated in the system are in the **Complete** status. In other words, there should not be any bills in the **Pending** status. If there are any bills in the **Pending** status or if any billable charge (generated through TFM) is not yet billed, disaggregation and cancellation of transactions which are uploaded using 4.0.0.0.0 will not happen successfully.

- Transactions which are uploaded using 4.0.0.0.0 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 4.0.0.0.0 to 5.0.0.0.0, you must download the following packages from the Oracle Revenue Management and Billing 5.0.0.0.0 media pack which is available on Oracle Software Delivery Cloud:

- Oracle Utilities Application Framework V4.5.0.0.0 Single Fix Prerequisite Rollup for RMB V5.0.0.0.0

- Oracle Revenue Management and Billing V5.0.0.0.0 Multiplatform

- Oracle Revenue Management and Billing V5.0.0.0.0 Oracle Database

You must also download the following packages from the **Oracle Utilities Application Framework 4.5.0.0.0** media pack which is available on <u>Oracle Software Delivery Cloud</u>:

- Oracle Utilities Application Framework 4.5.0.0.0 - Database Installation Media
- Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media

The downloaded files will be in the ZIP format.

2.2.1   Downloading the OUAF Packages

Oracle Utilities Application Framework Version 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 <u>Oracle Software Delivery Cloud</u>.
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 - Database Installation Media** and **Oracle Utilities Application Framework 4.5.0.0.0 - Application Installation Media** packages 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 packages and then click **Next**. The packages are downloaded on your local machine.

2.2.2   Downloading the ORMB Packages

Oracle Financial Services Revenue Management and Billing Version 5.0.0.0.0 and Oracle Insurance Revenue Management and Billing Version 5.0.0.0.0 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 5.0.0.0.0 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 5.0.0.0.0** or **Oracle Insurance Revenue Management and Billing 5.0.0.0.0** 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 V4.5.0.0.0 Single Fix Prerequisite Rollup for RMB V5.0.0.0.0**, **Oracle Revenue Management and Billing V5.0.0.0.0 Multiplatform**, and **Oracle Revenue Management and Billing V5.0.0.0.0 Oracle Database** packages 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 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 4.0.0.0.0 to 5.0.0.0.0, you need to install the following on the database:

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

To install the framework and its service packs on the database, you must have ability to connect to the database.

2.3.1 Applying Pre-requisites on the Database Environment

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

- Set the **MAX_STRING_SIZE** parameter to **EXTENDED**
- Enable the DBMS_CRYPTO Package

2.3.1.1 Setting the MAX_STRING_SIZE Parameter to EXTENDED

Some of the Oracle Utilities Application Framework application table VARCHAR2 fields require byte size beyond 4000 bytes to store data for new application requirements. To support this requirement, the Oracle Utilities Application Framework database should use the Extended Data Types feature. You can enable the Extended Data Types feature by setting the MAX_STRING_SIZE parameter to EXTENDED.

Note: This change in your database environment is mandatory. If you do not set the MAX_STRING_SIZE parameter to EXTENDED, it will lead to errors during the upgrade process.

If you have a non-container database, you need to perform the following steps to set the **MAX_STRING_SIZE** parameter to **EXTENDED**:

1. Set the ORACLE_HOME and ORACLE_SID environment variables.

Note: You need to connect as system administrator while executing the below steps.

2. Shutdown the target database using the following command:

   ```
   shutdown immediate
   ```

3. Start the database in the Upgrade mode using the following command:

   ```
   startup upgrade
   ```

4. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:

   ```
   alter system set max_string_size=extended scope=both;
   ```

5. Execute the utl32k.sql file using the following command:

   ```
   @?/rdbms/admin/utl32k.sql;
   ```

6. Restart the database in the Normal mode using the following commands:

   ```
   shutdown immediate
   ```

   ```
   startup
   ```

However, if you have a container database, you need to perform the following steps to set the **MAX_STRING_SIZE** parameter to **EXTENDED**:

1. Set the ORACLE_HOME and ORACLE_SID environment variables.

Note: You need to connect as system administrator while executing the below steps.

2. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:

   ```
   alter system set max_string_size=extended scope=spfile;
   ```

3. Start all pluggable databases in the Upgrade mode using the following command:

   ```
   shutdown immediate

   startup upgrade

   alter pluggable database all open upgrade;

   exit
   ```

4. Create the `utl32k_cdb_pdbs_output` folder to store the log files using the following command:

   ```
   mkdir /scratch/mydir/utl32k_cdb_pdbs_output
   ```

5. Execute the `utl32k.sql` from the `catcon.pl` file for all pluggable databases using the following command:

   ```
   cd $ORACLE_HOME/rdbms/admin

   $ORACLE_HOME/perl/bin/perl $ORACLE_HOME/rdbms/admin/catcon.pl -u
   SYS -d $ORACLE_HOME/rdbms/admin -l
   '/scratch/mydir/utl32k_cdb_pdbs_output' -b
   utl32k_cdb_pdbs_output utl32k.sql
   ```

6. Restart the database in the Normal mode using the following commands:

   ```
   shutdown immediate

   startup

   alter pluggable database all open read write;
   ```

2.3.1.2   Enabling the DBMS_CRYPTO Package

Before installing Oracle Utilities Application Framework Version 4.5.0.0.0, ensure that you provide the execute privilege for the DBMS_CRYPTO package to the CISADM user. You can assign the required privileges by executing the following command as SYS:

```
GRANT EXECUTE ON DBMS_CRYPTO TO CISADM;
```

2.3.2   Installing OUAF Version 4.5.0.0.0

To install Oracle Utilities Application Framework (OUAF) Version 4.5.0.0.0:

1. Login to the database server using the administrator's credentials.

2. Create a temporary folder (for example, `TEMPDIR`) on the database server using the following command:

   ```
   mkdir TEMPDIR
   ```

3. Copy the **Oracle Utilities Application Framework 4.5.0.0.0 - Database 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.

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

    AIX, Linux:

    `cd <PATH>/TEMPDIR`

    Windows:

    `cd <PATH>\TEMPDIR`

5. Unzip the **Oracle Utilities Application Framework 4.5.0.0.0 - Database 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 the following sub-folders:

    - `Install-Upgrade`
    - `jarfiles`

6. 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.

7. Set the `JAR_PATH` environment variable using the following command:

    AIX, Linux:

    `export JAR_PATH=<DESTINATION_FOLDER_1>/jarfiles`

Note:

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

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 - Database Installation Media** package.

8. Set the `CLASS_PATH` environment variable using the following command:

   <u>AIX, Linux:</u>

   ```
   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-
   2.10.3.jar:$JAR_PATH/jackson-core-2.10.3.jar:$JAR_PATH/jackson-
   databind-2.10.3.jar:$JAR_PATH/log4j-api-
   2.13.3.jar:$JAR_PATH/log4j-core-2.13.3.jar:$JAR_PATH/ojdbc8-
   19.3.0.0.0.jar:$JAR_PATH/spl-oradbi-4.5.0.0.0.jar:$JAR_PATH/spl-
   shared-4.5.0.0.0.jar
   ```

   <u>Windows:</u>

   ```
   SET CLASS_PATH=<DESTINATION_FOLDER_1>\jarfiles\*
   ```

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

   <u>AIX, Linux:</u>

   ```
   cd <DESTINATION_FOLDER_1>/Install-Upgrade
   ```

   <u>Windows:</u>

   ```
   cd <DESTINATION_FOLDER_1>\Install-Upgrade
   ```

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

    <u>AIX, Linux:</u>

    ```
    $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
    ```

    <u>Windows:</u>

    ```
    %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 V4.4.0.3.0 to V4.5.0.0.0,
    do you want to continue (Y/N)?
    ```

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

2.3.3   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 Utilities Application Framework V4.5.0.0.0 Single Fix Prerequisite Rollup for RMB V5.0.0.0.0** package to the `TEMPDIR` folder using the following command:

   AIX, Linux:

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

   Windows:

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

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

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

   AIX, Linux:

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

   Windows:

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

4. Unzip the **Oracle Utilities Application Framework V4.5.0.0.0 Single Fix Prerequisite Rollup for RMB V5.0.0.0.0** package using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include the `ORMB-V50000-FW-PREREQ-MultiPlatform.jar` file.

