

**Oracle Financial Services Revenue
Management and Billing**

OR

**Oracle Insurance Revenue
Management and Billing**

Version 9.0.0.0.0

Upgrade Guide

Revision 30.0

G52811-01

April 2026

Oracle Financial Services Revenue Management and Billing/Oracle Insurance Revenue Management and Billing Version 9.0.0.0.0 Upgrade Guide

Note: To improve the content readability, the above two products are collectively referred to as Oracle Revenue Management and Billing throughout this document.

G52811-01

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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 8.1.0.0.0 to 9.0.0.0.0	Explains how to upgrade from Oracle Revenue Management and Billing Version 8.1.0.0.0 to 9.0.0.0.0.
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 9.0.0.0.0.
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 9.0.0.0.0	Lists and describes the tables that are newly added in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix D	Existing Tables Modified in ORMB Version 9.0.0.0.0	Lists the existing tables and their columns that are modified in Oracle Revenue Management and Billing Version 9.0.0.0.0.

Section No.	Section Name	Description
Appendix E	Algorithms and Algorithm Types Dropped in ORMB Version 9.0.0.0.0	Lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix F	Parameters Added or Removed from Algorithm Types in ORMB Version 9.0.0.0.0	Lists the parameters which are added or removed from the algorithm types in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix G	Option Types Added or Removed from Feature Configurations in ORMB Version 9.0.0.0.0	Lists the option types which are added or removed from the feature configurations in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix H	Characteristic Types Dropped in ORMB Version 9.0.0.0.0	Lists the characteristic types which are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix I	Batch Controls Dropped in ORMB Version 9.0.0.0.0	Lists the batch controls which are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix J	Parameters Added or Removed from Batch Controls in ORMB Version 9.0.0.0.0	Lists the parameters which are added or removed from the batch controls in Oracle Revenue Management and Billing Version 9.0.0.0.0.
Appendix K	Changing the DB User Password	Explains how to change the database user password.
Appendix L	ORMB V9.0.0.0.0 Rollup Packs	Lists the rollup packs available for Oracle Revenue Management and Billing Version 9.0.0.0.0. It also explains how to apply a rollup pack on the application environment and database.
Appendix M	New Tables Added in OUAF Version 25.4	Lists and describes the tables that are newly added in Oracle Utilities Application Framework Version 25.4.
Appendix N	Existing Tables Modified in OUAF Version 25.4	Lists the existing tables and their columns that are modified in Oracle Utilities Application Framework Version 25.4.
Appendix O	Algorithms and Algorithm Types Dropped in OUAF Version 25.4	Lists the algorithms and algorithm types which are dropped in Oracle Utilities Application Framework Version 25.4.
Appendix P	Parameters Added or Removed from Batch Controls in OUAF Version 25.4	Lists the parameters which are added or removed from the batch controls in Oracle Utilities Application Framework Version 25.4.

Conventions

The following conventions are used across the document:

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

Acronyms

The following acronyms are used in this document:

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

Related Documents

You can see the following documents for more information:

Document Name	Description
<i>Oracle Revenue Management and Billing Version 9.0.0.0.0 Release Notes</i>	Lists the new features and enhancements made in this release. It contains high-level information about the supported platforms, framework upgrade, supported upgrades, unsupported integrations, and media pack downloads. It also lists the discontinued features, bug fixes, and known issues in this release.

Document Name	Description
<i>Oracle Revenue Management and Billing Version 9.0.0.0.0 Release Overview Guide</i>	Describes the new features, enhancements, user interface level changes, and database level changes made in this release. The new features and enhancements are classified under three categories – Generic (which is intended for both domains), Financial Services, and Insurance. It lists and describes enhancements made in the framework. It also encloses the ORMB and OUAF deprecation notices and enables you to access the product documentation.
<i>Oracle Revenue Management and Billing Upgrade Path Guide</i>	Explains the path and pre-requisites for upgrading Oracle Revenue Management and Billing from one version to another.
<i>Oracle Revenue Management and Billing Direct Database Upgrade Guide</i>	Explains how to directly upgrade the ORMB database from 2.5.0.1.0 or any later version to the current release. It also highlights any known issues during direct database upgrade and how to handle these issues in the database.

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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.

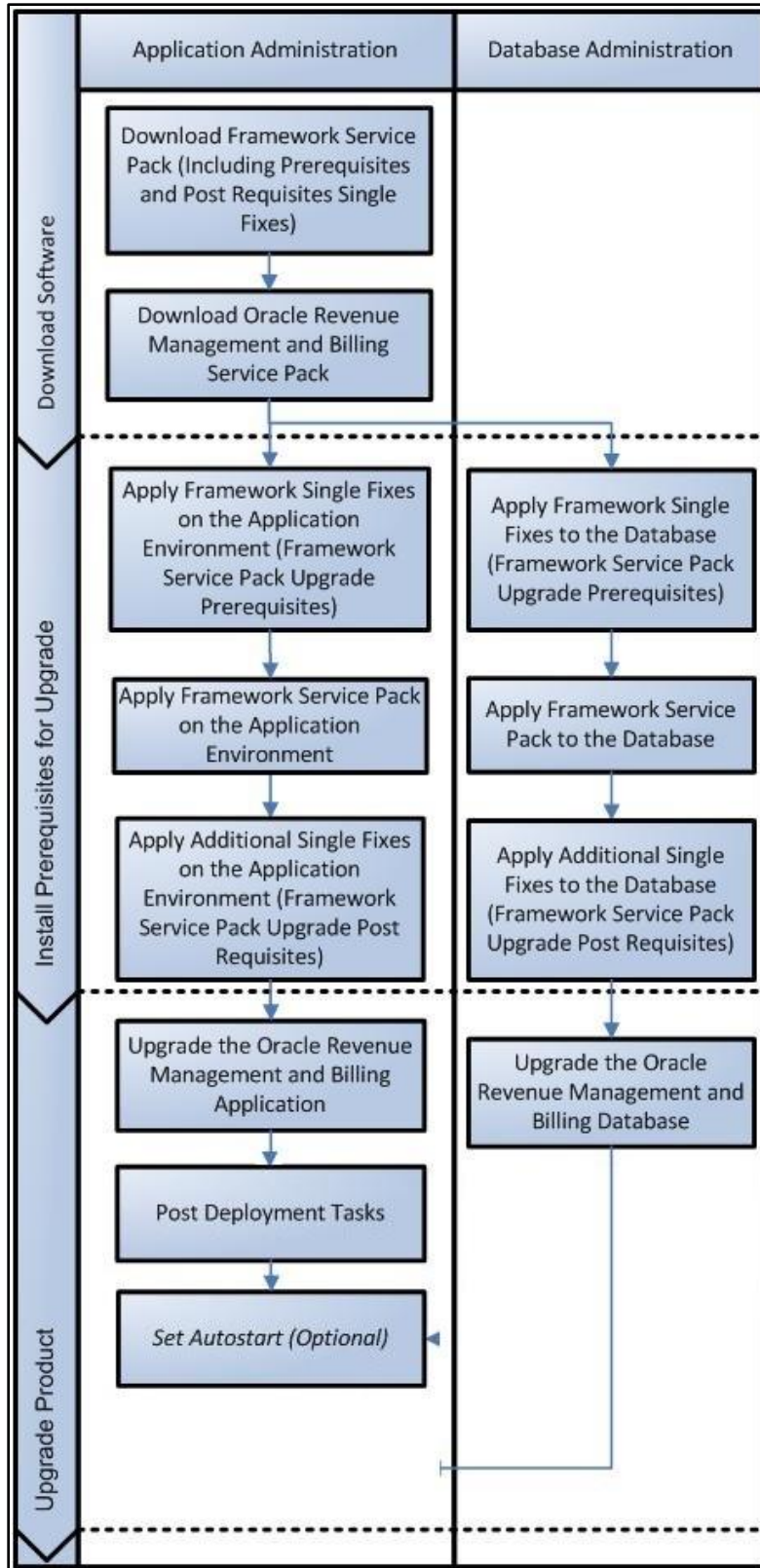


Figure 1: Upgrade Process

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, see 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 8.1.0.0.0 to 9.0.0.0.0

2. Upgrading from ORMB Version 8.1.0.0.0 to 9.0.0.0.0

This section explains how to upgrade from Oracle Revenue Management and Billing Version 8.1.0.0.0 to 9.0.0.0.0. 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 9.0.0.0.0, 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 any previous version will not happen successfully.
- Transactions which are uploaded using any previous version 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.

Note:

A non-schema owner can also upgrade the database without using the schema owner credentials. To enable a non-schema owner to upgrade the database, you need to provide the non-schema owner with the following privileges:

```
GRANT CONNECT, CREATE SESSION TO <NON-SCHEMA OWNER>;
GRANT SELECT ON <SCHEMA OWNER>.CI_WFM TO <NON-SCHEMA OWNER>;
GRANT SELECT ON <SCHEMA OWNER>.CI_WFM_OPT TO <NON-SCHEMA OWNER>;
```

2.2 Downloading the OUAF and ORMB Packages

For upgrading from Oracle Revenue Management and Billing Version 8.1.0.0.0 to 9.0.0.0.0, you must download the following packages from the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0** or **Oracle Insurance Revenue Management and Billing 9.0.0.0.0** media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Utilities Application Framework (25.4) Single Fix Prerequisite Rollup
- Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Multiplatform
- Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Database

You must also download the following packages from the **Oracle Utilities Application Framework 25.4** media pack which is available on [Oracle Software Delivery Cloud](#):

- Oracle Utilities Application Framework 25.4 - Application Installation Media
- Oracle Utilities Application Framework 25.4 - Database Installation Media

The downloaded files will be in the ZIP format.


2.2.1 Downloading the OUAF Packages

Oracle Utilities Application Framework 25.4 media pack can be installed on the following supported platforms:

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

The media pack includes the following packages - **Oracle Utilities Application Framework 25.4 - Database Installation Media** and **Oracle Utilities Application Framework 25.4 - Application Installation Media**.

To download the OUAF packages:

1. Login to [Oracle Software Delivery Cloud](#).
2. Select the **Release** option from the **All Categories** list.
3. Type **Oracle Utilities Application Framework** in the corresponding text box.
4. Click **Search**. A list of media packs appears in the search results.
5. Click the **Select** () icon corresponding to the **Oracle Utilities Application Framework 25.4** 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 25.4 - Application Installation Media** package from the media pack.
13. Click **Download**. An executable file is downloaded on your local machine.
14. Run the executable file. The **Oracle Download Manager** window appears.
15. Browse to the location where you want to download the packages and then click **Next**. The packages are downloaded on your local machine.


2.2.2 Downloading the ORMB Packages

Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 and **Oracle Insurance Revenue Management and Billing 9.0.0.0.0** media packs can be installed on the following supported platforms:

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

The media pack includes multiple packages. For more information, see the **Media Pack Contents** section in the *Oracle Revenue Management and Billing Version 9.0.0.0.0 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 9.0.0.0.0** or **Oracle Insurance Revenue Management and Billing 9.0.0.0.0** 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 following packages from the media pack:
 - Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Utilities Application Framework (25.4) Single Fix Prerequisite Rollup
 - Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Multiplatform
 - Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Database
13. Click **Download**. An executable file is downloaded on your local machine.
14. Run the executable file. The **Oracle Download Manager** window appears.
15. Browse to the location where you want to download the packages and then click **Next**. The packages are downloaded on your local machine.

2.3 Upgrading Framework on the Database

While upgrading from Oracle Revenue Management and Billing Version 8.1.0.0.0 to 9.0.0.0.0, you need to install the following on the database:

1. [Rollup Pack for Oracle Utilities Application Framework \(OUAF\) Version 25.4](#)

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

2.3.1 Pre-requisites

Before installing Oracle Utilities Application Framework Version 25.4, you need to do the following:

- Set the **MAX_STRING_SIZE** parameter to **EXTENDED** – For more information, see the **Setting the MAX_STRING_SIZE Parameter to EXTENDED** topic of the **Initial Install or Installing Version 9.0.0.0.0 for the First Time** section in the *Oracle Revenue Management and Billing Database Administrator's Guide*.
- Assign the **Execute** privilege for the **DBMS_CCRYPTO** package to the **CISADM** user - For more information, see the **Enabling the DBMS_CCRYPTO Package** topic of the **Initial Install or Installing Version 9.0.0.0.0 for the First Time** section in the *Oracle Revenue Management and Billing Database Administrator's Guide*.
- Set the interval partitioning for the **F1_MO_UPD** and **F1_MO_UPD_BACKLOG** tables – For more information, see the **Partitioning F1_MO_UPD and F1_MO_UPD_BACKLOG Tables** section of the *Oracle Revenue Management and Billing Database Administrator's Guide*.

2.3.2 Installing Rollup Pack for OUAF Version 25.4

You can install the rollup pack for Oracle Utilities Application Framework Version 25.4 from a Windows machine or UNIX Standalone server. To install the rollup pack for Oracle Utilities Application Framework (OUAF) Version 25.4 on the database:

1. Login to the database server using the administrator's credentials.
2. Copy the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Utilities Application Framework (25.4) Single Fix Prerequisite Rollup** package to the `TEMPDIR` folder using the following command:

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:

Linux:

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

Windows:

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

4. Unzip the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Utilities Application Framework (25.4) Single Fix Prerequisite Rollup** package using the following command:

Linux:

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

Windows:

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

The contents of the zip file are extracted in the `<DESTINATION_FOLDER_1>` folder. The contents include the `ORMB-V90000-FW-PREREQ-MultiPlatform.jar` file.

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

Linux:

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

Windows:

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

6. Decompress the JAR file using the following command:

```
jar -xvf ORMB-V90000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V25.4-Rollup` is extracted. It contains the following two sub-folders:

- `Application`
- `Database`

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

Linux:

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

Windows:

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

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

```
mkdir dbpatch_tools
```

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

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

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

Linux:

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

Windows:

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

12. Decompress the JAR file using the following command:

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

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

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

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

Linux:

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

Windows:

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

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

Linux:

```
cd <DESTINATION_FOLDER_1>/FW-V25.4-Rollup/Database
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW-V25.4-Rollup\Database
```

Note: The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `ORMB-V90000-FW-PREREQ-MultiPlatform.jar` file.

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

Windows:

```
TEMPDIR\dbpatch_tools\bin\ouafDatabasePatch.cmd
```

OR

```
%SPLEBASE%\tools\bin\db\bin\ouafDatabasePatch.cmd
```

Linux:

```
TEMPDIR/dbpatch_tools/bin/ouafDatabasePatch.sh
```

OR

```
$(SPLEBASE)/tools/bin/db/bin/ouafDatabasePatch.sh
```

Note: On the Linux platform, ensure that you grant the execute permission for the `ouafDatabasePatch.sh` utility using the following command:

```
chmod 755 ouafDatabasePatch.sh
```

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/SERVICE_NAME>

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

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

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

2.4 Installing Framework on the Application Environment

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

1. [Oracle Utilities Application Framework \(OUAF\) Version 25.4](#)
2. [Rollup Pack for Oracle Utilities Application Framework \(OUAF\) Version 25.4](#)

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 25.4

To install Oracle Utilities Application Framework (OUAF) Version 25.4 on the application environment:

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

```
mkdir TEMPDIR
```

- Copy the **Oracle Utilities Application Framework 25.4 - Application Installation Media** package to the `TEMPDIR` folder using the following command:

Linux:

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

Windows:

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

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

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

Linux:

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

Windows:

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

- Unzip the **Oracle Utilities Application Framework 25.4 - Application Installation Media** package using the following command:

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-V25.4`. The contents of the installation package are identical for all supported platforms. The `FW-V25.4` folder contains the OUAF installation software.

- 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, see the **Installing Application Server Prerequisite Software** section in the *Oracle Revenue Management and Billing Installation Guide*.

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

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

Points to Note:

The `<Java_Home>` is the location where you have installed Java 17.0.

The above command is applicable only for Linux platform.

8. Change to the `FW-V25.4` folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_1>/FW-V25.4
```

Windows:

```
cd <DESTINATION_FOLDER_1>\FW-V25.4
```

Note: The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the **Oracle Utilities Application Framework 25.4 - Application Installation Media** package.

