**Oracle® Revenue Management and Billing**

Version 3.1.0.0.0

**Database Administrator's Guide**

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**ORACLE®**

Oracle Revenue Management and Billing Database Administrator's Guide

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# Preface

## About This Document

This document will help you to understand how to install and maintain the Oracle Revenue Management and Billing (ORMB) database.

## Intended Audience

This document is intended for the following audience:

- End-Users
- Database 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 | Database Overview | Lists the database server supported on each platform. It also lists the dos and don'ts while maintaining a database. |
| Section 2 | Installing Oracle Revenue Management and Billing Version 3.1.0.0.0 Database | Explains how to install the Oracle Revenue Management and Billing database. |
| Section 3 | Database Design | Lists the naming conventions for various database objects. It also lists and describes the column data types and foreign key constraints. |
| Section 4 | Exadata Database Settings | Lists a set of activities that you need to perform if you are using the Oracle Exadata Database machine as the database server. |
| Section 5 | Database Implementation Guidelines | Lists and describes the general guidelines for configuring various objects in the database and implementing Oracle Database. |
| Appendix A | New Objects in the Oracle Revenue Management and Billing V3.1.0.0.0 Database | Lists the objects that are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database. |

| Section No. | Section Name | Description |
|---|---|---|
| Appendix B | Application Services Configured for Default User Group | Lists the application services configured for the default user groups shipped with Oracle Revenue Management and Billing Version 3.1.0.0.0. |
| Appendix C | Changing the DB User Password | Explains how to change the database user password. |
| Appendix D | New Objects in the Oracle Utilities Application Framework V4.4.0.3.0 Database | Lists the objects that are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database. |
| Appendix E | Oracle Utilities Application Framework System Table Guide | Lists the system tables owned by Oracle Utilities Application Framework V4.4.0.3.0 and explains the standards and guidelines to be followed while updating the data in the system tables. |
| Appendix F | ORMB V3.1.0.0.0 Rollup Packs | Lists the rollup packs available for Oracle Revenue Management and Billing Version 3.1.0.0.0. It also explains how to apply a rollup pack. |
| Appendix G | License and Copyright Notices | Lists all notices with reference to usage of third party products. |

# Conventions

The following conventions are used across this document:

| Convention | Meaning |
|---|---|
| boldface | Boldface indicates graphical user interface elements associated with an action, or terms defined in the text. |
| italic | Italic indicates a document or book title. |
| `monospace` | Monospace indicates commands within a paragraph, URLs, code in examples, text that appears on the screen or entered in the application. |

# Acronyms

The following acronyms are used in this document:

| Acronym | Meaning |
|---|---|
| ORMB | Oracle Revenue Management and Billing |
| RDS | Reliable Datagram Sockets |
| UAT | User Acceptance Testing |

| Acronym | Meaning |
|---------|---------|
| DBCA | Database Configuration Assistant |
| OUAF | Oracle Utilities Application Framework |
| FW | Framework |
| TDE | Transparent Data Encryption |
| ASSM | Automatic Segment Space Management |
| AMM | Automatic Memory Management |
| ASMM | Automatic Shared Memory Management |
| PDB | Pluggable Database |
| CDB | Container Database |
| LOB | Large Object |
| AWR | Automatic Workload Repository |
| CBO | Cost-Based Optimizer |
| USD | United States Dollar |
| NORTHAM | North America |
| EURO | Europe |
| CM | Customer Modification |
| ENG | English |
| UTC | Coordinated Universal Time |
| ICU4J | International Components for Unicode |

# Related Documents

You can refer to the following documents for more information:

| Document Name | Description |
|---------------|-------------|
| *Oracle Revenue Management and Billing Version 3.1.0.0.0 Release Notes* | Provides a brief description about the new features, enhancements, and UI level changes introduced in the current release. The new features and enhancements are classified under three distinct heads – Generic (which is intended for both domains), Financial Services, and Health Insurance. It also contains high-level information about the supported platforms, framework upgrade, supported upgrades, and documentation updates. In addition, it contains a list of discontinued features, planned deprecation notices, customer bugs fixed or forward ported and known issues in the current release. |