5. Change to the `<DESTINATION_FOLDER_2>` folder using the following command:

   AIX, Linux:

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

   Windows:

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

6. Decompress the JAR file using the following command:

   ```
   jar -xvf ORMB-V50000-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. Copy the `db_patch_standalone.jar` file to the `dbpatch_tools` folder.

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

    AIX, Linux:

    `cd <PATH>/TEMPDIR/dbpatch_tools`

    Windows:

    `cd <PATH>\TEMPDIR\dbpatch_tools`

11. Decompress the JAR file using the following command:

    `jar -xvf db_patch_standalone.jar`

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

    - `bin`
    - `config`
    - `lib`

12. Set the `TOOLSBIN` environment variable using the following command:

    AIX, Linux:

    `export TOOLSBIN=/TEMPDIR/dbpatch_tools/bin`

    Windows:

    `SET TOOLSBIN=TEMPDIR\dbpatch_tools\bin`

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

    AIX, Linux:

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

    Windows:

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

Note: The `<DESTINATION_FOLDER_2>` folder is the location where you have extracted the contents of the `ORMB-V50000-FW-PREREQ-MultiPlatform.jar` file.

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

    AIX, Linux:

    `ouafDatabasePatch.sh`

    Windows:

    `ouafDatabasePatch.cmd`

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

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

`Enter the name of the Oracle Database Connection String`	`<DB_SERVER: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 I: Changing the DB User Password.

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

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

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

2.4 Installing Framework on the Application Environment

Once you install the framework 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`

3. 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.

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

   AIX, Linux:

   `cd <PATH>/TEMPDIR`

   Windows:

   `cd <PATH>\TEMPDIR`

5. Unzip the **Oracle Utilities Application Framework 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`.

6. 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*.

7. 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.

8. 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 Utilities Application Framework V4.5.0.0.0 Single Fix Prerequisite Rollup for RMB V5.0.0.0.0** package to the `TEMPDIR` folder using the following command:

   AIX, Linux:

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

   Windows:

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

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

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

   AIX, Linux:

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

   Windows:

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

3. Unzip the **Oracle Utilities Application Framework V4.5.0.0.0 Single Fix Prerequisite Rollup for RMB V5.0.0.0.0** package using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include the `ORMB-V50000-FW-PREREQ-MultiPlatform.jar` file.

4. Decompress the JAR file using the following command:

   ```
   jar -xvf ORMB-V50000-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`

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

   AIX, Linux:

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

   Windows:

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

6. 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-V50000-FW-PREREQ-MultiPlatform.jar` file.

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

   AIX, Linux:

   `chmod a+x installSFgroup.sh`

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

   `./installSFgroup.sh`

   Windows:

   `installSFgroup.cmd`

   The following message appears in the command line:

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

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

2.5   Installing the ORMB Application

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

1. [Oracle Revenue Management and Billing (ORMB) Version 5.0.0.0.0](#)
2. [Oracle Revenue Management and Billing (ORMB) Version 5.0.0.0.0 Post Requisite Patches](#)

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

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

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

- C1-CFS
- C1-REPORTVW
- C1-FLUPLD

2.5.1   Installing ORMB Version 5.0.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 5.0.0.0.0 on the application environment:

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

2. Copy the **Oracle Revenue Management and Billing V5.0.0.0.0 Multiplatform** package to the `TEMPDIR` folder using the following command:

   AIX, Linux:

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

   Windows:

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

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

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

   AIX, Linux:

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

   Windows:

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

4. Unzip the **Oracle Revenue Management and Billing V5.0.0.0.0 Multiplatform** package using the following command:

   AIX, Linux:

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

   Windows:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_3>` folder. The contents include `ORMB.V5.0.0.0.0` folder.

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

   AIX, Linux:

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

Windows:

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

6. Stop the managed server where the application is hosted using the Oracle WebLogic Console.

7. Change to the `ORMB.V5.0.0.0.0` folder using the following command:

   AIX, Linux:

   `cd <DESTINATION_FOLDER_3>/ORMB.V5.0.0.0.0`

   Windows:

   `cd <DESTINATION_FOLDER_3>\ORMB.V5.0.0.0.0`

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

   AIX, Linux:

   `./install.sh`

   Windows:

   `install.cmd`

   The following message appears in the command line:

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

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

10. Type **P**, and then press **Enter**.

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 5.0.0.0.0, you need to apply the release-specific patches on the application environment. To view the list of patches that you need to apply on the application environment, refer to the *ORMB V5.0.0.0.0 Patch Guide (Document ID: 2910808.1)* on My Oracle Support.