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

Linux:

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

Windows:

```
install.cmd
```

The following message appears in the command line:

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

Note: In Microsoft Windows platform, the installation must be on a New Technology File System (NTFS). The script will error out if the filesystem is not NTFS.

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, see 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, see 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, see 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, see 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, see 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, see 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, see 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, see 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, see 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 25.4 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:

- `$PATH` - Updated to include all the required environment scripts and objects.
- `$SPLEBASE (%SPLEBASE%)` - Indicates the `<SPLDIR>/<SPLENVIRON>` folder
- `$SPLOUTPUT (%SPLOUTPUT%)` - Indicates the `<SPLDIROUT>/<SPLENVIRON>` folder
- `$SPLENVIRON (%SPLENVIRON%)` - Indicates the environment name

Points to Note:

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

Linux:

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

Windows:

```
%SPLBASE%\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 25.4

To install the rollup pack for Oracle Utilities Application Framework Version 25.4 on the application environment:

1. Copy the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Utilities Application Framework (25.4) Single Fix Prerequisite Rollup** package to the `TEMPDIR` folder using the following command:

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:

Linux:

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

Windows:

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

3. Unzip the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Utilities Application Framework (25.4) Single Fix Prerequisite Rollup** package using the following command:

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-V90000-FW-PREREQ-MultiPlatform.jar` file.

- Decompress the JAR file using the following command:

```
jar -xvf ORMB-V90000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V25.4-Rollup` is extracted. It contains the following two sub-folders:

- `Application`
- `Database`

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

Linux:

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

Windows:

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

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

Linux:

```
cd <DESTINATION_FOLDER_2>/FW-V25.4-Rollup/Application
```

Windows:

```
cd <DESTINATION_FOLDER_2>\FW-V25.4-Rollup\Application
```

Note: The <DESTINATION_FOLDER_2> folder is the location where you have extracted the contents of the `ORMB-V90000-FW-PREREQ-MultiPlatform.jar` file.

- Execute the `installSFgroup` utility using the following command:

Linux:

```
chmod a+x installSFgroup.sh
```

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

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

The following message appears in the command line:

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

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

2.5 Installing the ORMB Application

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

1. [Oracle Revenue Management and Billing \(ORMB\) Version 9.0.0.0.0](#)
2. [Oracle Revenue Management and Billing \(ORMB\) Version 9.0.0.0.0 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, see the [Accessing the ORMB Application](#) section. After accessing the application, you need to set the [C1-CFS](#) feature configuration.

2.5.1 Installing ORMB Version 9.0.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 9.0.0.0.0 on the application environment:

1. Login to the application server using the administrator's credentials.
2. Copy the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Multiplatform** package to the `TEMPDIR` folder using the following command:

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:

Linux:

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

Windows:

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

4. Unzip the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Multiplatform** package using the following command:

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.V9.0.0.0.0 folder.

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

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.V9.0.0.0.0 folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_3>/ORMB.V9.0.0.0.0
```

Windows:

```
cd <DESTINATION_FOLDER_3>\ORMB.V9.0.0.0.0
```

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

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:

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, see 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 9.0.0.0.0, 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, see the *ORMB V9.0.0.0.0 Patch Guide* 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, see [Appendix L: ORMB V9.0.0.0.0 Rollup Packs](#).

To apply a patch:

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

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:

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 V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform folder.

4. Change to the V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_5>/V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

Windows:

```
cd <DESTINATION_FOLDER_5>\V9.0.0.0.0-<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.V9.0.0.0.0-<PATCH_NUMBER>.jar and a directory named database.

- Decompress the `CCB.V9.0.0.0.0-<PATCH_NUMBER>.jar` file using the following command:

```
jar -xvf CCB.V9.0.0.0.0-<PATCH_NUMBER>.jar
```

The contents include two sub-folders - `META-INF` and `CCB.V9.0.0.0.0-<PATCH_NUMBER>`.

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

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.

- Change to the `CCB.V9.0.0.0.0-<PATCH_NUMBER>` folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_5>/V9.0.0.0.0-  
<PATCH_NUMBER>_MultiPlatform/CCB.V9.0.0.0.0-<PATCH_NUMBER>
```

Windows:

```
cd <DESTINATION_FOLDER_5>\V9.0.0.0.0-  
<PATCH_NUMBER>_MultiPlatform\CCB.V9.0.0.0.0-<PATCH_NUMBER>
```

- Install the patch using the following command:

Linux:

```
./installSF.sh
```

Windows:

```
installSF.cmd
```

- Start the managed server using the Oracle WebLogic Console.

2.5.3 Accessing the ORMB Application

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

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

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, see 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 9.0.0.0.0.
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	<p>Used to indicate whether the application environment should use the file object storage service of Oracle Cloud Infrastructure (OCI). The valid values are:</p> <ul style="list-style-type: none"> • Y • N <div style="border: 1px solid black; padding: 5px;"> <p>Points to Note:</p> <p>By default, the value is set to N.</p> <p>You must ensure that the value of this option type is set to N in the On Premise and Cloud Service environments.</p> <p>If the value of this option type is set to Y, you need to accordingly specify the directory paths while executing the DWLDBILC, C1-PUPSG, C1-APACK, and C1-RECUP batches. For more information,</p> </div>	Yes

Option Type	Description	Mandatory (Yes or No)
	see the <i>Oracle Revenue Management and Billing Batch Guide</i> .	
ODB Extendable Lookup and Bucket	<p>Used to specify the following information in the <File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while uploading the files through the On Demand Billing feature. • The bucket or container from where you want to upload the file using the On Demand Billing feature. 	<p>Yes (Conditional)</p> <div data-bbox="1117 396 1422 653" style="border: 1px solid black; padding: 5px;"> <p>Note: This option type is required only when the File Object Storage Usage option type is set to Y and you want to use the On Demand Billing feature.</p> </div>
Payment Upld Extendable Lookup and Bucket	<p>Used to specify the following information in the <File Storage Extendable Lookup Value>/<Object Storage Bucket> format:</p> <ul style="list-style-type: none"> • The file storage extendable lookup value from where the cloud storage compartment and connection details are retrieved while uploading the files through the Payment Upload feature. • The bucket or container from where you want to upload the file using the Payment Upload feature. 	<p>Yes (Conditional)</p> <div data-bbox="1117 865 1422 1121" style="border: 1px solid black; padding: 5px;"> <p>Note: This option type is required only when the File Object Storage Usage option type is set to Y and you want to use the Payment Upload feature.</p> </div>

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.

2.6 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 8.1.0.0.0 to 9.0.0.0.0, you need to install the following on the database:

1. [Oracle Revenue Management and Billing \(ORMB\) Version 9.0.0.0.0](#)
2. [Oracle Revenue Management and Billing \(ORMB\) Version 9.0.0.0.0 Post Requisite Patches](#)

Points to Note:

To view the list of patches that you need to apply on the database, see the *ORMB V9.0.0.0.0 Patch Guide* 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, see [Appendix L: ORMB V9.0.0.0.0 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 9.0.0.0.0

To install Oracle Revenue Management and Billing (ORMB) Version 9.0.0.0.0:

1. Login to the database server using the administrator's credentials.
2. Copy the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Database** package to the `TEMPDIR` folder using the following command:

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:

Linux:

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

Windows:

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

4. Unzip the **Oracle Financial Services Revenue Management and Billing 9.0.0.0.0 - Oracle Database** package using the following command:

Linux:

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

Windows:

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

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

- RMB

Note:

There might be situations when you do not want to recreate one or more tables or indexes. You can skip the recreation process of one or more tables or indexes by adding the following line in the <DESTINATION_FOLDER_2>/RMB/Upgrade/Oracle/Install-Upgrade/OraSchUpg.inp file:

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

```
-TABLE: 'TBAL1_NAME', 'TABLE2_NAME'
```

For example,

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

```
-TABLE: 'F1_WEB_SVC'
```

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

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 17.0 is installed.

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

Linux:

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

Note: The above command is applicable only for the Linux platform.

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

Linux:

```
export CLASS_PATH=$JAR_PATH/commons-cli-1.9.0.jar:$JAR_PATH/commons-codec-1.17.1.jar:$JAR_PATH/jackson-annotations-2.17.0.jar:$JAR_PATH/jackson-core-2.17.0.jar:$JAR_PATH/jackson-databind-2.17.0.jar:$JAR_PATH/log4j-api-2.21.0.jar:$JAR_PATH/log4j-core-2.21.0.jar:$JAR_PATH/ojdbc17-23.6.0.24.10.jar:$JAR_PATH/spl-oradbi-25.4.jar:$JAR_PATH/spl-shared-25.4.jar
```

Windows:

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

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

Linux:

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

Windows:

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

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

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
```

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
```

The following message appears in the command line:

```
Ready to upgrade the target database from V8.1.0.0.0 to V9.0.0.0.0, 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 9.0.0.0.0, you need to apply all patches listed in the *ORMB V9.0.0.0.0 Patch Guide*. 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:

Linux:

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

Windows:

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

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

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

Linux:

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

Windows:

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

The contents of the zip file are extracted in the <DESTINATION_FOLDER_4> folder. The contents include the V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform folder.

4. Change to the V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_4>/V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

Windows:

```
cd <DESTINATION_FOLDER_4>\V9.0.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

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

The contents include a file named CCB.V9.0.0.0.0-<PATCH_NUMBER>.jar and a folder named database.

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

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:

Linux:

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

Windows:

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

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

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

Windows:

```
ouafDatabasePatch.cmd
```

Linux:

```
ouafDatabasePatch.sh
```

Note: On the Linux platform, ensure that you grant the execute permission for the `ouafDatabasePatch.sh` utility using the following command:

```
chmod 755 ouafDatabasePatch.sh
```

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/SERVICE_NAME>

8. Enter the required parameter value. The following message appears in the command line:

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

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

2.7 Migrating Data

No data migration is required while upgrading from Oracle Revenue Management and Billing Version 8.1.0.0.0 to 9.0.0.0.0.

3. Additional Tasks

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

1. [Starting the Thread Pool Worker](#)
2. [Building Javadoc Index](#)
3. [Table Partitioning](#)

3.1 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:

Linux:

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

Windows:

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

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

3.2 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:

Linux:

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

Windows:

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

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

3.3 Table Partitioning

Once the database is upgraded, we recommend you partition the tables which has considerable amount of data. This will help you to manage data and ensure consistent system performance with the increasing data. For more information about the table partitioning, see the **Table Partitioning Strategy** section in the *Oracle Revenue Management and Billing Database Administrator's Guide*.

Note: An out of box sample release-specific table partitioning scripts are provided by Oracle Revenue Management and Billing on [My Oracle Support](#). You can partition the tables using these sample scripts. For more information, see *Oracle Revenue Management and Billing ILM Implementation Guide*.

Appendix A : Known Issues

To view the known issues in the current release, see [Known Issues](#).

Appendix B : Third-Party Software Upgrade

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

Appendix C : New Tables Added in ORMB Version 9.0.0.0.0

This section lists and describes the tables that are newly added in Oracle Revenue Management and Billing Version 9.0.0.0.0.

C.1 C1_ACCT_BAL

Purpose:	Used to store the account balance details.
Total Number of Columns:	5

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCT_ID	CHAR(10)	No	-
CRE_DTTM	DATE	No	-
CUR_AMT	NUMBER(22,15)	No	-
TOT_AMT	NUMBER(22,15)	No	-
UPDT_DTTM	DATE	No	-

Primary Key:

Key Type	Column Name
Primary	ACCT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM912P0	Unique	ACCT_ID

C.2 C1_ACCT_SUMMARY

Purpose:	Used to store the summary details of an account.
Total Number of Columns:	27

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCT_ID	CHAR(10)	No	-
CIS_DIVISION	CHAR(5)	No	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
LAST_UPD_DTTM	DATE	Yes	-
NET_ACCT_DIV_CURR_REV	NUMBER(22,36)	Yes	-
NET_IMPL_CURR_REV	NUMBER(22,36)	Yes	-
NET_IMPL_CURR_REV	NUMBER(22,36)	Yes	-
NET_REVENUE	NUMBER(22,36)	No	-
PERIOD	CHAR(6)	Yes	-
PROFIT_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
PROFIT_AMT	NUMBER(22,36)	Yes	-
PROFIT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
PROFITABILITY	NUMBER(22,36)	Yes	-
TOT_ADJ_COUNT	NUMBER(22,15)	Yes	-
TOT_BILL_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_COUNT	NUMBER(22,15)	Yes	-
TOT_BILL_IMPL_CURR_AMT	NUMBER(22,26)	Yes	-
TOT_BSEG_COUNT	NUMBER(22,15)	Yes	-
TOT_CAN_BILLS	NUMBER(22,15)	Yes	-
TOT_COST_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_COST_AMT	NUMBER(22,36)	Yes	-
TOT_COST_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_CYCLIC_BILLS	NUMBER(22,15)	Yes	-
TOT_DEDUCT_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCTIBLE_AMT	NUMBER(22,36)	Yes	-
TOT_NON_CYC_BILLS	NUMBER(22,15)	Yes	-
VERSION	NUMBER(22,5)	No	-

Primary Key:

Key Type	Column Name
Composite	ACCT_ID
	PERIOD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT567P0	Unique	ACCT_ID
			PERIOD

C.3 C1_BILL_ELIG_SKIP

Purpose:	Used to store the account and bill eligibility skip details.
Total Number of Columns:	18

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCT_ID	CHAR(10)	No	-
ACCT_SKIP_REASON	CHAR(254)	Yes	-
BILL_CYC_CD	CHAR(4)	Yes	-
BILL_ELIG_SKIP_ID	CHAR(10)	No	-
BILL_GEN_SOURCE	CHAR(5)	No	-
BILL_GEN_TYPE	CHAR(5)	No	-
CRE_DTTM	DATE	Yes	-
MESSAGE_CAT_NBR	NUMBER(22,5)	Yes	-
MESSAGE_NBR	NUMBER(22,5)	Yes	-
PK_VAL_1	VARCHAR2(50)	Yes	-
PK_VAL_2	VARCHAR2(50)	Yes	-
PK_VAL_3	VARCHAR2(50)	Yes	-
PK_VAL_4	VARCHAR2(50)	Yes	-
PK_VAL_5	VARCHAR2(50)	Yes	-
UPD_DTTM	DATE	Yes	-
VERSION	NUMBER(22,5)	No	-
WIN_END_DT	DATE	Yes	-
WIN_START_DT	DATE	Yes	-

Primary Key:

Key Type	Column Name
Primary	BILL_ELIG_SKIP_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT561P0	Unique	BILL_ELIG_SKIP_ID
2.	XXT561S0	Unique	ACCT_ID
			WIN_START_DT

C.4 C1_BILL_ELIG_SKIP_K

Purpose:	Used to store the account and bill eligibility skip key details.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_ELIG_SKIP_ID	CHAR(10)	No	-
ENV_ID	NUMBER(22,6)	No	-

Primary Key:

Key Type	Column Name
Composite	BILL_ELIG_SKIP_ID
	ENV_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT562P0	Unique	BILL_ELIG_SKIP_ID
			ENV_ID

C.5 C1_BILL_SUMMARY

Purpose:	Used to store the summary details of a bill.
Total Number of Columns:	34

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCT_ID	CHAR(10)	No	-
BILL_CANCEL_SW	CHAR(1)	Yes	-
BILL_CREATION_DT	DATE	Yes	-
BILL_CYC_CD	CHAR(4)	No	-
BILL_DT	DATE	Yes	-
BILL_ID	CHAR(12)	No	-
BILLING_METHOD	VARCHAR2(10)	Yes	-
LAST_UPD_DTTM	DATE	Yes	-
NET_ACCT_DIV_CURR_REV	NUMBER(22,36)	Yes	-
NET_IMPL_CURR_REV	NUMBER(22,36)	Yes	-
NET_REVENUE	NUMBER(22,36)	Yes	-
PROFIT_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
PROFIT_AMT	NUMBER(22,36)	Yes	-
PROFIT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
PROFITABILITY	NUMBER(22,36)	Yes	-
TOT_ADJ_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_ADJ_AMT	NUMBER(22,36)	Yes	-
TOT_ADJ_CAN_COUNT	NUMBER(22,15)	Yes	-
TOT_ADJ_COUNT	NUMBER(22,15)	Yes	-
TOT_ADJ_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_COST_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_COST_AMT	NUMBER(22,36)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
TOT_COST_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCT_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCTIBLE_AMT	NUMBER(22,36)	Yes	-
TOT_SEG_CAN_COUNT	NUMBER(22,15)	Yes	-
TOT_SEG_COUNT	NUMBER(22,5)	Yes	-
VERSION	NUMBER(22,5)	No	-
WIN_END_DT	DATE	Yes	-
WIN_START_DT	DATE	Yes	-

Primary Key:

Key Type	Column Name
Primary	BILL_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT568P0	Unqiue	BILL_ID

C.6 C1_BSEG_SUMMARY

Purpose:	Used to store the summary details of a bill segment.
Total Number of Columns:	34

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCT_DIV_CURR_CD	CHAR(3)	Yes	-
ACCT_DIV_CURR_EXCHRATE_ID	CHAR(10)	Yes	-
ACCT_ID	CHAR(10)	No	-
BILL_CREATION_DT	DATE	Yes	-
BILL_CYC_CD	CHAR(4)	Yes	-
BILL_ID	CHAR(12)	No	-
BSEG_ID	CHAR(12)	No	-
BSEG_STAT_FLG	CHAR(2)	No	-
COST_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
COST_AMT	NUMBER(22,36)	Yes	-
COST_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
COST_SQI	NUMBER(22,36)	Yes	-
DEDUCTIBLE_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
DEDUCTIBLE_AMT	NUMBER(22,36)	Yes	-
DEDUCTIBLE_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
END_DT	DATE	Yes	-
IMPL_CURR_CD	CHAR(3)	Yes	-
IMPL_DIV_CURR_EXCHRATE_ID	CHAR(10)	Yes	-
LAST_UPD_DTTM	DATE	Yes	-
NET_ACCT_DIV_CURR_REV	NUMBER(22,36)	Yes	-
NET_IMPL_CURR_REV	NUMBER(22,36)	Yes	-
NET_REV	NUMBER(22,36)	Yes	-
PARAM_STR	VARCHAR2(4000)	Yes	-
PRICEITEM_CD	CHAR(30)	Yes	-
PRICEITEM_PARAM_GRP_ID	CHAR(10)	Yes	-
PROFIT_AC_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
PROFIT_AMT	NUMBER(22,36)	Yes	-
PROFIT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
PROFITABILITY	NUMBER(22,36)	Yes	-
START_DT	DATE	Yes	-
TOT_BSEG_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_BSEG_AMT	NUMBER(22,36)	Yes	-
TOT_BSEG_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
VERSION	NUMBER(22,5)	No	-

Primary Key:

Key Type	Column Name
Primary	BSEG_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT560P0	Unique	BSEG_ID

C.7 C1_PER_SUMMARY

Purpose:	Used to store the summary details of a person.
Total Number of Columns:	27

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
CIS_DIVISION	CHAR(5)	Yes	-
CUST_SEG_FLG	CHAR(4)	Yes	-
CUST_TIER_FLG	CHAR(4)	Yes	-
LAST_UPD_DTTM	DATE(7)	Yes	-
NET_IMPL_CURR_REV	NUMBER(22,36)	Yes	-
NET_PER_DIV_CURR_REV	NUMBER(22,36)	Yes	-
NET_REVENUE	NUMBER(22,36)	Yes	-
PER_ID	CHAR(10)	No	-
PERIOD	CHAR(6)	No	-
PROFIT_AMT	NUMBER(22,36)	Yes	-
PROFIT_AMT_PER_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
PROFIT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_ACCOUNT_COUNT	NUMBER(22,15)	Yes	-
TOT_BILL_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_COUNT	NUMBER(22,15)	Yes	-
TOT_BILL_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_BILL_PER_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_CAN_BILLS	NUMBER(22,15)	Yes	-
TOT_COST_AMT	NUMBER(22,36)	Yes	-
TOT_COST_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_COST_PER_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_CYCLIC_BILLS	NUMBER(22,15)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
TOT_DEDUCT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCT_PER_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_DEDUCTIBLE_AMT	NUMBER(22,36)	Yes	-
TOT_NON_CYCLIC_BILLS	NUMBER(22,15)	Yes	-
VERSION	NUMBER(22,5)	No	-

Primary Key:

Key Type	Column Name
Composite	PER_ID
	PERIOD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT569P0	Unique	PER_ID
			PERIOD

C.8 C1_PRICEITEM_SUMMARY

Purpose:	Used to store the summary details of a price item.
Total Number of Columns:	21

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_CREATION_DT	DATE	Yes	-
CIS_DIVISION	CHAR(5)	No	-
COST_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
COST_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
COST_SQI	NUMBER(22,36)	Yes	-
DEDUCTIBLE_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
DEDUCTIBLE_AMT	NUMBER(22,36)	Yes	-
DEDUCTIBLE_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
LAST_UPD_DTTM	DATE	Yes	-
NET_ACCT_DIV_CURR_REV	NUMBER(22,36)	Yes	-
NET_IMPL_CURR_REV	NUMBER(22,36)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
PARAM_STR	VARCHAR2(4000)	Yes	-
PERIOD	CHAR(6)	No	-
PRICEITEM_CD	CHAR(30)	No	-
PRICEITEM_PARM_GRP_ID	NUMBER(22,22)	No	-
PROFIT_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
PROFIT_AMT	NUMBER(22,36)	Yes	-
PROFIT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-
PROFITABILITY	NUMBER(22,36)	Yes	-
TOT_AMT_ACCT_DIV_CURR_AMT	NUMBER(22,36)	Yes	-
TOT_AMT_IMPL_CURR_AMT	NUMBER(22,36)	Yes	-

Primary Key:

Key Type	Column Name
Composite	CIS_DIVISION
	PERIOD
	PRICEITEM_CD
	PRICEITEM_PARM_GRP_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XXT570P0	Unique	CIS_DIVISION
			PERIOD
			PRICEITEM_CD
			PRICEITEM_PARM_GRP_ID

C.9 C1_SLAB_BC_PRED

Purpose:	Used to store the prediction data of a SLAB billing cycle.
Total Number of Columns:	22

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCOUNTING_DT	DATE	No	-
BILL_CYC_CD	CHAR(4)	No	-
BILLS_COMPLETED	NUMBER(22)	Yes	-
BILLS_PER_HR_LAST5PCT	NUMBER(22,12)	Yes	-
BREACH_FLG	CHAR(1)	Yes	-
BUFFER_DAYS	NUMBER(22,8)	Yes	-
BUFFER_DEADLINE_DT	DATE	Yes	-
CRE_DTTM	DATE	Yes	-
ELAPSED_HOURS	NUMBER(22,12)	Yes	-
ETA_DT	TIMESTAMP(6)(11)	Yes	-
HR_REMAIN_PRED	NUMBER(22,12)	Yes	-
JSON_MSG	CLOB(4000)	Yes	-
PCT_COMPLETE	NUMBER(22,5)	Yes	-
SLA_DAYS	NUMBER(22,8)	Yes	-
SLA_DEADLINE_DT	DATE	Yes	-
SLA_DEVIATION_DAYS	NUMBER(22,12)	Yes	-
SNAP_TS	TIMESTAMP(6)(11)	No	-
STATUS_CODE	VARCHAR2(20)	Yes	-
TARGET_PCT	NUMBER(22,5)	No	-
TOTAL_BILLS	NUMBER(22)	Yes	-
UPDATE_DTTM	DATE	Yes	-
VERSION	NUMBER(22)	Yes	-

Primary Key:

Key Type	Column Name
Composite	ACCOUNTING_DT
	BILL_CYC_CD
	SNAP_TS
	TARGET_PCT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM972P0	Unique	ACCOUNTING_DT
			BILL_CYC_CD
			SNAP_TS
			TARGET_PCT

C.10 C1_SLAB_BC_TRAIN

Purpose:	Used to store the training data of a SLAB billing cycle.
Total Number of Columns:	10

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ACCOUNTING_DT	DATE	No	-
BILL_CYC_CD	CHAR(4)	No	-
BILLS_COMPLETED	NUMBER(22)	No	-