| Document Name | Description |
|---|---|
| *Oracle Revenue Management and Billing Installation Guide* | Provides an overview about the application architecture. It contains detailed information about the software and hardware requirements, supported platforms, application server and database space requirements, and application server pre-requisites for supported platforms. It explains the installation and configuration menu options which are available during installation and advanced menu options which are available post installation. It also explains how to configure WebSphere application server and how to install OUAF, OUAF rollup packs, ORMB, and ORMB patches or rollup packs.<br><br>It contains appendices which lists ORMB rollup packs and notices about third party JAR and other components. |
| *Oracle Revenue Management and Billing Quick Installation Guide* | Provides information about the media packs which are available for the current release. It contains information about the supported platforms, space requirements, and release-specific documentation library. In addition, it contains high-level information on how to install ORMB and selected additional software. |
| *Oracle Revenue Management and Billing Server Administration Guide* | Provides detailed information about the product architecture, native support, directory structures, environment variables, logs, etc. It explains various concepts related to the batch server and lists and describes the scripts required for installing and configuring ORMB. It explains how to monitor the system and configure Web browser, Web application server, business application server, inbound web services, and batch server. It explains how to provide Oracle Cloud Support and how to integrate and monitor Oracle Scheduler.<br><br>It contains various appendices which lists and describes the parameters available in the ENVIRON.INI, Web.xml, spl.properties, hibernate.properties, submitbatch.properties, threadpoolworker, coherence-cache.config.xml, and tangosol-coherence-override.xml files. |

| Document Name | Description |
|---|---|
| *Oracle Revenue Management and Billing Security Guide* | Highlights what's new in security! Describes all the security features available in ORMB for authentication, authorization, user access, database access, LDAP and SSO integration, audit, encryption, web services, and JNDI access. It also describes how to provide support for data masking, Oracle cloud object storage, groovy, HTTP proxy, keystore, truststore, whitelist, federated architecture, and object erasure. In addition, it explains how to garble the customer information. |
| *Oracle Revenue Management and Billing Direct Database Upgrade Guide* | Explains how to directly upgrade the ORMB database from 2.3.0.2.0 or any later version to the current release. It also highlights any known issues during direct database upgrade and how to handle these issues in the database. |

# Change Log

| Revision | Last Update | Updated Section | Comments |
|---|---|---|---|
| 20.1 | 23-Sep-2021 | Appendix A: New Objects in the Oracle Revenue Management and Billing V3.1.0.0.0 Database | Updated Information |
| | | Appendix D: New Objects in the Oracle Utilities Application Framework V4.4.0.3.0 Database | Updated Information |
| 20.2 | 27-Oct-2021 | Appendix G.1.2: Notice Concerning Usage of Apache Software | Updated Information |
| | | Appendix G.1.4: Notice Concerning Usage of Bouncy Castle Crypto API | Updated Information |
| | | Appendix G.1.23: Notice Concerning Usage of SLF4J | Updated Information |
| | | Section 2.3.1.6: Post Installation Tasks | Updated Information |
| | | Appendix F: ORMB V3.1.0.0.0 Rollup Packs | Updated Information |
| | | Appendix A.1.1: New Tables | Updated Information |
| | | Appendix A.1.2: Added Columns | Updated Information |
| | | Appendix A.2.9: Zones | Updated Information |
| | | Appendix A.2.10: UI Maps | Updated Information |
| | | Appendix A.2.17: To Do Types | Updated Information |
| 20.3 | 22-Nov-2021 | Section 2.1: Installation Overview | Added Information |

| Revision | Last Update | Updated Section | Comments |
|---|---|---|---|
| | | Section 2.2: Creating the Database | Added Information |
| | | Section 2.3: Oracle Database Installation | Added Information |
| | | Section 2.3.2: Demo Install | Added Section |
| 20.4 | 14-Jan-2022 | - | Added Bookmarks in PDF |
| 20.5 | 04-Mar-2022 | Section 2.3.1.4: Installing Oracle Utilities Application Framework | Updated Information |
| | | Section 2.3.1.5: Installing Oracle Revenue Management and Billing | Updated Information |
| 20.6 | 29-Jun-2022 | Section 2.3.2.1: Copying and Decompressing Demo Dump Patch | Added Information |
| | | Section 2.3.2.4: Importing the Demo Dump File | Added Information |
| 20.7 | 14-Jul-2022 | Section 5.2.3: Table Partitioning Strategy | Updated Information |
| 20.8 | 25-Jul-2022 | Section 5.2.3: Table Partitioning Strategy | Updated Information |
| 20.9 | 17-Nov-2022 | Section 2.2: Creating the Database | Updated Information |
| | | Section 2.3.1.4: Installing Oracle Utilities Application Framework | Updated Information |
| | | Section 2.3.1.5: Installing Oracle Revenue Management and Billing | Updated Information |
| | | Section 2.3.3: Configuring Security | Removed Section |
| 20.10 | 15-Dec-2022 | Section 2.3: Oracle Database Installation | Removed Information |

# Contents

# 1.   Database Overview

This section provides an overview of the Oracle Revenue Management and Billing database, including:

- Supported Database Platforms
- Database Maintenance Rules

## 1.1  Supported Database Platforms

This section defines the platforms on which Oracle Revenue Management and Billing is verified to operate.