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to Appendix J: ORMB V5.0.0.0.0 Rollup Packs.

To apply a patch:

1. Download the patch from <u>My Oracle Support</u>. 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 `V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder.

4. Change to the `V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_5>/V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_5>\V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
   ```

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

   The contents include a file named `CCB.V5.0.0.0.0-<PATCH_NUMBER>.jar` and a directory named `database`.

5. Decompress the `CCB.V5.0.0.0.0-<PATCH_NUMBER>.jar` file using the following command:

   ```
   jar -xvf CCB.V5.0.0.0.0-<PATCH_NUMBER>.jar
   ```

   The contents include two sub-folders - `META-INF` and `CCB.V5.0.0.0.0-<PATCH_NUMBER>`.

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

   AIX, Linux:

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

Windows:

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

Where,

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

7. Change to the CCB.V5.0.0.0.0-<PATCH_NUMBER> folder using the following command:

AIX, Linux:

```
cd <DESTINATION_FOLDER_5>/V5.0.0.0.0-
<PATCH_NUMBER>_MultiPlatform/CCB.V5.0.0.0.0-<PATCH_NUMBER>
```

Windows:

```
cd <DESTINATION_FOLDER_5>\V5.0.0.0.0-
<PATCH_NUMBER>_MultiPlatform\CCB.V5.0.0.0.0-<PATCH_NUMBER>
```

8. Install the patch using the following command:

AIX, Linux:

```
./installSF.sh
```

Windows:

```
installSF.cmd
```

9. Start the managed server using the 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 5.0.0.0.0.
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	Used to indicate whether the application environment should use the file object storage service of Oracle Cloud Infrastructure (OCI). The valid values are: • Y • N **Points to Note:** By default, the value is set to **N**. You must ensure that the value of this option type is set to **N** in the On Premise and Cloud Service environments. 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 *Oracle Revenue Management and Billing Batch Guide*.	Yes

8. Set the **File Object Storage Usage** option type to **N**.

9. 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:

1. Login to Oracle Revenue Management and Billing Version 5.0.0.0.0.

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-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	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: https://ipaddress:port/ouaf/reportView **Note:** You must override the default value as per the requirement.	Yes
Report Generation (FOP) File Path	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. If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path: • **@SHARED_DIR** – Used when you want to store the FOP reports in the shared directory on the server. For example, you can set the value to @SHARED_DIR/output. 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: • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while storing the FOP reports on OCI	Yes

Option Type	Description	Mandatory (Yes or No)
	• The bucket or container where you want the system to store the FOP reports which are generated in the different formats.	
	Points to Note: By default, the value is set to **@SHARED_DIR/splapp/reporting/output**. You must change the value as per the requirement. The shared directory variable (i.e. **SHARED_DIR**) is case-sensitive.	
Report Generation XSL Template File Path	Used to specify the directory or bucket from where the respective XSL file should be fetched while generating the FOP report. If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path: • **@SHARED_DIR** – Used when you want to fetch the XSL file from the shared directory on the server. For example, you can set the value to @SHARED_DIR/xsl. 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: • 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.	Yes
	Points to Note: By default, the value is set to **@SHARED_DIR/splapp/reporting/xsl**. You must change the value as per the requirement.	

Option Type	Description	Mandatory (Yes or No)
	The shared directory variable (i.e. **SHARED_DIR**) is case-sensitive. Before generating an FOP report, you need to ensure that the XSL files are copied from the **@INSTALL_DIR/splapp/reporting/xsl** directory to the specified shared directory.	
Report Generation XML Data File Path	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. If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path: • **@SHARED_DIR** – Used when you want to store the XML file in the shared directory on the server. For example, you can set the value to @SHARED_DIR/extractxml. 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: • 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. **Points to Note:** By default, the value is set to **@SHARED_DIR/splapp/reporting/extractxml**. You must change the value as per the requirement. The shared directory variable (i.e. **SHARED_DIR**) is case-sensitive.	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 5.0.0.0.0.

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.	Yes

Option Type	Description	Mandatory (Yes or No)
	If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path: • **@SHARED_DIR** – Used when you want to fetch the keystore file from the shared directory on the server. For example, you can set the value to @SHARED_DIR/.ouaf_keystore. 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: • 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. **Points to Note:** By default, the value is set to **@SHARED_DIR/ks/.ouaf_keystore**. You must change the value as per the requirement. The shared directory variable (i.e. **SHARED_DIR**) is case-sensitive.	
Key Store Mode	Used to specify the mode using which you want to encrypt or decrypt the files. **Note:** By default, the value is set to **CBC** (i.e. Cipher-block Chaining).	Yes
Key Store Padding	Used to specify the padding using which you want to encrypt or decrypt the files. **Note:** By default, the value is set to **PKCS5Padding**.	Yes
Key Store Password File Path	Used to specify the directory or bucket from where you want to fetch the keystore password file.	Yes

Option Type	Description	Mandatory (Yes or No)
	If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path: • **@SHARED_DIR** – Used when you want to fetch the keystore password file from the shared directory on the server. For example, you can set the value to @SHARED_DIR/.ouaf_storepass. 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: • 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. **Points to Note:** By default, the value is set to **@SHARED_DIR/ks/.ouaf_storepass**. You must change the value as per the requirement. The shared directory variable (i.e. **SHARED_DIR**) is case-sensitive.	
Key Store Type	Used to indicate the type of keystore file. **Note:** By default, the value is set to **JCEKS**.	Yes
Private Key File Path	Used to specify the directory or bucket from where you want to fetch the private key file. If the application environment is an On Premise or Cloud Service environment, you can specify the directory name along with the following relative path: • **@SHARED_DIR** – Used when you want to fetch the private key file from the shared directory on the server.	Yes

Option Type	Description	Mandatory (Yes or No)
	For example, you can set the value to @SHARED_DIR/.ouaf_storepass.	
	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:	
	• 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.	
	Points to Note: By default, the value is set to **@SHARED_DIR/ks/.ouaf_storepass**. You must change the value as per the requirement. The shared directory variable (i.e. **SHARED_DIR**) is case-sensitive.	

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

1. Oracle Revenue Management and Billing (ORMB) Version 5.0.0.0.0
2. Oracle Revenue Management and Billing (ORMB) Version 5.0.0.0.0 Post Requisite Patches

Points to Note:

To view the list of patches that you need to apply on the database, refer to the *ORMB V5.0.0.0.0 Patch Guide (Document ID: 2910808.1)* on My Oracle Support.

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to [Appendix J: ORMB V5.0.0.0.0 Rollup Packs](#).

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

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

2.6.1   Installing ORMB Version 5.0.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 5.0.0.0.0:

1. Login to the database server using the administrator's credentials.

2. Copy the **Oracle Revenue Management and Billing V5.0.0.0.0 Oracle Database** package to the `TEMPDIR` folder using the following command:

   AIX, Linux:

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

   Windows:

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

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

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

   AIX, Linux:

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

   Windows:

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

4. Unzip the **Oracle Revenue Management and Billing V5.0.0.0.0 Oracle Database** 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 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_3>/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-
   2.12.2.jar:$JAR_PATH/jackson-core-2.12.2.jar:$JAR_PATH/jackson-
   databind-2.12.2.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_3>\RMB\jarfiles\*`

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

   AIX, Linux:

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

   Windows:

   `cd <DESTINATION_FOLDER_3>\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 V4.0.0.0.0 to
V5.0.0.0.0, 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 5.0.0.0.0, you need to apply all patches listed in the *ORMB V5.0.0.0.0 Patch Guide (Document ID: 2910808.1)*. 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_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 `V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder.

4. Change to the `V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_5>/V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_5>\V5.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
   ```