BILLS_PER_HR_LAST5PCT	NUMBER(22,12)	Yes	-
ELAPSED_HOURS	NUMBER(22,12)	No	-
HR_REMAIN	NUMBER(22,12)	No	-
PCT_COMPLETE	NUMBER(22,5)	No	-
SNAP_TS	TIMESTAMP(6)(11)	No	-
TARGET_PCT	NUMBER(22,5)	No	-
TOTAL_BILLS	NUMBER(22)	No	-

Primary Key:

Key Type	Column Name
Composite	ACCOUNTING_DT
	BILL_CYC_CD
	SNAP_TS
	TARGET_PCT

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM971P0	Unique	ACCOUNTING_DT
			BILL_CYC_CD
			SNAP_TS
			TARGET_PCT

C.11 C1_SLAB_SLA

Purpose:	Used to store the registry information of a SLAB SLA.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BILL_CYC_CD	CHAR(4)	No	-
BUFFER_DAYS	NUMBER(22,8)	No	--
SLA_DAYS	NUMBER(22,8)	No	
TARGET_PCT	NUMBER(22,5)	No	95

Primary Key:

Key Type	Column Name
Primary	BILL_CYC_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	XM973P0	Unique	BILL_CYC_CD

Appendix D : Existing Tables Modified in ORMB Version 9.0.0.0.0

This section lists the existing tables which are modified in Oracle Revenue Management and Billing Version 9.0.0.0.0. It indicates the columns that are newly added, dropped, or modified in these tables.

D.1 APPLICATION_LEDGER

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CREATED_BY	Newly Added	-	VARCHAR2(1280)	No	-
2.	DESCRIPTION	Newly Added	-	VARCHAR2(560)	No	-
3.	ENTITY_ID	Newly Added	-	VARCHAR2(200)	No	-
4.	LAST_UPDATED_BY	Newly Added	-	VARCHAR2(1280)	No	-
5.	STATUS	Newly Added	-	VARCHAR2(20)	No	-

D.2 C1_AUDIT_EVENT

The following table lists the columns that are newly added, modified, or dropped from the C1_AUDIT_EVENT table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	C1_INBOUND_MESSAGE_ID	Newly Added	-	VARCHAR2(15)	No	-

D.3 C1_B_ACCT_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_ACCT_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-
3.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.4 C1_B_ADJ_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_ADJ_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADJ_ID	Newly Added	-	CHAR(12)	No	-
2.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-

D.5 C1_B_ADJ_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_ADJ_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	ADJ_AMT	Newly Added	-	NUMBER(22,15)	No	-
3.	ADJ_CURRENCY_CD	Newly Added	-	CHAR(3)	No	-
4.	ADJ_ID	Newly Added	-	CHAR(12)	No	-
5.	ADJ_STATUS_FLG	Newly Added	-	CHAR(2)	No	-
6.	ADJ_TYPE_CD	Newly Added	-	CHAR(8)	No	-
7.	BASE_AMT	Newly Added	-	NUMBER(22,36)	No	-
8.	BILL_ID	Newly Added	-	CHAR(12)	No	-
9.	BILL_SQ	Newly Added	-	NUMBER(22,36)	No	-
10.	BSEG_ID	Newly Added	-	CHAR(12)	No	-
11.	CALC_AMT	Newly Added	-	NUMBER(22,36)	No	-
12.	CAN_RSN_CD	Newly Added	-	CHAR(4)	No	-
13.	CAN_RSN_DESCR	Newly Added	-	VARCHAR2(60)	No	-
14.	CHAR_TYPE_CD_1	Newly Added	-	CHAR(8)	No	-
15.	CHAR_TYPE_CD_10	Newly Added	-	CHAR(8)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
16.	CHAR_TYPE_CD_2	Newly Added	-	CHAR(8)	No	-
17.	CHAR_TYPE_CD_3	Newly Added	-	CHAR(8)	No	-
18.	CHAR_TYPE_CD_4	Newly Added	-	CHAR(8)	No	-
19.	CHAR_TYPE_CD_5	Newly Added	-	CHAR(8)	No	-
20.	CHAR_TYPE_CD_6	Newly Added	-	CHAR(8)	No	-
21.	CHAR_TYPE_CD_7	Newly Added	-	CHAR(8)	No	-
22.	CHAR_TYPE_CD_8	Newly Added	-	CHAR(8)	No	-
23.	CHAR_TYPE_CD_9	Newly Added	-	CHAR(8)	No	-
24.	CHAR_VAL_1	Newly Added	-	VARCHAR2(254)	No	-
25.	CHAR_VAL_10	Newly Added	-	VARCHAR2(254)	No	-
26.	CHAR_VAL_2	Newly Added	-	VARCHAR2(254)	No	-
27.	CHAR_VAL_3	Newly Added	-	VARCHAR2(254)	No	-
28.	CHAR_VAL_4	Newly Added	-	VARCHAR2(254)	No	-
29.	CHAR_VAL_5	Newly Added	-	VARCHAR2(254)	No	-
30.	CHAR_VAL_6	Newly Added	-	VARCHAR2(254)	No	-
31.	CHAR_VAL_7	Newly Added	-	VARCHAR2(254)	No	-
32.	CHAR_VAL_8	Newly Added	-	VARCHAR2(254)	No	-
33.	CHAR_VAL_9	Newly Added	-	VARCHAR2(254)	No	-
34.	DESCR_ON_BILL	Newly Added	-	VARCHAR2(80)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
35.	DST_ID	Newly Added	-	CHAR(10)	No	-
36.	EXCHRATE	Newly Added	-	NUMBER(22,36)	No	-
37.	EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
38.	EXEMPT_AMT	Newly Added	-	NUMBER(22,36)	No	-
39.	ORIG_ADJ_AMT	Newly Added	-	NUMBER(22,15)	No	-
40.	ORIG_ADJ_CCY_CD	Newly Added	-	CHAR(3)	No	-
41.	RC_SEQ	Newly Added	-	NUMBER(22)	No	-
42.	RS_CD	Newly Added	-	CHAR(8)	No	-
43.	SA_ID	Newly Added	-	CHAR(10)	No	-
44.	SETTLEMENT_ACCT_ID	Newly Added	-	CHAR(10)	No	-
45.	SETTLEMENT_ID_NBR	Newly Added	-	VARCHAR2(20)	No	-
46.	SQI_CD	Newly Added	-	CHAR(8)	No	-
47.	XFER_ADJ_ID	Newly Added	-	CHAR(12)	No	-

D.6 C1_B_BCHG_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BCHG_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
2.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-

D.7 C1_B_BCHG_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BCHG_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_BILL_SW	Newly Added	-	CHAR(1)	No	-
2.	AGG_PARM_GRP_ID	Newly Added	-	NUMBER(22,22)	No	-
3.	BILL_AFTER_DT	Newly Added	-	DATE	No	-
4.	BILL_PERIOD_CD	Newly Added	-	CHAR(8)	No	-
5.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
6.	BILLABLE_CHG_STAT	Newly Added	-	CHAR(2)	No	-
7.	CHG_TYPE_CD	Newly Added	-	CHAR(12)	No	-
8.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
9.	DESCR_ON_BILL	Newly Added	-	VARCHAR2(80)	No	-
10.	END_TM	Newly Added	-	DATE	No	-
11.	FEED_SOURCE_FLG	Newly Added	-	CHAR(4)	No	-
12.	PA_ACCT_ID	Newly Added	-	CHAR(10)	No	-
13.	PA_PER_ID	Newly Added	-	CHAR(10)	No	-
14.	PA_PRICELIST_ID	Newly Added	-	CHAR(10)	No	-
15.	POLICY_INVOICE_FREQ_CD	Newly Added	-	CHAR(4)	No	-
16.	PRICE_ASGN_ID	Newly Added	-	CHAR(10)	No	-
17.	PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
18.	PRICEITEM_PARM_GRP_ID	Newly Added	-	NUMBER(22,22)	No	-
19.	RECURRING_FLG	Newly Added	-	CHAR(4)	No	-
20.	SA_ID	Newly Added	-	CHAR(10)	No	-
21.	SQI_CD	Newly Added	-	CHAR(8)	No	-
22.	SUBSCR_CHRG_ID	Newly Added	-	CHAR(12)	No	-
23.	SVC_QTY	Newly Added	-	NUMBER(22,36)	No	-
24.	TOU_CD	Newly Added	-	CHAR(8)	No	-

D.8 C1_B_BILL_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BILL_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	BILL_ID	Newly Added	-	CHAR(12)	No	-
3.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-

D.9 C1_B_BILL_FACT_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BILL_FACT_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_APAY_ID	Newly Added	-	CHAR(10)	No	-
2.	ADDRESS_ID	Newly Added	-	CHAR(12)	No	-
3.	ADHOC_BILL_SW	Newly Added	-	CHAR(1)	No	-
4.	ALLOW_REOPEN_SW	Newly Added	-	CHAR(1)	No	-
5.	ALT_BILL_ID	Newly Added	-	VARCHAR2(30)	No	-
6.	APAY_AMT	Newly Added	-	NUMBER(22,15)	No	-
7.	APAY_CLR_ID	Newly Added	-	CHAR(12)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
8.	APAY_CRE_DT	Newly Added	-	DATE	No	-
9.	APAY_STOP_AMT	Newly Added	-	NUMBER(22,15)	No	-
10.	APAY_STOP_CRE_DT	Newly Added	-	DATE	No	-
11.	APAY_STOP_DTTM	Newly Added	-	DATE	No	-
12.	APAY_STOP_USER_ID	Newly Added	-	CHAR(8)	No	-
13.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-
14.	BILL_CYC_DESCR	Newly Added	-	VARCHAR2(60)	No	-
15.	BILL_DT	Newly Added	-	DATE	No	-
16.	BILL_EXCP_FLG	Newly Added	-	CHAR(2)	No	-
17.	BILL_FORMAT_FLG	Newly Added	-	CHAR(2)	No	-
18.	BILL_ID	Newly Added	-	CHAR(12)	No	-
19.	BILL_MSG_CD	Newly Added	-	CHAR(4)	No	-
20.	BILL_MSG_DESCR	Newly Added	-	VARCHAR2(60)	No	-
21.	BILL_PRT_INTERCEPT	Newly Added	-	CHAR(8)	No	-
22.	BILL_RTE_TYPE_CD	Newly Added	-	CHAR(8)	No	-
23.	BILL_STAT_FLG	Newly Added	-	CHAR(2)	No	-
24.	CR_NOTE_FR_BILL_ID	Newly Added	-	CHAR(12)	No	-
25.	CUR_AMT	Newly Added	-	NUMBER(22,15)	No	-
26.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
27.	DUE_DT	Newly Added	-	DATE	No	-
28.	EXTRACT_DTTM	Newly Added	-	DATE	No	-
29.	EXTRACT_ELIG_SW	Newly Added	-	CHAR(1)	No	-
30.	MSG_ON_BILL	Newly Added	-	VARCHAR2(254)	No	-
31.	NBR_BILL_COPIES	Newly Added	-	NUMBER(22,1)	No	-
32.	NO_BATCH_PRT_SW	Newly Added	-	CHAR(1)	No	-
33.	PER_ID	Newly Added	-	CHAR(10)	No	-
34.	REPRINT_SW	Newly Added	-	CHAR(1)	No	-
35.	SA_ID	Newly Added	-	CHAR(10)	No	-
36.	SETTLEMENT_ACCT_ID	Newly Added	-	CHAR(10)	No	-
37.	SETTLEMENT_ID_NBR	Newly Added	-	VARCHAR2(20)	No	-
38.	TOT_AMT	Newly Added	-	NUMBER(22,15)	No	-
39.	TRIAL_BILL_ID	Newly Added	-	CHAR(12)	No	-
40.	WIN_START_DT	Newly Added	-	DATE	No	-

D.10 C1_B_BSEG_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BSEG_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
2.	BSEG_ID	Newly Added	-	CHAR(12)	No	-
3.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-

D.11 C1_B_BSEG_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BSEG_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	APP_IN_SUMM_SW	Newly Added	-	CHAR(1)	No	-
2.	BASE_AMT	Newly Added	-	NUMBER(22,36)	No	-
3.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-
4.	BILL_ID	Newly Added	-	CHAR(12)	No	-
5.	BILL_MSG_CD	Newly Added	-	CHAR(4)	No	-
6.	BILL_SCNR_ID	Newly Added	-	CHAR(12)	No	-
7.	BILL_SQ	Newly Added	-	NUMBER(22,36)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
8.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
9.	BSEG_CALC_DESCR	Newly Added	-	VARCHAR2(80)	No	-
10.	BSEG_CALC_LN_DESCR	Newly Added	-	VARCHAR2(80)	No	-
11.	BSEG_CRE_DTTM	Newly Added	-	DATE	No	-
12.	BSEG_END_DT	Newly Added	-	DATE	No	-
13.	BSEG_EXCP_FLG	Newly Added	-	CHAR(2)	No	-
14.	BSEG_ID	Newly Added	-	CHAR(12)	No	-
15.	BSEG_START_DT	Newly Added	-	DATE	No	-
16.	BSEG_STAT_FLG	Newly Added	-	CHAR(2)	No	-
17.	BSEG_TYPE_FLG	Newly Added	-	CHAR(4)	No	-
18.	CALC_AMT	Newly Added	-	NUMBER(22,15)	No	-
19.	CALC_LN_AMT	Newly Added	-	NUMBER(22,36)	No	-
20.	CAN_BSEG_ID	Newly Added	-	CHAR(12)	No	-
21.	CAN_RSN_CD	Newly Added	-	CHAR(4)	No	-
22.	CAN_RSN_DESCR	Newly Added	-	VARCHAR2(60)	No	-
23.	CLOSING_BSEG_SW	Newly Added	-	CHAR(1)	No	-
24.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-
25.	DST_ID	Newly Added	-	CHAR(10)	No	-
26.	EXCHRATE	Newly Added	-	NUMBER(22,36)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
27.	EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
28.	EXEMPT_AMT	Newly Added	-	NUMBER(22,36)	No	-
29.	HEADER_SEQ	Newly Added	-	NUMBER(22,3)	No	-
30.	INIT_SQ	Newly Added	-	NUMBER(22,36)	No	-
31.	MASTER_BSEG_ID	Newly Added	-	CHAR(12)	No	-
32.	MSR_PEAK_QTY_SW	Newly Added	-	CHAR(1)	No	-
33.	PRIC_AMT	Newly Added	-	NUMBER(22,36)	No	-
34.	PRIC_CCY_CD	Newly Added	-	CHAR(3)	No	-
35.	PRICE_ASGN_ID	Newly Added	-	CHAR(10)	No	-
36.	PRICECOMP_ID	Newly Added	-	CHAR(10)	No	-
37.	PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
38.	PRICEITEM_PARM_GRP_ID	Newly Added	-	NUMBER(22,22)	No	-
39.	PRT_SW	Newly Added	-	CHAR(1)	No	-
40.	RC_SEQ	Newly Added	-	NUMBER(22,3)	No	-
41.	REBILL_SEG_ID	Newly Added	-	CHAR(12)	No	-
42.	RS_CD	Newly Added	-	CHAR(8)	No	-
43.	SA_ID	Newly Added	-	CHAR(10)	No	-
44.	SETTLEMENT_ACCT_ID	Newly Added	-	CHAR(10)	No	-
45.	SETTLEMENT_ID_NBR	Newly Added	-	VARCHAR2(20)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
46.	SQI_CD	Newly Added	-	CHAR(8)	No	-
47.	TOT_AGG_SQ	Newly Added	-	NUMBER(22,36)	No	-
48.	USAGE_ACCT_ID	Newly Added	-	CHAR(10)	No	-
49.	VALUE_AMT	Newly Added	-	NUMBER(22,36)	No	-
50.	WIN_START_DT	Newly Added	-	DATE	No	-

D.12 C1_B_DIM_ACCT_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_DIM_ACCT_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_APAY_ID	Newly Added	-	CHAR(10)	No	-
2.	ACCT_CL_CD	Newly Added	-	CHAR(8)	No	-
3.	ACCT_CL_DESCR	Newly Added	-	VARCHAR2(60)	No	-
4.	ACCT_MGMT_GRP_CD	Newly Added	-	CHAR(10)	No	-
5.	ACCT_MGMT_GRP_DESCR	Newly Added	-	VARCHAR2(60)	No	-
6.	ACCT_NBR	Newly Added	-	VARCHAR2(30)	No	-
7.	ACCT_NBR_TYPE	Newly Added	-	CHAR(8)	No	-
8.	ACCT_NBR_TYPE_DESCR	Newly Added	-	VARCHAR2(60)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
9.	ACCT_PURPOSE	Newly Added	-	VARCHAR2(10)	No	-
10.	ACCT_PURPOSE_TYPE	Newly Added	-	VARCHAR2(10)	No	-
11.	ACCT_TYPE	Newly Added	-	CHAR(8)	No	-
12.	ACCT_USAGE_TYPE	Newly Added	-	CHAR(4)	No	-
13.	ACCT_USAGE_TYPE_DESC	Newly Added	-	VARCHAR2(60)	No	-
14.	APAY_END_DT	Newly Added	-	DATE	No	-
15.	APAY_EXP_DT	Newly Added	-	DATE	No	-
16.	APAY_MAX_WDRWL_AMT	Newly Added	-	NUMBER(22,15)	No	-
17.	APAY_METHOD	Newly Added	-	VARCHAR2(60)	No	-
18.	APAY_METHOD_FLG	Newly Added	-	CHAR(4)	No	-
19.	APAY_PCT	Newly Added	-	NUMBER(22,5)	No	-
20.	APAY_RTE_TYPE_CD	Newly Added	-	CHAR(10)	No	-
21.	APAY_SRC_CD	Newly Added	-	CHAR(12)	No	-
22.	APAY_START_DT	Newly Added	-	DATE	No	-
23.	APAY_TYPE_FLG	Newly Added	-	CHAR(4)	No	-
24.	APAY_USAGE_FLG	Newly Added	-	CHAR(4)	No	-
25.	BASE_CURRENCY_CD	Newly Added	-	CHAR(3)	No	-
26.	BEHAVIOUR_SCORE	Newly Added	-	VARCHAR2(10)	No	-