### 1.1.1    Supported Platforms Summary Table

Oracle Revenue Management and Billing (ORMB) is supported on the following platforms:

| Platform | Database Server |
|---|---|
| AIX 7.2 TL0+[1] (64-bit) | Oracle Database Server 19c |
| Oracle Linux 7.x[2] or 8.x[2] (64-bit) | Oracle Database Server 19c |
| Red Hat Enterprise Linux[3] 7.x[2] or 8.x[2] (64-bit) | Oracle Database Server 19c |
| Oracle Solaris 11.3+[1] (SPARC 64-bit) | Oracle Database Server 19c |
| Microsoft Windows Server 2016+ (64-bit) | Oracle Database Server 19c |

**Note:**

Oracle Corporation distributes Oracle Linux with the following two kernels:

**>> Red Hat Compatible Kernel** – This kernel is identical to the kernel shipped in Red Hat Enterprise Linux.

**>> Unbreakable Enterprise Kernel** – This kernel is based on a later Linux 2.6-series kernel, with Oracle's own enhancements for OLTP, InfiniBand, SSD disk access, NUMA-optimizations, Reliable Datagram Sockets (RDS), async I/O, OCFS2, and networking.

Oracle claims that the Unbreakable Enterprise Kernel is compatible with Red Hat Enterprise Linux; and Oracle middleware and third-party Red Hat Enterprise Linux-certified applications can be installed and run unchanged on Unbreakable Enterprise Kernel. However, for users requiring strict compatibility with Red Hat or for users running kernel modules dependent on specific kernel versions, the Red Hat Compatible Kernel offers 100% compatibility with Red Hat Enterprise Linux.

The following Oracle Database Server Editions are supported:

- Oracle Database Enterprise Edition

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[1] Version numbers suffixed with "+" are the MINIMUM version supported. That version and all future 4th digit updates will be supported.

[2] Here, **x** represents the vendor supported version.

[3] Oracle Revenue Management and Billing is tested and certified on Oracle Linux 7.x and 8.x. Oracle Linux is 100% userspace-compatible with Red Hat Enterprise Linux, and therefore Oracle Revenue Management and Billing is supported on Red Hat Enterprise Linux.

Oracle Database Client 19c is required as a pre-requisite for installing the Oracle Revenue Management and Billing application.

> **Note:**
>
> Oracle Database Enterprise Edition with the **Advanced Compression and Partitioning** options is strongly recommended in all situations.
>
> We strongly recommend you install Oracle Revenue Management and Billing (ORMB) on Microsoft Windows platform only for non-production activities, such as User Acceptance Testing (UAT), development setup, and so on.

## 1.1.2   Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle Revenue Management and Billing has been tested with.

If it is necessary to apply an upgrade, please do so in a test environment that is running on the same platform as your production environment prior to updating the Oracle Revenue Management and Billing production environment.

The exception from this rule is Hibernate Version 4.1 GA and Oracle Database Client 19c. These should not be upgraded.

Always contact Oracle Revenue Management and Billing Support prior to applying vendor updates that do not guarantee backward compatibility.

# 1.2  Database Maintenance Rules

The database supplied with the product consists of the following elements:

- A set of users to administrate, execute and read the database schema provided.
- A set of database roles to implement security for each of the users provided.
- A tablespace and a schema containing the base database objects used by the product.

The installation instructions are outlined in the installation section of this document.

## 1.2.1   Permitted Database Changes

During and after installation of the product the following changes may be performed by the database administrator personnel on site:

- Users supplied by product may be changed according to the site standards.
- Database objects may be added to the schema according to database naming standards outlined later in this document.
- Database views and indexes may be created against base database objects. Please make sure to prefix new items with "CM" (for customer modification).
- Database storage attributes for base indexes and base tables may be changed according to site standards and hardware used.
- Tablespace names, attributes and locations may be changed according to site standards.

- Database topology (base table/index to tablespace, tablespace to data file, data file to location) may be altered according to tuning and/or site standards.
- Database triggers may be created against base database objects unless they attempt to contravene base data integrity rules.
- Database initialization and parameter settings may be altered according to site standards unless otherwise advised by Oracle Support or outlined in this document.