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

The contents include a file named `CCB.V5.0.0.0.0-<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_6>
   ```

   Windows:

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_6>` folder. The contents include 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

No data migration is required while upgrading from Oracle Revenue Management and Billing Version 4.0.0.0.0 to 5.0.0.0.0.

3. Additional Tasks

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

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

3.1 Generating the Application Viewer

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

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

    AIX, Linux:

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

    Windows:

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

    Where, `$SPLEBASE` or `%SPLEBASE%` is the path where the application environment is installed, and `$SPLENVIRON` or `%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 5.0.0.0.0 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 5.0.0.0.0

This section lists and describes the tables that are newly added in Oracle Revenue Management and Billing Version 5.0.0.0.0.

C.1 C1_ACCUM_REINSR_ASL_AMT

Purpose:	Used to store the details of the aggregate stop-loss charge created for the reinsurer account.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCUM_GRP_ID	CHAR(12)	No	-
WIN_START_DT	DATE	No	-
ACCT_ID	CHAR(10)	No	-
BILLABLE_CHG_ID	CHAR(12)	No	' '

Primary Key:

Key Type	Column Name
Composite	ACCUM_GRP_ID
	WIN_START_DT
	ACCT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM780P0	Unique	ACCUM_GRP_ID
			WIN_START_DT
			ACCT_ID
2.	XM780S0	Non Unique	ACCUM_GRP_ID
			WIN_START_DT
3.	XM780S1	Non Unique	ACCT_ID
4.	XM780S2	Non Unique	BILLABLE_CHG_ID

C.2   C1_ACCUM_REINSR_SSL_AMT

Purpose:	Used to store the details of the specific stop-loss charge created for the reinsurer account.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCUM_GRP_ID	CHAR(12)	No	-
WIN_START_DT	DATE	No	-
ACCT_ID	CHAR(10)	No	-
BILLABLE_CHG_ID	CHAR(12)	No	' '

Primary Key:

Key Type	Column Name
Composite	ACCUM_GRP_ID
	WIN_START_DT
	ACCT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM780P0	Unique	ACCUM_GRP_ID
			WIN_START_DT
			ACCT_ID
2.	XM780S0	Non Unique	ACCUM_GRP_ID
			WIN_START_DT
3.	XM780S1	Non Unique	ACCT_ID
4.	XM780S2	Non Unique	BILLABLE_CHG_ID

C.3   C1_BUS_RULE_REF_WO

Purpose:	
Total Number of Columns:	10

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BUS_RULE_ID	CHAR(15 BYTE)	No	-
REF_THR_AMT	NUMBER(15,2)	Yes	-
REF_THR_DAYS	NUMBER(3,0)	Yes	-
UDF_1	VARCHAR2(254 BYTE)	Yes	-
UDF_2	VARCHAR2(254 BYTE)	Yes	-
UDF_3	VARCHAR2(254 BYTE)	Yes	-
UDF_4	VARCHAR2(254 BYTE)	Yes	-
VERSION	NUMBER(5,0)	No	-
WO_THR_AMT	NUMBER(15,2)	Yes	-
WO_THR_DAYS	NUMBER(3,0)	Yes	-

Primary Key:

Key Type	Column Name
Simple	BUS_RULE_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM723P0	Unique	BUS_RULE_ID

C.4   C1_REFWO_INS

Purpose:	
Total Number of Columns:	19

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCT_ID	CHAR(10 BYTE)	No	-
BUS_RULE_ID	CHAR(15 BYTE)	Yes	-
C1_REF_WO_REQ_TYPE_CD	CHAR(30 BYTE)	Yes	-
CRE_DTTM	DATE	Yes	-
EXT_REASON_CD	VARCHAR2(20 BYTE)	Yes	-
ILM_ARCH_SW	CHAR(1 BYTE)	Yes	-
ILM_DT	DATE	Yes	-
INST_ENT_ID	CHAR(15 BYTE)	No	-
INST_ENT_TYPE_FLG	CHAR(4 BYTE)	No	-
ORIG_ACCT_BAL	NUMBER(15,2)	Yes	-
REASON_CD	VARCHAR2(20 BYTE)	Yes	-
REF_WO_INST_ID	CHAR(12 BYTE)	No	-
REF_WO_INST_STAT_FLG	CHAR(4 BYTE)	No	-
REF_WO_REQ_ID	CHAR(12 BYTE)	Yes	-
REFWO_INST_RSN_CD_FLG	CHAR(4 BYTE)	Yes	-
REQ_CRE_DT	DATE	Yes	-
UPDT_DTTM	DATE	Yes	-
VERSION	NUMBER(5,0)	Yes	-
WAIT_DT	DATE	No	-

Primary Key:

Key Type	Column Name
Simple	REF_WO_INST_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF955P0	Unique	REF_WO_INST_ID
2.	XF955S1	Non Unique	ACCT_ID
3.	XF955S2	Non Unique	REF_WO_INST_STAT_FLG
4.	XF955S3	Non Unique	REQ_CRE_DT
5.	XF955S4	Non Unique	WAIT_DT
6.	XF955S5	Non Unique	C1_REF_WO_REQ_TYPE_CD
7.	XF955S6	Non Unique	INST_ENT_TYPE_FLG
			INST_ENT_ID
8.	XF955S7	Non Unique	REFWO_INST_RSN_CD_FLG

C.5   C1_REF_WO_INS_K

Purpose:	
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
REF_WO_INST_ID	CHAR(12 BYTE)	No	-
ENV_ID	CHAR(6 BYTE)	No	-

Primary Key:

Key Type	Column Name
Composite	REF_WO_INST_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XF956P0	Unique	REF_WO_INST_ID
			ENV_ID

Appendix D : Existing Tables Modified in ORMB Version 5.0.0.0.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 5.0.0.0.0. It indicates the columns that are newly added, dropped, or modified in these tables.

D.1 CI_ACCUM_ASL_AMT

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	REINSR_STATUS	Newly Added	-	CHAR(1)	No	-

D.2 CI_ACCUM_SSL_AMT

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	REINSR_STATUS	Newly Added	-	CHAR(1)	No	-

D.3   CI_CIS_DIVISION

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	LOCAL_CURRENCY_CD	Newly Added	-	CHAR(3)	No	-

D.4   CI_DST_CODE

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	LOCAL_CURRENCY_SW	Newly Added	-	CHAR(1)	No	-