27.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
28.	BILL_CYC_DESCR	Newly Added	-	VARCHAR2(60)	No	-
29.	BILL_LEAD_DAYS	Newly Added	-	NUMBER(22,5)	No	-
30.	BILL_MSG	Newly Added	-	VARCHAR2(60)	No	-
31.	BILL_MSG_CD	Newly Added	-	CHAR(4)	No	-
32.	BILL_MSG_TYPE_FLG	Newly Added	-	CHAR(2)	No	-
33.	CIS_DIVISION	Newly Added	-	CHAR(5)	No	-
34.	CIS_DIVISION_DESCR	Newly Added	-	VARCHAR2(60)	No	-
35.	COLL_CL_CD	Newly Added	-	CHAR(10)	No	-
36.	COLL_CL_DESCR	Newly Added	-	VARCHAR2(60)	No	-
37.	CURRENCY_DESC	Newly Added	-	VARCHAR2(60)	No	-
38.	CUST_CL_CD	Newly Added	-	CHAR(8)	No	-
39.	CUST_ID	Newly Added	-	CHAR(10)	No	-
40.	CUST_NAME	Newly Added	-	VARCHAR2(254)	No	-
41.	CUST_TYPE	Newly Added	-	VARCHAR2(60)	No	-
42.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-
43.	ENCR_EXT_ACCT_ID	Newly Added	-	VARCHAR2(108)	No	-
44.	EXT_ACCT_ID	Newly Added	-	VARCHAR2(50)	No	-
45.	JOINT_APPLICANT_SW	Newly Added	-	VARCHAR2(10)	No	-
46.	MATURITY_DT	Newly Added	-	VARCHAR2(10)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
47.	OD_PROC_SW	Newly Added	-	VARCHAR2(3)	No	-
48.	PRD_CD	Newly Added	-	VARCHAR2(10)	No	-
49.	PRD_CD_DESCR	Newly Added	-	VARCHAR2(10)	No	-
50.	PROD_CL_CD	Newly Added	-	VARCHAR2(10)	No	-
51.	PROD_CL_CD_DESCR	Newly Added	-	VARCHAR2(10)	No	-
52.	PROD_GRP_CD	Newly Added	-	VARCHAR2(10)	No	-
53.	PROD_GRP_CD_DESCR	Newly Added	-	VARCHAR2(10)	No	-
54.	SETUP_DT	Newly Added	-	DATE	No	-
55.	SRC_ACCT_ID	Newly Added	-	CHAR(10)	No	-

D.13 C1_B_DIM_CUST_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_DIM_CUST_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADDRESS_2	Newly Added	-	VARCHAR2(254)	No	-
2.	ADDRESS_3	Newly Added	-	VARCHAR2(254)	No	-
3.	ADDRESS_4	Newly Added	-	VARCHAR2(254)	No	-
4.	CIS_DIVISION	Newly Added	-	CHAR(5)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	CIS_DIVISION_DESCR	Newly Added	-	VARCHAR2(60)	No	-
6.	COMPANY_TYPE	Newly Added	-	VARCHAR2(30)	No	-
7.	CONTACT_NUMBER	Newly Added	-	VARCHAR2(24)	No	-
8.	CONTACT_TYPE	Newly Added	-	CHAR(12)	No	-
9.	COUNTRY_CODE	Newly Added	-	CHAR(3)	No	-
10.	COUNTRY_DESCRIPTION	Newly Added	-	VARCHAR2(60)	No	-
11.	CUSTOMER_ID	Newly Added	-	CHAR(10)	No	-
12.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
13.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-
14.	DESIGNATION	Newly Added	-	CHAR(120)	No	-
15.	EMAIL_ID	Newly Added	-	VARCHAR2(254)	No	-
16.	EMPLOYEMENT_STATUS	Newly Added	-	CHAR(3)	No	-
17.	EMPLOYER_NAME	Newly Added	-	VARCHAR2(120)	No	-
18.	EMPLOYMENT_TYPE	Newly Added	-	VARCHAR2(30)	No	-
19.	GEOGRAPHICAL_CODE	Newly Added	-	CHAR(11)	No	-
20.	GROSS_ANNUALSALARY	Newly Added	-	NUMBER(22,36)	No	-
21.	ID_TYPE	Newly Added	-	VARCHAR2(60)	No	-
22.	ID_TYPE_CD	Newly Added	-	CHAR(8)	No	-
23.	IN_CITYLIMIT	Newly Added	-	CHAR(1)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
24.	INDUSTRY_TYPE	Newly Added	-	VARCHAR2(30)	No	-
25.	L1_PARENT_ID	Newly Added	-	VARCHAR2(10)	No	-
26.	L1_PARENT_NAME	Newly Added	-	VARCHAR2(64)	No	-
27.	L2_PARENT_ID	Newly Added	-	VARCHAR2(10)	No	-
28.	L2_PARENT_NAME	Newly Added	-	VARCHAR2(64)	No	-
29.	L3_PARENT_ID	Newly Added	-	VARCHAR2(10)	No	-
30.	L3_PARENT_NAME	Newly Added	-	VARCHAR2(64)	No	-
31.	L4_PARENT_ID	Newly Added	-	VARCHAR2(10)	No	-
32.	L4_PARENT_NAME	Newly Added	-	VARCHAR2(64)	No	-
33.	L5_PARENT_ID	Newly Added	-	VARCHAR2(10)	No	-
34.	L5_PARENT_NAME	Newly Added	-	VARCHAR2(64)	No	-
35.	LANGUAGE	Newly Added	-	CHAR(3)	No	-
36.	LANGUAGE_DESCRIPTION	Newly Added	-	VARCHAR2(60)	No	-
37.	NAME_TYPE_FLG	Newly Added	-	CHAR(4)	No	-
38.	OCCUPATION_TYPE	Newly Added	-	CHAR(120)	No	-
39.	PER_ID_NBR	Newly Added	-	VARCHAR2(90)	No	-
40.	PER_OR_BUS_FLG	Newly Added	-	CHAR(2)	No	-
41.	PH_COUNTRY_CD	Newly Added	-	CHAR(3)	No	-
42.	POSTAL_CODE	Newly Added	-	CHAR(12)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
43.	RECEIVE_MARKETINGINFORMATION	Newly Added	-	VARCHAR2(60)	No	-
44.	STATE_CODE	Newly Added	-	CHAR(6)	No	-
45.	STATE_DESCRIPTION	Newly Added	-	VARCHAR2(60)	No	-

D.14 C1_B_FT_GL_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_FT_GL_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCOUNTING_DT	Newly Added	-	DATE	No	-
2.	ACCT_APAY_ID	Newly Added	-	CHAR(10)	No	-
3.	ARS_DT	Newly Added	-	DATE	No	-
4.	BILL_ID	Newly Added	-	CHAR(12)	No	-
5.	CIS_DIVISION	Newly Added	-	CHAR(5)	No	-
6.	CIS_DIVISION_DESCR	Newly Added	-	VARCHAR2(60)	No	-
7.	CORRECTION_SW	Newly Added	-	CHAR(1)	No	-
8.	CUR_AMT	Newly Added	-	NUMBER(22,15)	No	-
9.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-
10.	DIVISION_AMT	Newly Added	-	NUMBER(22,15)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
11.	DIVISION_CURCY_CD	Newly Added	-	CHAR(3)	No	-
12.	DIVISION_CURRENCY_EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-
13.	DST_ID	Newly Added	-	CHAR(10)	No	-
14.	EFF_START_DATE	Newly Added	-	DATE	No	-
15.	EXCHRATE	Newly Added	-	NUMBER(22,36)	No	-
16.	FREEZE_DTTM	Newly Added	-	DATE	No	-
17.	FREEZE_SW	Newly Added	-	CHAR(1)	No	-
18.	FREEZE_USER_ID	Newly Added	-	CHAR(8)	No	-
19.	FT_ID	Newly Added	-	CHAR(12)	No	-
20.	FT_TYPE_FLG	Newly Added	-	CHAR(2)	No	-
21.	GL_ACCT	Newly Added	-	VARCHAR2(254)	No	-
22.	GL_AMOUNT	Newly Added	-	NUMBER(22,15)	No	-
23.	GL_DIVISION	Newly Added	-	CHAR(5)	No	-
24.	GL_DIVISION_DESCR	Newly Added	-	VARCHAR2(60)	No	-
25.	GL_SEQ_NBR	Newly Added	-	NUMBER(22,3)	No	-
26.	LOCAL_CURRENCY_AMT	Newly Added	-	NUMBER(22,15)	No	-
27.	LOCAL_CURRENCY_CD	Newly Added	-	CHAR(3)	No	-
28.	LOCAL_CURRENCY_EXCHRATE	Newly Added	-	NUMBER(22,36)	No	-
29.	LOCAL_CURRENCY_EXCHRATE_ID	Newly Added	-	CHAR(10)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
30.	MATCH_EVT_ID	Newly Added	-	CHAR(12)	No	-
31.	NEW_DEBIT_SW	Newly Added	-	CHAR(1)	No	-
32.	NOT_IN_ARS_SW	Newly Added	-	CHAR(1)	No	-
33.	ORIG_PAY_AMT	Newly Added	-	NUMBER(22,15)	No	-
34.	PARENT_ID	Newly Added	-	CHAR(12)	No	-
35.	PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
36.	PRSN_BILL_ID	Newly Added	-	CHAR(12)	No	-
37.	REDUNDANT_SW	Newly Added	-	CHAR(1)	No	-
38.	SA_ID	Newly Added	-	CHAR(10)	No	-
39.	SETTLEMENT_ID_NBR	Newly Added	-	VARCHAR2(20)	No	-
40.	SHOW_ON_BILL_SW	Newly Added	-	CHAR(1)	No	-
41.	SIBLING_ID	Newly Added	-	CHAR(12)	No	-
42.	TOT_AMT	Newly Added	-	NUMBER(22,15)	No	-
43.	TOT_AMT_SW	Newly Added	-	CHAR(1)	No	-

D.15 C1_B_PER_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_PER_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DATA_LOAD_DTTM	Newly Added	-	DATE	No	-
2.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.16 C1_BRC_UPA_CYCLVL

The following table lists the columns that are newly added, modified, or dropped from the C1_BRC_UPA_CYCLVL table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	VARCHAR2(40)	No	-
2.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-
3.	CIS_DIVISION	Newly Added	-	VARCHAR2(64)	No	-
4.	CREATION_DT	Newly Added	-	DATE	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(256)	No	-
6.	INITIAL_PRICEITEM_CD	Newly Added	-	VARCHAR2(64)	No	-
7.	PER_ID	Newly Added	-	VARCHAR2(40)	No	-
8.	SQI_CD	Newly Added	-	VARCHAR2(40)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
9.	WIN_END_DT	Newly Added	-	DATE	No	-
10.	WIN_START_DT	Newly Added	-	DATE	No	-

D.17 C1_BRC_UPA_DAYLVL

The following table lists the columns that are newly added, modified, or dropped from the C1_BRC_UPA_DAYLVL table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	VARCHAR2(40)	No	-
2.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-
3.	CIS_DIVISION	Newly Added	-	VARCHAR2(64)	No	-
4.	CREATION_DT	Newly Added	-	DATE	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(256)	No	-
6.	INITIAL_PRICEITEM_CD	Newly Added	-	VARCHAR2(64)	No	-
7.	PER_ID	Newly Added	-	VARCHAR2(40)	No	-
8.	SQI_CD	Newly Added	-	VARCHAR2(40)	No	-
9.	TXN_DTTM	Newly Added	-	DATE	No	-
10.	WIN_END_DT	Newly Added	-	DATE	No	-
11.	WIN_START_DT	Newly Added	-	DATE	No	-

D.18 C1_BRC_UPA_MASTERTBL

The following table lists the columns that are newly added, modified, or dropped from the C1_BRC_UPA_MASTERTBL table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	VARCHAR2(40)	No	-
2.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-
3.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
4.	CIS_DIVISION	Newly Added	-	VARCHAR2(64)	No	-
5.	CREATION_DT	Newly Added	-	DATE	No	-
6.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(256)	No	-
7.	INITIAL_PRICE_ITEM_CD	Newly Added	-	VARCHAR2(64)	No	-
8.	PER_ID	Newly Added	-	VARCHAR2(40)	No	-
9.	SEQ_NO	Newly Added	-	NUMBER(22,5)	No	-
10.	SQI_CD	Newly Added	-	VARCHAR2(40)	No	-
11.	TXN_AMT	Newly Added	-	NUMBER(22,18)	No	-
12.	TXN_DETAIL_ID	Newly Added	-	NUMBER(22,15)	No	-
13.	TXN_DTTM	Newly Added	-	DATE	No	-
14.	TXN_VOL	Newly Added	-	NUMBER(22,18)	No	-
15.	WIN_END_DT	Newly Added	-	DATE	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
16.	WIN_START_DT	Newly Added	-	DATE	No	-

D.19 C1_BRC_UPA_TARGET

The following table lists the columns that are newly added, modified, or dropped from the C1_BRC_UPA_TARGET table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	VARCHAR2(40)	No	-
2.	BILL_CYC_CD	Newly Added	-	CHAR(4)	No	-
3.	CIS_DIVISION	Newly Added	-	VARCHAR2(64)	No	-
4.	CREATED_BY	Newly Added	-	VARCHAR2(64)	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(256)	No	-
6.	INITIAL_PRICEITEM_CD	Newly Added	-	VARCHAR2(64)	No	-
7.	PER_ID	Newly Added	-	VARCHAR2(40)	No	-
8.	REASON_CD	Newly Added	-	VARCHAR2(512)	No	-
9.	RUN_DT	Newly Added	-	DATE	No	-
10.	SQI_CD	Newly Added	-	VARCHAR2(40)	No	-
11.	UPDATED_DTTM	Newly Added	-	TIMESTAMP(6)(11)	No	-
12.	WIN_END_DT	Newly Added	-	DATE	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
13.	WIN_START_DT	Newly Added	-	DATE	No	-

D.20 C1_BUS_RULE_DELIN

The following table lists the columns that are newly added, modified, or dropped from the C1_BUS_RULE_DELIN table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	WORK_DAY_MD_GP_FLG	Newly Added	-	CHAR(4)	No	-

D.21 C1_DELIN_PROC_TYPE

The following table lists the columns that are newly added, modified, or dropped from the C1_DELIN_PROC_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	WORK_DAY_MD_GP_FLG	Newly Added	-	CHAR(4)	No	-
2.	WORK_DAY_MD_GS_FLG	Newly Added	-	CHAR(4)	No	-
3.	WORK_DAY_MODE_FLG	Newly Added	-	CHAR(4)	No	-

D.22 C1_DWP_PRICEITEM_TRAIN

The following table lists the columns that are newly added, modified, or dropped from the C1_DWP_PRICEITEM_TRAIN table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	AGE	Dropped	NUMBER(22)	-	No	-
2.	CURRENCY	Dropped	VARCHAR2(4000)	-	No	-
3.	SQI_TYPE_FLG	Dropped	VARCHAR2(4000)	-	No	-

D.23 C1_FILE_REQUEST_BATCH_SUMMARY

The following table lists the columns that are newly added, modified, or dropped from the C1_FILE_REQUEST_BATCH_SUMMARY table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	AGENT_NAME	Newly Added	-	VARCHAR2(100)	No	-

D.24 C1_PAY_MATCH_TYPE

The following table lists the columns that are newly added, modified, or dropped from the C1_PAY_MATCH_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PAY_AMT	Newly Added	-	NUMBER(22,15)	No	-

D.25 C1_RF_AGG_ACCT

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_AGG_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
2.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
3.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-
4.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
6.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
7.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.26 C1_RF_AGG_CUST

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_AGG_CUST table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
2.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
3.	PER_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
4.	PER_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.27 C1_RF_BASE_TXN_DTLS

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_BASE_TXN_DTLS table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
2.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-
3.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
4.	BILL_ID	Newly Added	-	CHAR(12)	No	-
5.	BILL_SEQ	Newly Added	-	NUMBER(22,36)	No	-
6.	BILLABLE_CHG_ID	Newly Added	-	CHAR(12)	No	-
7.	BSEG_ID	Newly Added	-	CHAR(12)	No	-
8.	CALC_AMT	Newly Added	-	NUMBER(22,36)	No	-
9.	CREATE_DTTM	Newly Added	-	DATE(7)	No	-
10.	CUST_SEG	Newly Added	-	VARCHAR2(60)	No	-
11.	CUST_SEG_FLG	Newly Added	-	CHAR(4)	No	-
12.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