## 1.2.2    Non-Permitted Database Changes

In order to maintain operability and upgradeability of the product, during and after the installation of the product, the following changes may not be performed by the database administration personnel on site:

- Base objects must not be removed or altered in the following ways:
  o   Columns in base tables must not be altered in anyway.
  o   Columns in Indexes must not be altered or removed.
  o   Tables must not be renamed or removed.
  o   Base views must not be renamed or removed.
  o   Base Triggers and Sequences must not be renamed or removed.
  o   Base indexes must not be altered or removed.

# 2. Installing Oracle Revenue Management and Billing Version 3.1.0.0.0 Database

This section provides the instructions for installing the Oracle Revenue Management and Billing database. This section includes the following topics:

- Installation Overview
- Creating the Database
- Oracle Database Installation

## 2.1 Installation Overview

> **Note**: Refer to the Supported Database Platforms section for information about the supported platforms on which Oracle Revenue Management and Billing is verified to operate.

The following types of installation are available for Oracle Revenue Management and Billing:

- Initial Install — a database without demo data
- Demo Install — a database with demo data

The database installation requires Java Development Kit Version 8.0 and Oracle Database Client 19c on the Windows desktop where the install package is staged and run.

## 2.2 Creating the Database

For an initial or demo install, you will create an empty database on the UNIX or Windows database server on which you operate the production instance of Oracle Revenue Management and Billing.

To create the database:

1. Create the database using the Database Configuration Assistant (DBCA). Refer to the *Master Note: Overview of Database Configuration Assistant (DBCA) (Document ID: 1488770.1)* article on My Oracle Support for more information.
2. Ensure that you set the database character set to AL32UTF8 and national character set (NLS_NCHAR_CHARACTERSET) to AL16UTF16.

> **Note:** In the prior versions of the product, the `cdxdba` utility (`cdxdba.plx` for UNIX and `CDXDBA.exe` for Windows) was included in the package. However, it is no longer supported. Instead of using the `cdxdba` utility, use the **Database Configuration Assistant** to create the database.

3. Enable the following mandatory software options:
   - Oracle Spatial OR Oracle Locator
   - Oracle Text
4. Execute the following SQL command to verify whether the above mandatory software options are enabled:
   - `SELECT COMP_NAME, STATUS FROM DBA_REGISTRY WHERE COMP_NAME IN ('Spatial','Oracle Text');`

5. Create the default tablespace named CISTS_01 using the following command:

```
CREATE    BIGFILE    TABLESPACE    CISTS_01    LOGGING    DATAFILE
'/<db_file_location>/oradata/<DB_NAME>/cists01.dbf' SIZE 5G REUSE
AUTOEXTEND ON EXTENT MANAGEMENT LOCAL AUTOALLOCATE;
```

6. Create the CIS_USER and CIS_READ roles using the following commands:

```
CREATE ROLE CIS_USER;
CREATE ROLE CIS_READ;
```

7. Assign the privileges to the CIS_USER role using the following command:

```
GRANT CREATE SYNONYM TO CIS_USER;
```

8. Assign the privileges to the CIS_READ role using the following command:

```
GRANT CREATE SYNONYM TO CIS_READ;
```

9. Create the CISADM, CISUSER, CISOPR, and CISREAD users using the following commands:

```
CREATE USER CISADM IDENTIFIED BY CISADM DEFAULT TABLESPACE
CISTS_01 TEMPORARY TABLESPACE TEMP PROFILE DEFAULT;
GRANT UNLIMITED TABLESPACE TO CISADM WITH ADMIN OPTION;
GRANT SELECT ANY TABLE TO CISADM;
GRANT CREATE DATABASE LINK TO CISADM;
GRANT CONNECT TO CISADM;
GRANT RESOURCE TO CISADM;
GRANT DBA TO CISADM WITH ADMIN OPTION;
GRANT CREATE ANY SYNONYM TO CISADM;
GRANT SELECT ANY DICTIONARY TO CISADM;


CREATE USER CISUSER PROFILE DEFAULT IDENTIFIED BY CISUSER DEFAULT
TABLESPACE CISTS_01 TEMPORARY TABLESPACE TEMP;
GRANT SELECT ANY TABLE TO CISUSER;
GRANT CIS_USER TO CISUSER;
GRANT CIS_READ TO CISUSER;
GRANT CONNECT TO CISUSER;


CREATE USER CISREAD IDENTIFIED BY CISREAD DEFAULT TABLESPACE
CISTS_01 TEMPORARY TABLESPACE TEMP;
GRANT SELECT ANY TABLE TO CISREAD;
GRANT CIS_READ TO CISREAD;
GRANT CONNECT TO CISREAD;


CREATE USER CISOPR PROFILE DEFAULT IDENTIFIED BY OPRPLUS DEFAULT
TABLESPACE CISTS_01 TEMPORARY TABLESPACE TEMP;
GRANT CONNECT, RESOURCE, EXP_FULL_DATABASE TO CISOPR;
```