D.5   CI_FT_GL_EXT

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DIVISION_CURRENCY_EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
2.	LOCAL_CURRENCY_AMT	Newly Added	-	NUMBER(15,2)	No	-
3.	LOCAL_CURRENCY_CD	Newly Added	-	CHAR(3)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
4.	LOCAL_CURRENCY_EXCHRATE	Newly Added	-	NUMBER(36,18)	No	-
5.	LOCAL_CURRENCY_EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-

D.6   CI_STM_ADJ_VW

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADJ_TYPE_CD	Newly Added	-	CHAR(8)	No	-

D.7   CI_STM_PER_VW

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	STATE_DESCR	Newly Added	-	VARCHAR2(60)	No	-

D.8   CI_STM_SERVICE_VW

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

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SETTLEMENT_ACCT_ID	Newly Added	-	CHAR(10)	No	-

D.9   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 V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PROFITABILITY_VAL	Format Change	NUMBER(8,2)	NUMBER(15,2)	No	-

D.10   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 V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PROFITABILITY_VAL	Format Change	NUMBER(8,2)	NUMBER(15,2)	No	-

D.11   C1_REF_WO_REQ

The following table lists the columns that are newly added, modified, or dropped from the C1_REF_WO_REQ table:

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADJ_LVL_FLG	Newly Added	-	CHAR(4)	No	-

D.12   C1_REF_WO_REQ_TYPE

The following table lists the columns that are newly added, modified, or dropped from the C1_REF_WO_REQ_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V4.0.0.0.0	Data Type in V5.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	NETT_SA_TYPE_CD	Newly Added	-	CHAR(8)	No	-

Appendix E : Algorithms and Algorithm Types Dropped in ORMB Version 5.0.0.0.0

This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 5.0.0.0.0.

E.1   Algorithm Types

No algorithm types are dropped in Oracle Revenue Management and Billing Version 5.0.0.0.0.

E.2   Algorithms

The following table lists the algorithms which are dropped in Oracle Revenue Management and Billing Version 5.0.0.0.0:

Algorithm	Description
C1_FOPPASMGH	This Algorithm is for FOP payment summary group healthcare report.
C1-ERPBILEX	Bill Extract Algorithm for ERP Invoice in UBL 2.1 Format
ST FOR TWIS	Create statement print extract records in twist and camt

Appendix F :   Parameters Added or Removed from Algorithm Types in ORMB Version 5.0.0.0.0

No parameters are newly added or removed from the existing algorithm types in Oracle Revenue Management and Billing Version 5.0.0.0.0.

Appendix G : Option Types Added or Removed from Feature Configurations in ORMB Version 5.0.0.0.0

This section lists the option types which are newly added or removed from the existing feature configurations in Oracle Revenue Management and Billing Version 5.0.0.0.0.

Feature Configuration	Option Type (Removed from 5.0.0.0.0)	Option Type (Added in 5.0.0.0.0)
C1_AXENTITY	-	Display Information String
C1_CMO	-	Excluded Contract types for netting
C1_FINTRANOP	-	Defer Bill Segment Freeze
C1_STM	-	Account Basic Bank Identifier
	-	Receiver Organisation Identifier
	-	Receiver Person Identifier Type
	-	Tax Region Char
C1-ADJ-PAY	-	Account Level Payment Characteristic Type
	-	On-Account Contract Type
	-	On-Account Match Type
	-	Statement Level Payment Characteristic Type
C1-ASOBLLNG	-	Reinsurer Person Relationship Type
C1-BRMLINOPS	-	Bill Readiness Feature Install Type
C1-PAYFLUPLD	-	Field Mapping for Match Type
SYSDT	-	Maximum Attachment Size

Appendix H : Characteristic Types Dropped in ORMB Version 5.0.0.0.0

No characteristic types are dropped in Oracle Revenue Management and Billing Version 5.0.0.0.0.

Appendix I :   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 J :   ORMB V5.0.0.0.0 Rollup Packs

Instead of individually applying the patches, you can download and apply the release-specific rollup packs. To view the list of rollup packs that you need to apply on the application environment and database, refer to the *ORMB V5.0.0.0.0 Patch Guide (Document ID: 2910808.1)* on My Oracle Support.

J.1   Applying a Rollup Pack on the Application Environment

Once you install Oracle Revenue Management and Billing Version 5.0.0.0.0, you need to apply the rollup packs listed in the *ORMB V5.0.0.0.0 Patch Guide (Document ID: 2910808.1)*. 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_V5.0.0.0.0_App_Rollup`, `RMB_V5.0.0.0.0_DB_Rollup`, and `RMB_V5.0.0.0.0_PFDs`.

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

   AIX, Linux:

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

   Windows:

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

   Where,

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

4. Change to the `RMB_V5.0.0.0.0_App_Rollup` folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_1>/RMB_V5.0.0.0.0_App_Rollup
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_1>\RMB_V5.0.0.0.0_App_Rollup
   ```