13.	DESCR_ON_BILL	Newly Added	-	VARCHAR2(80)	No	-
14.	ID_TYPE	Newly Added	-	VARCHAR2(60)	No	-
15.	ID_TYPE_CD	Newly Added	-	CHAR(8)	No	-
16.	ILM_DTTM	Newly Added	-	DATE(7)	No	-
17.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
18.	PA_PRICELIST_ID	Newly Added	-	CHAR(10)	No	-
19.	PER_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
20.	PER_ID	Newly Added	-	CHAR(10)	No	-
21.	PER_ID_NBR	Newly Added	-	VARCHAR2(90)	No	-
22.	PRICE_ASGN_ID	Newly Added	-	CHAR(10)	No	-
23.	PRICECOMP_ID	Newly Added	-	CHAR(10)	No	-
24.	PRICEITEM	Newly Added	-	VARCHAR2(60)	No	-
25.	PRICEITEM_CD	Newly Added	-	CHAR(30)	No	-
26.	PRICEITEM_PARAMETER	Newly Added	-	VARCHAR2(4000)	No	-
27.	PRICEITEM_PARM_GRP_ID	Newly Added	-	NUMBER(22,22)	No	-
28.	RC_MAP_ID	Newly Added	-	CHAR(10)	No	-
29.	RC_SEQ	Newly Added	-	NUMBER(22,3)	No	-
30.	REL_MGR	Newly Added	-	CHAR(8)	No	-
31.	RS_CD	Newly Added	-	CHAR(8)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
32.	SA_ID	Newly Added	-	CHAR(10)	No	-
33.	SQI_CD	Newly Added	-	CHAR(8)	No	-

D.28 C1_RF_BY_ACCT

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_BY_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
2.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
3.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-
4.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
6.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
7.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.29 C1_RF_BY_CUST

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_BY_CUST table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
2.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
3.	PER_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
4.	PER_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
5.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.30 C1_RF_TRAIN_ACCT

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_TRAIN_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
2.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
3.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-
4.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
6.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
7.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.31 C1_RF_TRAIN_CUST

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_TRAIN_CUST table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
2.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
3.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-
4.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
6.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
7.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.32 C1_RF_TTS_ACCT

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_TTS_ACCT table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
2.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
3.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-
4.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
5.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
6.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
7.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.33 C1_RF_TTS_CUST

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_TTS_CUST table:

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
2.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
3.	PER_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
4.	PER_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
5.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.34 CI_BILL

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BILL_CANCEL_SW	Newly Added	-	CHAR(1)	No	-

D.35 CI_PRICELIST

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DEFAULT_DIVISION	Newly Added	-	VARCHAR2(100)	No	-

D.36 CMC_TB_AIF_EMBEDDING_METRICS

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MODEL_NAME	Newly Added	-	VARCHAR2(800)	No	-
2.	PRODUCT	Newly Added	-	VARCHAR2(80)	No	-
3.	REFERENCE_ID	Newly Added	-	VARCHAR2(400)	No	-

D.37 CMC_TB_AIF_GENERATE_METRICS

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	MODEL_NAME	Newly Added	-	VARCHAR2(800)	No	-
2.	PRODUCT	Newly Added	-	VARCHAR2(80)	No	-
3.	REFERENCE_ID	Newly Added	-	VARCHAR2(400)	No	-

D.38 CMC_TM_AIF_BANK_SYSTEM_CONFIG_DET

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ID	Newly Added	-	VARCHAR2(36)	No	-

D.39 CMC_TM_AIF_BANK_SYSTEM_CONFIG_MAS

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ID	Newly Added	-	VARCHAR2(36)	No	-

D.40 CMC_TM_AIF_USECASE_PROMPT

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ID	Newly Added	-	VARCHAR2(36)	No	-
2.	USECASE	Newly Added	-	VARCHAR2(50)	No	-

D.41 CMC_TM_AIF_USECASE_SETTING

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	DESCRIPTION	Newly Added	-	VARCHAR2(100)	No	-
2.	ID	Newly Added	-	VARCHAR2(36)	No	-
3.	USECASE	Newly Added	-	VARCHAR2(50)	No	-

D.42 CMC_TM_AIF_USECASE_SETTING_DET

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ID	Newly Added	-	VARCHAR2(36)	No	-
2.	USECASE	Newly Added	-	VARCHAR2(50)	No	-

D.43 ERTB_MSGS

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	LANGUAGE	Newly Added	-	VARCHAR2(3)	No	-
2.	MESSAGE	Newly Added	-	VARCHAR2(4000)	No	-
3.	TYPE	Newly Added	-	CHAR(1)	No	-

D.44 PLATO_DEBUG_USERS

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ID	Newly Added	-	NUMBER(22)	No	-

D.45 PROPERTIES

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ID	Newly Added	-	NUMBER(22)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
2.	LABEL	Newly Added	-	VARCHAR2(500)	No	-
3.	VALUE	Newly Added	-	VARCHAR2(1000)	No	-

D.46 TEMP_ACCT_MAX_EXCHRATES

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.47 TEMP_ACCT_PRED_EXCHRATES

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
2.	ACCT_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
3.	ACCT_DIV_EXCHRATE	Newly Added	-	NUMBER(22)	No	-
4.	ACCT_DIVISION	Newly Added	-	CHAR(5)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
6.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
7.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
8.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.48 TEMP_FUTURE_DATES_ACCT

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.49 TEMP_MAX_DATES_ACCT

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ACCT_ID	Newly Added	-	CHAR(10)	No	-
2.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.50 TEMP_MAX_EXCHRATES

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PER_ID	Newly Added	-	CHAR(10)	No	-

D.51 TEMP_PRED_EXCHRATES

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

Sr. No.	Column Name	Modification Type	Data Type in V8.1.0.0.0	Data Type in V9.0.0.0.0	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CUSTOMER_NAME	Newly Added	-	VARCHAR2(254)	No	-
2.	IMPL_CURCY_CD	Newly Added	-	CHAR(3)	No	-
3.	PER_DIV_CURCY_AMT	Newly Added	-	NUMBER(22)	No	-
4.	PER_DIV_CURCY_CD	Newly Added	-	VARCHAR2(3)	No	-
5.	PER_DIV_EXCHRATE	Newly Added	-	NUMBER(22)	No	-
6.	PER_ID	Newly Added	-	CHAR(10)	No	-

Appendix E : Algorithms and Algorithm Types Dropped in ORMB Version 9.0.0.0.0

This section lists the algorithms and algorithm types which are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.

E.1 Algorithm Types

No algorithm types are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.

E.2 Algorithms

No algorithms are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.

Appendix F : Parameters Added or Removed from Algorithm Types in ORMB Version 9.0.0.0.0

No parameters are newly added or removed from the existing algorithm types in Oracle Revenue Management and Billing Version 9.0.0.0.0.

Appendix G : Option Types Added or Removed from Feature Configurations in ORMB Version 9.0.0.0.0

This section lists the option types which are newly added or removed from the existing feature configurations in Oracle Revenue Management and Billing Version 9.0.0.0.0:

Feature Configuration	Option Type (Removed from 9.0.0.0.0)	Option Type (Added in 9.0.0.0.0)
AIF_CONFIG	-	AIF Host
	-	AIF Port
C1_STM	-	Allowance Charge Tax Id
	-	Allowance Charge Tax Rate
	-	Bill Segment Calc Line Char Tax Id
	-	Bill Segment - Tax Region
	-	Bill Segment Calc Line Char Tax Rate
	-	Buyer Reference Identifier
	-	Standard Item Identity
	-	Standard Item Scheme
	-	Receiver Endpoint Identifier
	-	Receiver Endpoint Scheme
	-	Receiver Legal Identifier
	-	Bill Correction Type - Release Hold
	-	Receiver Legal Scheme
	-	Release Hold
	-	Receiver VAT Identifier
	-	Sender Endpoint Identifier
	-	Sender Endpoint Scheme
-	Sender Legal Identifier	
-	Sender Legal Scheme	
-	Sender Party Identifier	

Feature Configuration	Option Type (Removed from 9.0.0.0.0)	Option Type (Added in 9.0.0.0.0)
	-	Sender Party Scheme
	-	Sender VAT Identifier
C1-A360DASH	-	Product and Pricing Export Excel
	-	Product and Pricing Export PDF
	-	Product Revenue Export Excel
	-	Number of Rows Per Page
	-	Thread Count
C1-AIMLFC	-	Most Recent Complete Data
	-	Rebate Aggregate Spend Amount Exclusion
	-	Revenue Analyzer Configuration
	-	Revenue Analyzer Feature Opt-In
	-	Refresh
	-	Revenue Forecasting Feature Opt-In
	-	SLA Breach Predictor
	-	SLA Breach Predictor Feature Opt-In
	-	SLAB Breach Predictor
	-	Transaction Anomaly Detection
	-	Transaction Anomaly Detection Feature Opt-In
	-	Usage Pattern Analyzer
C1-ASOBLNG	-	Allow update for settlement date in months
C1-C360DASH	-	Billing Hierarchy Export Excel
	-	Default Hierarchy Export Excel
	-	Product and Pricing Export Excel
	-	Product and Pricing Export PDF
	-	Product Revenue Export Excel
	-	Settlement Hierarchy Export Excel
C1-FLUPLD	-	Summarizer Agent
C1-PAYFLUPLD	-	Allow Payment Creation On Suspense Account

Feature Configuration	Option Type (Removed from 9.0.0.0.0)	Option Type (Added in 9.0.0.0.0)
C1-UPAFC	-	Bill Details
	-	Billing Date
	-	Buffer Days

Appendix H : Characteristic Types Dropped in ORMB Version 9.0.0.0.0

No characteristic types are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.

Appendix I : Batch Controls Dropped in ORMB Version 9.0.0.0.0

No batch controls are dropped in Oracle Revenue Management and Billing Version 9.0.0.0.0.

Appendix J : Parameters Added or Removed from Batch Controls in ORMB Version 9.0.0.0.0

This section lists the parameters which are newly added or removed from the existing batch controls in Oracle Revenue Management and Billing Version 9.0.0.0.0:

Batch Control	Parameters (Removed from 9.0.0.0.0)		Parameters (Added in 9.0.0.0.0)	
	Sequence Number	Parameter	Sequence Number	Parameter
C1-ARXRP	990	DIST-THD-POOL	970	DIST-THD-POOL
	992	MAX-ERRORS	980	Email Mode
	991	Email Mode	990	MAX-ERRORS
C1-BLUPG	-	-	900	Email Mode
	-	-	910	MAX-ERRORS
	-	-	50	Shuffle Work Unit
C1-PYTRS	-	-	55	Chunk Size
	-	-	900	Email Mode
	-	-	52	Healthcare Product Category Priority Sequence
	-	-	910	MAX-ERRORS
	-	-	51	Payment to Multiple Member Accounts
C1REVTXN	-	-	140	Claim Status Udf
	-	-	130	Exclude Reject Status
	-	-	120	Feature Configuration

Appendix K : Changing the DB User Password

If you have changed the database user password, you need to execute the following steps before installing the rollup pack for Oracle Utilities Application Framework Version 25.4:

1. 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:

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:

Linux:

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

Windows:

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

Appendix L : ORMB V9.0.0.0.0 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, see the *ORMB V9.0.0.0.0 Patch Guide* on [My Oracle Support](#).

L.1 Applying a Rollup Pack on the Application Environment

Once you install Oracle Revenue Management and Billing Version 9.0.0.0.0, you need to apply the rollup packs listed in the *ORMB V9.0.0.0.0 Patch Guide*. 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:

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_V9.0.0.0.0_App_Rollup`, `RMB_V9.0.0.0.0_DB_Rollup`, and `RMB_V9.0.0.0.0_PFDs`.

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

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_V9.0.0.0.0_App_Rollup` folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_1>/RMB_V9.0.0.0.0_App_Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_1>\RMB_V9.0.0.0.0_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:

Linux:

```
./installSFgroup.sh
```

Windows:

```
installSFgroup.cmd
```

L.2 Applying a Rollup Pack on the Database

Once you install Oracle Revenue Management and Billing Version 9.0.0.0.0, you need to apply the rollup packs listed in the *ORMB V9.0.0.0.0 Patch Guide*. 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:

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_V9.0.0.0.0_App_Rollup`, `RMB_V9.0.0.0.0_DB_Rollup`, and `RMB_V9.0.0.0.0_PFDs`.

3. Change to the `RMB_V9.0.0.0.0_DB_Rollup` folder using the following command:

Linux:

```
cd <DESTINATION_FOLDER_1>/RMB_V9.0.0.0.0_DB_Rollup
```

Windows:

```
cd <DESTINATION_FOLDER_1>\RMB_V9.0.0.0.0_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
```

Linux:

```
ouafDatabasePatch.sh
```

Note: On the Linux platform, ensure that you grant the execute permission for the `ouafDatabasePatch.sh` utility using the following command:

```
chmod 755 ouafDatabasePatch.sh
```

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/SERVICE_NAME>

5. Enter the required parameter value. The following message appears in the command line:

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

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

Appendix M : New Tables Added in OUAF Version 25.4

This section lists and describes the tables that are newly added in Oracle Utilities Application Framework Version 25.4.

M.1 CI_BATCH_CTRL_OPT

Purpose:	Used to store the options of a batch control.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BATCH_CD	CHAR(8)	No	-
BATCH_CTRL_OPT_FLG	CHAR(4)	No	-
BATCH_CTRL_OPT_VAL	VARCHAR2(254)	No	-
OWNER_FLG	CHAR(4)	No	-
SEQ_NUM	NUMBER(22)	No	-
VERSION	NUMBER(22)	No	1

Primary Key:

Key Type	Column Name
Composite	BATCH_CD
	BATCH_CTRL_OPT_FLG
	BATCH_CTRL_OPT_VAL
	SEQ_NUM

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1T929P0	Unique	BATCH_CD
			BATCH_CTRL_OPT_FLG
			BATCH_CTRL_OPT_VAL
			SEQ_NUM

M.2 F1_ATTACHMENT_DATA

Purpose:	Used to store the details of an attachment.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ATTACHMENT_ID	CHAR(14)	No	-
ATTCH_DATA_USAGE_FLG	CHAR(4)	No	' '
ATTCH_FILE_DETAILS	CLOB(4000)	Yes	-
SEQNO	NUMBER(22)	No	1

Primary Key:

Key Type	Column Name
Composite	ATTACHMENT_ID
	ATTCH_DATA_USAGE_FLG
	SEQNO

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1T930P0	Unique	ATTACHMENT_ID
			ATTCH_DATA_USAGE_FLG
			SEQNO

M.3 F1_PATCH_DETAILS

Purpose:	Used to store the details of a patch.
Total Number of Columns:	14

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
APPL_VERSION	VARCHAR2(60)	No	-
BASE_REF_ID	VARCHAR2(60)	Yes	-
EXT_PATCH_REF_ID	VARCHAR2(60)	No	-
PATCH_CATEGORY	VARCHAR2(254)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
PATCH_COMP_XFLG	VARCHAR2(30)	No	-
PATCH_COPY_FLG	CHAR(4)	No	-
PATCH_DESCR	VARCHAR2(254)	No	-
PATCH_ID	CHAR(12)	No	-
PATCH_INSTALL_DTTM	DATE	No	-
PATCH_PROD_ID	VARCHAR2(30)	No	-
PATCH_VERSION	VARCHAR2(60)	No	-
RELATED_REF_ID	VARCHAR2(60)	Yes	-
RELEASE_VER	VARCHAR2(100)	No	-
VERSION	NUMBER(22,5)	No	1

Primary Key:

Key Type	Column Name
Simple	PATCH_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1T211P0	Unique	PATCH_ID

M.4 F1_PROD_METRIC_SNPSHT

Purpose:	Used to store the details of a product metric snapshot.
Total Number of Columns:	9

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BO_STATUS_CD	CHAR(12)	No	-
BO_XML_DATA_AREA	XMLTYPE(2000)	Yes	-
BUS_OBJ_CD	CHAR(30)	No	-
CRE_DTTM	DATE	Yes	-
METRIC_SNAPSHOT_ID	CHAR(12)	No	-
PROD_METRIC_TYPE_CD	VARCHAR2(30)	No	-
SNAPSHOT_XML_DATA_AREA	XMLTYPE(2000)	Yes	-

Column Name	Data Type	Nullable (Yes or No)	Default Value
STATUS_UPD_DTTM	DATE	Yes	-
VERSION	NUMBER(22,5)	No	1

Primary Key:

Key Type	Column Name
Simple	METRIC_SNAPSHOT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1T918P0	Unique	METRIC_SNAPSHOT_ID

M.5 F1_PROD_METRIC_SNPSHT_K

Purpose:	Used to store the product metric snapshot ID.
Total Number of Columns:	2

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
ENV_ID	NUMBER(22,6)	No	-
METRIC_SNAPSHOT_ID	CHAR(12)	No	-

Primary Key:

Key Type	Column Name
Composite	ENV_ID
	METRIC_SNAPSHOT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1T927P0	Unique	ENV_ID
			METRIC_SNAPSHOT_ID

M.6 F1_PROD_METRIC_SNPSHT_VAL

Purpose:	Used to store the values for the product metric snapshot.
Total Number of Columns:	4

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
EXT_PROD_METRIC	CHAR(36)	No	-
METRIC_SNAPSHOT_ID	CHAR(12)	No	-
METRIC_VALUE	VARCHAR2(254)	No	-
VERSION	NUMBER(22,5)	No	1

Primary Key:

Key Type	Column Name
Composite	EXT_PROD_METRIC
	METRIC_SNAPSHOT_ID

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1T928P0	Unique	EXT_PROD_METRIC
			METRIC_SNAPSHOT_ID

M.7 F1_PROD_METRIC_TYPE

Purpose:	Used to store the details of a product metric type.
Total Number of Columns:	8

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
BO_STATUS_CD	CHAR(12)	No	-
BO_XML_DATA_AREA	XMLTYPE(2000)	Yes	-
BUS_OBJ_CD	CHAR(30)	No	-
OWNER_FLG	CHAR(4)	No	-
PROD_METRIC_TYPE_CD	VARCHAR2(30)	No	-
PROD_OFFERINGS	VARCHAR2(100)	Yes	-
SNAPSHOT_BO_CD	CHAR(30)	No	-
VERSION	NUMBER(22,5)	No	1

Primary Key:

Key Type	Column Name
Simple	PROD_METRIC_TYPE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C921P0	Unique	PROD_METRIC_TYPE_CD

M.8 F1_PROD_METRIC_TYPE_L

Purpose:	Used to store the description of a product metric type.
Total Number of Columns:	6

Column Details:

Column Name	Data Type	Nullable (Yes or No)	Default Value
DESCR100	VARCHAR2(100)	No	-
DESCRLONG	VARCHAR2(4000)	Yes	-
LANGUAGE_CD	CHAR(3)	No	-
OWNER_FLG	CHAR(4)	No	-
PROD_METRIC_TYPE_CD	VARCHAR2(30)	No	-
VERSION	NUMBER(22,5)	No	1

Primary Key:

Key Type	Column Name
Composite	LANGUAGE_CD
	PROD_METRIC_TYPE_CD

Indexes:

Sr. No.	Index Name	Index Type	Column Name
1.	F1C922P0	Unique	LANGUAGE_CD
			PROD_METRIC_TYPE_CD

Appendix N : Existing Tables Modified in OUAF Version 25.4

This section lists the existing tables which are modified in Oracle Utilities Application Framework Version 25.4. It indicates the columns that are newly added, dropped, or modified in these tables.

N.1 C1_B_ACCT_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_ACCT_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
2.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
3.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
4.	CHAR_VAL_FK1	Newly Added	-	VARCHAR2(50)	No	-
5.	CHAR_VAL_FK2	Newly Added	-	VARCHAR2(50)	No	-
6.	CHAR_VAL_FK3	Newly Added	-	VARCHAR2(50)	No	-
7.	CHAR_VAL_FK4	Newly Added	-	VARCHAR2(50)	No	-
8.	CHAR_VAL_FK5	Newly Added	-	VARCHAR2(50)	No	-
9.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
10.	EFFDT	Newly Added	-	DATE(7)	No	-
11.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.2 C1_B_ADJ_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_ADJ_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
2.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
3.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
4.	CHAR_VAL_FK1	Newly Added	-	VARCHAR2(50)	No	-
5.	CHAR_VAL_FK2	Newly Added	-	VARCHAR2(50)	No	-
6.	CHAR_VAL_FK3	Newly Added	-	VARCHAR2(50)	No	-
7.	CHAR_VAL_FK4	Newly Added	-	VARCHAR2(50)	No	-
8.	CHAR_VAL_FK5	Newly Added	-	VARCHAR2(50)	No	-
9.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
10.	SEQ_NUM	Newly Added	-	NUMBER(22,3)	No	-
11.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.3 C1_B_ADJ_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_ADJ_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CRE_DT	Newly Added	-	DATE	No	-
2.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
3.	EFFDT	Newly Added	-	DATE	No	-
4.	SEQ_NUM	Newly Added	-	NUMBER(22)	No	-

N.4 C1_B_BCHG_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BCHG_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
2.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
3.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
4.	CHAR_VAL_FK1	Newly Added	-	VARCHAR2(50)	No	-
5.	CHAR_VAL_FK2	Newly Added	-	VARCHAR2(50)	No	-
6.	CHAR_VAL_FK3	Newly Added	-	VARCHAR2(50)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
7.	CHAR_VAL_FK4	Newly Added	-	VARCHAR2(50)	No	-
8.	CHAR_VAL_FK5	Newly Added	-	VARCHAR2(50)	No	-
9.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
10.	EFFDT	Newly Added	-	DATE	No	-
11.	SRCH_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
12.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.5 C1_B_BCHG_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BCHG_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CRE_DT	Newly Added	-	DATE	No	-
2.	END_DT	Newly Added	-	DATE	No	-
3.	SEQ_NUM	Newly Added	-	NUMBER(22,3)	No	-
4.	START_DT	Newly Added	-	DATE	No	-
5.	START_TM	Newly Added	-	DATE	No	-

N.6 C1_B_BILL_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BILL_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
2.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
3.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
4.	CHAR_VAL_FK1	Newly Added	-	VARCHAR2(50)	No	-
5.	CHAR_VAL_FK2	Newly Added	-	VARCHAR2(50)	No	-
6.	CHAR_VAL_FK3	Newly Added	-	VARCHAR2(50)	No	-
7.	CHAR_VAL_FK4	Newly Added	-	VARCHAR2(50)	No	-
8.	CHAR_VAL_FK5	Newly Added	-	VARCHAR2(50)	No	-
9.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
10.	SEQ_NUM	Newly Added	-	NUMBER(22,3)	No	-
11.	SRCH_CHAR_VAL	Newly Added	-	VARCHAR2(50)	No	-
12.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.7 C1_B_BILL_FACT_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BILL_FACT_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADDRESS1	Newly Added	-	VARCHAR2(254)	No	-
2.	ADDRESS2	Newly Added	-	VARCHAR2(254)	No	-
3.	ADDRESS3	Newly Added	-	VARCHAR2(254)	No	-
4.	ADDRESS4	Newly Added	-	VARCHAR2(254)	No	-
5.	CITY	Newly Added	-	VARCHAR2(90)	No	-
6.	COMMENTS	Newly Added	-	VARCHAR2(254)	No	-
7.	COMPLETE_DTTM	Newly Added	-	DATE(7)	No	-
8.	COUNTRY	Newly Added	-	CHAR(3)	No	-
9.	COUNTY	Newly Added	-	VARCHAR2(90)	No	-
10.	CRE_DTTM	Newly Added	-	DATE(7)	No	-
11.	CURRENCY_CD	Newly Added	-	CHAR(3)	No	-
12.	EXP_MSG	Newly Added	-	VARCHAR2(254)	No	-
13.	MESSAGE_CAT_NBR	Newly Added	-	NUMBER(22,5)	No	-
14.	MESSAGE_NBR	Newly Added	-	NUMBER(22,5)	No	-
15.	MESSAGE_PARM1	Newly Added	-	VARCHAR2(2000)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
16.	MESSAGE_PARM2	Newly Added	-	VARCHAR2(2000)	No	-
17.	MESSAGE_PARM3	Newly Added	-	VARCHAR2(2000)	No	-
18.	MSG_PARM_VAL	Newly Added	-	VARCHAR2(2000)	No	-
19.	NUM1	Newly Added	-	CHAR(6)	No	-
20.	NUM2	Newly Added	-	CHAR(4)	No	-
21.	POSTAL	Newly Added	-	CHAR(12)	No	-
22.	SEQ_NUM	Newly Added	-	NUMBER(22,3)	No	-
23.	SEQNO	Newly Added	-	NUMBER(22,5)	No	-
24.	STATE	Newly Added	-	CHAR(6)	No	-
25.	TD_ENTRY_ID	Newly Added	-	CHAR(14)	No	-
26.	USER_ID	Newly Added	-	CHAR(8)	No	-

N.8 C1_B_BSEG_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BSEG_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
2.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
3.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
4.	CHAR_VAL_FK1	Newly Added	-	VARCHAR2(50)	No	-
5.	CHAR_VAL_FK2	Newly Added	-	VARCHAR2(50)	No	-
6.	CHAR_VAL_FK3	Newly Added	-	VARCHAR2(50)	No	-
7.	CHAR_VAL_FK4	Newly Added	-	VARCHAR2(50)	No	-
8.	CHAR_VAL_FK5	Newly Added	-	VARCHAR2(50)	No	-
9.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
10.	SEQNO	Newly Added	-	NUMBER(22,5)	No	-
11.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.9 C1_B_BSEG_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_BSEG_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
2.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
3.	CRE_DTTM	Newly Added	-	DATE	No	-
4.	CURRENCY_CD	Newly Added	-	CHAR(3)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
5.	EFFDT	Newly Added	-	DATE	No	-
6.	EXP_MSG	Newly Added	-	VARCHAR2(254)	No	-
7.	MESSAGE_CAT_NBR	Newly Added	-	NUMBER(22,5)	No	-
8.	MESSAGE_NBR	Newly Added	-	NUMBER(22,5)	No	-
9.	MESSAGE_PARM1	Newly Added	-	VARCHAR2(2000)	No	-
10.	MESSAGE_PARM2	Newly Added	-	VARCHAR2(2000)	No	-
11.	MESSAGE_PARM3	Newly Added	-	VARCHAR2(2000)	No	-
12.	SEQNO	Newly Added	-	NUMBER(22,5)	No	-