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

5. Install the patch using the following command:

AIX, Linux:

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

J.2　　Applying a Rollup Pack on the Database

Once you install Oracle Revenue Management and Billing Version 5.0.0.0.0, you need to apply the rollup packs listed in the _ORMB V5.0.0.0.0 Patch Guide_ _(Document ID: 2910808.1)_. 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_V5.0.0.0.0_App_Rollup`, `RMB_V5.0.0.0.0_DB_Rollup`, and `RMB_V5.0.0.0.0_PFDs`.

3. Change to the `RMB_V5.0.0.0.0_DB_Rollup` folder using the following command:

   AIX, Linux:

   ```
   cd <DESTINATION_FOLDER_1>/RMB_V5.0.0.0.0_DB_Rollup
   ```

   Windows:

   ```
   cd <DESTINATION_FOLDER_1>\RMB_V5.0.0.0.0_DB_Rollup
   ```

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

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

   Windows:
   ```
   ouafDatabasePatch.cmd
   ```
   AIX, Linux:
   ```
   ouafDatabasePatch.sh
   ```

Appendix K :   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.

K.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

K.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
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

K.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	' '

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

K.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

K.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

K.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

K.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

K.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

K.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	' '

Column Name	Data Type	Nullable (Yes or No)	Default Value
BO_DATA_AREA	CLOB	Yes	-
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

K.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

K.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

Sr. No.	Index Name	Index Type	Column Name
			LANGUAGE_CD

K.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_VALUE5	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

Sr. No.	Index Name	Index Type	Column Name
			KEYS
2.	F1C798S1	Non-Unique	MAINT_OBJ_CD
			PK_VALUE1
			PK_VALUE2
			PK_VALUE3
			PK_VALUE4
			PK_VALUE5

Appendix L :   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.

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-

L.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	-