13.	STAT_CHG_DTTM	Newly Added	-	DATE	No	-
14.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.10 C1_B_DIM_ACCT_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_DIM_ACCT_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CURRENCY_CD	Newly Added	-	CHAR(3)	No	-

N.11 C1_B_DIM_CUST_INTG

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADDRESS	Newly Added	-	VARCHAR2(254)	No	-
2.	CITY	Newly Added	-	VARCHAR2(90)	No	-
3.	COUNTY	Newly Added	-	VARCHAR2(90)	No	-
4.	HOUSE_TYPE	Newly Added	-	CHAR(2)	No	-

N.12 C1_B_FT_GL_DTLS_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_FT_GL_DTLS_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
2.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
3.	CRE_DTTM	Newly Added	-	DATE(7)	No	-
4.	CURRENCY_CD	Newly Added	-	CHAR(3)	No	-
5.	END_DT	Newly Added	-	DATE(7)	No	-
6.	SEQNO	Newly Added	-	NUMBER(22,5)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
7.	START_DT	Newly Added	-	DATE(7)	No	-

N.13 C1_B_PER_CHAR_INTG

The following table lists the columns that are newly added, modified, or dropped from the C1_B_PER_CHAR_INTG table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ADHOC_CHAR_VAL	Newly Added	-	VARCHAR2(254)	No	-
2.	CHAR_TYPE_CD	Newly Added	-	CHAR(8)	No	-
3.	CHAR_VAL	Newly Added	-	CHAR(16)	No	-
4.	CHAR_VAL_FK1	Newly Added	-	VARCHAR2(50)	No	-
5.	CHAR_VAL_FK2	Newly Added	-	VARCHAR2(50)	No	-
6.	CHAR_VAL_FK3	Newly Added	-	VARCHAR2(50)	No	-
7.	CHAR_VAL_FK4	Newly Added	-	VARCHAR2(50)	No	-
8.	CHAR_VAL_FK5	Newly Added	-	VARCHAR2(50)	No	-
9.	DESCR	Newly Added	-	VARCHAR2(60)	No	-
10.	EFFDT	Newly Added	-	DATE(7)	No	-
11.	VERSION	Newly Added	-	NUMBER(22,5)	No	-

N.14 C1_ENT_BUS_RULE

The following table lists the columns that are newly added, modified, or dropped from the C1_ENT_BUS_RULE table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	END_DT	Newly Added	-	DATE	No	-

N.15 C1_FILE_REQUEST_BATCH_SUMMARY

The following table lists the columns that are newly added, modified, or dropped from the C1_FILE_REQUEST_BATCH_SUMMARY table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	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(22,10)	No	-
3.	BATCH_RERUN_NBR	Newly Added	-	NUMBER(22,10)	No	-

N.16 C1_RF_BASE_TXN_DTLS

The following table lists the columns that are newly added, modified, or dropped from the C1_RF_BASE_TXN_DTLS table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	CURRENCY_CD	Newly Added	-	CHAR(3)	No	-

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
2.	END_DT	Newly Added	-	DATE	No	-
3.	ILM_ARCH_SW	Newly Added	-	CHAR(1)	No	-
4.	START_DT	Newly Added	-	DATE	No	-
5.	UPDATE_DTTM	Newly Added	-	DATE	No	-

N.17 CMC_TB_AIF_EMBEDDING_METRICS

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	USER_ID	Newly Added	-	VARCHAR2(1280)	No	-

N.18 CMC_TB_AIF_GENERATE_METRICS

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	USER_ID	Newly Added	-	VARCHAR2(1280)	No	-

N.19 PLATO_DEBUG_USERS

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	USER_ID	Newly Added	-	VARCHAR2(1280)	No	-

N.20 TEMP_ACCT_MAX_EXCHRATES

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	START_DT	Newly Added	-	DATE	No	-

N.21 TEMP_ACCT_MAX_EXCHRATES

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	START_DT	Newly Added	-	DATE	No	-

N.22 CI_BATCH_CTRL

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	BASE_BATCH_FLG	Newly Added	-	CHAR(4)	No	-
2.	BATCH_TEMPLATE_XFLG	Newly Added	-	VARCHAR(254)	No	-

N.23 F1_ATTACHMENT

The following table lists the columns that are newly added, modified, or dropped from the F1_ATTACHMENT table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ATTCH_CONT_LOC_FLG	Newly Added	-	CHAR(4)	No	-
2.	ATTCH_FILE_REF	Newly Added	-	VARCHAR2(2000)	No	-

N.24 F1_REQ_TYPE

The following table lists the columns that are newly added, modified, or dropped from the F1_REQ_TYPE table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.25 F1_REQ_TYPE_L

The following table lists the columns that are newly added, modified, or dropped from the F1_REQ_TYPE_L table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	OWNER_FLG	Newly Added	-	CHAR(4)	No	-

N.26 F1_SIBSCH_TBLS_VW

The following table lists the columns that are newly added, modified, or dropped from the F1_SIBSCH_TBLS_VW table:

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	SYSTEM_TBL_SW	Newly Added	-	CHAR(1)	No	-
2.	TBL_NAME	Newly Added	-	CHAR(30)	No	-

N.27 CI_PORTAL

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	PORTAL_ROLE_FLG	Newly Added	-	CHAR(4)	No	-

N.28 CI_ZONE

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

Sr. No.	Column Name	Modification Type	Data Type in V4.5.0.1.3	Data Type in V25.4	Data Migration Required (Yes or No)	Column Value After Data Migration
1.	ZONE_ROLE_FLG	Newly Added	-	CHAR(4)	No	-

Appendix O : Algorithms and Algorithm Types Dropped in OUAF Version 25.4

This section lists the algorithms and algorithm types which are dropped in Oracle Utilities Application Framework Version 25.4.

O.1 Algorithm Types

No algorithm types are dropped in Oracle Utilities Application Framework Version 25.4.

O.2 Algorithms

No algorithms are dropped in Oracle Utilities Application Framework Version 25.4.

Appendix P : Parameters Added or Removed from Batch Controls in OUAF Version 25.4

This section lists the parameters which are newly added or removed from the existing batch controls in Oracle Utilities Application Framework Version 25.4:

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1ACCTPX	-	-	901	Email Mode
F1ACTNDX	-	-	901	Email Mode
F1ALGOMX	-	-	901	Email Mode
F1ALGTEX	-	-	901	Email Mode
F1ANALSX	-	-	901	Email Mode
F1APPSEX	-	-	901	Email Mode
F1-ARQPR	-	-	900	Email Mode
F1BATCLX	-	-	901	Email Mode
F1-BFCRL	-	-	900	Email Mode
F1-BICDD	-	-	900	Email Mode
F1-BITMD	-	-	900	Email Mode
F1BKTCGX	-	-	901	Email Mode
F1BRANEX	-	-	900	Email Mode
F1BRANSN	-	-	900	Email Mode
F1-BSFLG	-	-	900	Email Mode
F1BTANEX	-	-	900	Email Mode
F1BTANSN	-	-	900	Email Mode
F1-BTIDT	-	-	900	Email Mode
F1-BTMON	-	-	900	Email Mode
F1-BUNPR	-	-	900	Email Mode
F1BUSFGX	-	-	901	Email Mode
F1BUSFPX	-	-	901	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1BUSOJX	-	-	901	Email Mode
F1BUSSCX	-	-	901	Email Mode
F1-CAGVY	-	-	900	Email Mode
F1CALENX	-	-	901	Email Mode
F1CHAREX	-	-	901	Email Mode
F1COLOTX	-	-	901	Email Mode
F1CONTEX	-	-	901	Email Mode
F1COUNYX	-	-	901	Email Mode
F1CUBEEX	-	-	901	Email Mode
F1CUBEWX	-	-	901	Email Mode
F1CURREX	-	-	901	Email Mode
F1-CVASG	-	-	900	Email Mode
F1-CVCTS	-	-	900	Email Mode
F1-CVINS	-	-	900	Email Mode
F1-CVVAL	-	-	900	Email Mode
F1-CVXML	-	-	900	Email Mode
F1DATAAX	-	-	901	Email Mode
F1DATASX	-	-	901	Email Mode
F1DISPFX	-	-	901	Email Mode
F1DISPNX	-	-	901	Email Mode
F1ENTYGX	-	-	901	Email Mode
F1ETLMLX	-	-	901	Email Mode
F1EXTLPX	-	-	901	Email Mode
F1FAACTX	-	-	901	Email Mode
F1-FCTRN	-	-	900	Email Mode
F1FIELDX	-	-	901	Email Mode
F1FILETX	-	-	901	Email Mode
F1FKREFX	-	-	901	Email Mode
F1-FKVBP	-	-	900	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1FLINCX	-	-	901	Email Mode
F1-FLUSH	-	-	900	Email Mode
F1-GEEXO	-	-	901	Email Mode
F1-GEIXP	-	-	901	Email Mode
F1GEOTEX	-	-	901	Email Mode
F1-GERST	-	-	900	Email Mode
F1-GEXPI	-	-	901	Email Mode
F1-ILMIN	-	-	900	Email Mode
F1-IMCRL	-	-	900	Email Mode
F1INSIPX	-	-	901	Email Mode
F1INSTYX	-	-	901	Email Mode
F1-IPUM	-	-	900	Email Mode
F1IWSANX	-	-	901	Email Mode
F1IWSAPX	-	-	901	Email Mode
F1IWSSCX	-	-	901	Email Mode
F1JMSCTX	-	-	901	Email Mode
F1-LANG	-	-	900	Email Mode
F1LANGEX	-	-	901	Email Mode
F1-LDAP	-	-	900	Email Mode
F1-LKPIL	-	-	900	Email Mode
F1LOOKPX	-	-	901	Email Mode
F1MAINJX	-	-	901	Email Mode
F1MANCTX	-	-	901	Email Mode
F1MEENUX	-	-	901	Email Mode
F1MESS2X	-	-	901	Email Mode
F1-MGDIM	-	-	900	Email Mode
F1-MGDPR	-	-	910	Email Mode
F1-MGDPR	-	-	900	Email Mode
F1-MGOAB	-	-	900	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1-MGOAP	-	-	900	Email Mode
F1-MGOPB	-	-	900	Email Mode
F1-MGOPR	-	-	900	Email Mode
F1-MGTAP	-	-	900	Email Mode
F1-MGTPR	-	-	900	Email Mode
F1MIGRNX	-	-	901	Email Mode
F1MIGRQX	-	-	901	Email Mode
F1-MIMMN	-	-	900	Email Mode
F1MK301I	-	-	900	Email Mode
F1MK301K	-	-	900	Email Mode
F1MK302I	-	-	900	Email Mode
F1MK305I	-	-	900	Email Mode
F1MKC01I	-	-	900	Email Mode
F1MKC01K	-	-	900	Email Mode
F1MKC02I	-	-	900	Email Mode
F1MKC03I	-	-	900	Email Mode
F1MKC06I	-	-	900	Email Mode
F1MKC07I	-	-	900	Email Mode
F1-MKCRL	-	-	900	Email Mode
F1-MKMSO	-	-	900	Email Mode
F1MKN01I	-	-	900	Email Mode
F1MKN01K	-	-	900	Email Mode
F1MKN02I	-	-	900	Email Mode
F1MKN03I	-	-	900	Email Mode
F1MKN04I	-	-	900	Email Mode
F1MKN05I	-	-	900	Email Mode
F1MKN08I	-	-	900	Email Mode
F1-MKPRP	-	-	900	Email Mode
F1MKT01I	-	-	900	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1MKT01K	-	-	900	Email Mode
F1MKT02I	-	-	900	Email Mode
F1MKT03I	-	-	900	Email Mode
F1MKT04I	-	-	900	Email Mode
F1MKT05I	-	-	900	Email Mode
F1MKT08I	-	-	900	Email Mode
F1MKT0GX	-	-	901	Email Mode
F1MKT0NR	-	-	900	Email Mode
F1MKT0NV	-	-	900	Email Mode
F1MKT0NX	-	-	901	Email Mode
F1MKT0PX	-	-	901	Email Mode
F1MKT0TR	-	-	900	Email Mode
F1MKT0TV	-	-	900	Email Mode
F1MKT0TX	-	-	901	Email Mode
F1MKT0PCR	-	-	900	Email Mode
F1MKT0PCV	-	-	900	Email Mode
F1MKT0PCX	-	-	901	Email Mode
F1MKT0PPX	-	-	901	Email Mode
F1MKT0PTR	-	-	900	Email Mode
F1MKT0PTV	-	-	900	Email Mode
F1MKT0PTX	-	-	901	Email Mode
F1-MNTPL	-	-	900	Email Mode
F1-MPECL	-	-	900	Email Mode
F1-MPEVR	-	-	900	Email Mode
F1MST0GX	-	-	901	Email Mode
F1NAV0YX	-	-	901	Email Mode
F1NAV0TX	-	-	901	Email Mode
F1-NDPUR	-	-	900	Email Mode
F1NTDWEX	-	-	901	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1NTDWFY	-	-	901	Email Mode
F1NTUPEX	-	-	901	Email Mode
F1NTXIDX	-	-	901	Email Mode
F1-OESCR	-	-	900	Email Mode
F1-OESMN	-	-	900	Email Mode
F1-OMCRL	-	-	900	Email Mode
F1-ORCRL	-	-	900	Email Mode
F1-OUCRL	-	-	900	Email Mode
F1OUTMPX	-	-	901	Email Mode
F1-PDBEX	-	-	960	Email Mode
F1-PDBG	-	-	900	Email Mode
F1-PDUPL	-	-	900	Email Mode
F1PERFTX	-	-	901	Email Mode
F1PERFYX	-	-	901	Email Mode
F1-PFCRL	-	-	900	Email Mode
F1PHONEX	-	-	901	Email Mode
F1PORTLX	-	-	901	Email Mode
F1PROCNX	-	-	901	Email Mode
F1RDCTEX	-	-	901	Email Mode
F1REPOTX	-	-	901	Email Mode
F1REQTEX	-	-	901	Email Mode
F1-REQTY	-	-	900	Email Mode
F1REREQX	-	-	901	Email Mode
F1-REVPR	-	-	900	Email Mode
F1RPTONX	-	-	901	Email Mode
F1-SAKRQ	-	-	900	Email Mode
F1SCHEAX	-	-	901	Email Mode
F1-SCMUP	-	-	900	Email Mode
F1-SCMUP	-	-	910	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1SCRITX	-	-	901	Email Mode
F1SECTEX	-	-	901	Email Mode
F1SERVEX	-	-	901	Email Mode
F1-SICRL	-	-	900	Email Mode
F1-SRCRL	-	-	900	Email Mode
F1-SRLRQ	-	-	900	Email Mode
F1-SSCRL	-	-	900	Email Mode
F1STASEX	-	-	901	Email Mode
F1-STATS	-	-	900	Email Mode
F1STATSX	-	-	901	Email Mode
F1-STCRL	-	-	900	Email Mode
F1-STKDF	-	-	900	Email Mode
F1-STKTR	-	-	900	Email Mode
F1STSRNX	-	-	901	Email Mode
F1STSSTX	-	-	901	Email Mode
F1-SUBRQ	-	-	900	Email Mode
F1SVCTKX	-	-	901	Email Mode
F1-SYNEF	-	-	900	Email Mode
F1-SYNIL	-	-	900	Email Mode
F1-SYNRQ	-	-	900	Email Mode
F1-SYSRQ	-	-	900	Email Mode
F1TABLEX	-	-	901	Email Mode
F1TAGEYX	-	-	901	Email Mode
F1-TDCLP	-	-	900	Email Mode
F1-TDCRL	-	-	900	Email Mode
F1-TDEER	-	-	900	Email Mode
F1-TDMON	-	-	900	Email Mode
F1-TDPG	-	-	900	Email Mode
F1TIMEEX	-	-	901	Email Mode

Batch Control	Parameters (Removed from 25.4)		Parameters (Added in 25.4)	
	Sequence Number	Parameter	Sequence Number	Parameter
F1TIMENX	-	-	901	Email Mode
F1TODO4X	-	-	901	Email Mode
F1TODOEX	-	-	901	Email Mode
F1TODOYX	-	-	901	Email Mode
F1TRREEX	-	-	901	Email Mode
F1UIMAPX	-	-	901	Email Mode
F1UIZO2X	-	-	901	Email Mode
F1USERPX	-	-	901	Email Mode
F1USSERX	-	-	901	Email Mode
F1WEBSTX	-	-	901	Email Mode
F1WFEVEX	-	-	901	Email Mode
F1WFMSMX	-	-	901	Email Mode
F1WFPREX	-	-	901	Email Mode
F1WFPRLX	-	-	901	Email Mode
F1WORKLX	-	-	901	Email Mode
F1XAICSX	-	-	901	Email Mode
F1XAIJCX	-	-	901	Email Mode
F1XAIJQX	-	-	901	Email Mode
F1XAIJRX	-	-	901	Email Mode
F1XAIOSX	-	-	901	Email Mode
F1XAISEX	-	-	901	Email Mode
F1XAISRX	-	-	901	Email Mode
F1ZONELX	-	-	901	Email Mode