10. Review the `Storage.xml` file under the `TEMPDIR\FW\Install-Upgrade` folder prior to an initial install. This file allocates all base tables and indexes to the default tablespace (CISTS_01) and the required users and roles.

Information in this file is used by `ORADBI` (i.e. `spl-oradbi-4.4.0.3.0.jar`) while installing the Oracle Revenue Management and Billing database objects. Refer to the [Updating Storage.xml](#) section for more information on how to update the `Storage.xml` file.

> **Note:** You will need to review the Storage.xml file, prior to an initial install, to update the default values to custom values (for example, TableSpace Name). The `spl-oradbi-4.4.0.3.0.jar` can be executed by a non-schema owner in order to upgrade the database. The Initial Install still needs to be done by the schema owner.

If you decide to allocate some tables or indexes outside of the default tablespace, change the tablespace name from the default value to a custom value in the `Storage.xml` file.

For instance, if you decide to allocate the `CI_ACCT` table in the `MyTablespace` tablespace, change Storage.xml as shown:

```
<CI_ACCT>
    <TABLESPACE>MyTablespace</TABLESPACE>
</CI_ACCT>
```

For optimum storage allocation, database administrators should create multiple tablespaces with extents sized to store different types of tables/indexes. They can then edit the `storage.xml` file before install process, to spread tables and indexes across these tablespaces. Tables and indexes can be created in parallel by editing degree of parallelism. Tablespace, storage options, secure file options, Advanced Compression, and parallel information are used only for new objects. Therefore, for initial installs, information for each object should be reviewed. Be careful while editing this file. Make sure that tablespace names being used exist in the database. Do not change the basic format of this file.

> **Note:** Prior to the installation of the database schema for the product, please ensure that the Database Management System software is installed according to your site standards and the installation guide provided by the database vendor. Also please make sure that you have necessary licenses to use some of the advanced database features, such as Advanced Compression.

## 2.3 Oracle Database Installation

This section describes how to install Oracle Database for Oracle Revenue Management and Billing Version 3.1.0.0.0. It contains the following topics:

- [Initial Install, or Installing Version 3.1.0.0.0 for the First Time](#)
- [Demo Install](#)
- [Populating Language Data](#)

> **Note**: The installation tools outlined in this guide run on Windows, UNIX, and Linux only. Please refer to the [Supported Database Platforms](#) section for more information on supported platforms.

## 2.3.1    Initial Install, or Installing Version 3.1.0.0.0 for the First Time

This section describes how to install the database components of Oracle Revenue Management and Billing. It includes the following topics:

- Copying and Decompressing Install Media
- Creating the Database
- Setting the MAX_STRING_SIZE Parameter to EXTENDED
- Installing Oracle Utilities Application Framework
- Installing Oracle Revenue Management and Billing
- Post Installation Tasks

**Note:** You must have a supported version of the Java Development Kit installed on the Windows and Linux desktop where you stage and run the database installation package. Refer to the *Oracle Revenue Management and Billing Installation Guide* for more information.

Before you begin with the installation, ensure that you have Oracle Database Client installed on the Microsoft Windows desktop.

### 2.3.1.1    Copying and Decompressing Install Media

To download and decompress the ORMB Database package:

1. Download the **Oracle Revenue Management and Billing V3.1.0.0.0 Oracle Database** package from the **Oracle Revenue Management and Billing V3.1.0.0.0** media pack which is available on Oracle Software Delivery Cloud. A zip file is downloaded.
2. Create a temporary folder named `TEMPDIR` on your local machine.
3. Unzip the downloaded file in the `TEMPDIR` folder. The contents include the following sub-folders:
   - `FW`
   - `RMB`

### 2.3.1.2    Creating the Database

**Note**: You must have Oracle Database Server 19c installed on your machine to create the database.

The Linux and Windows database creation utilities create an empty database with AL32UTF8 character set and at least one tablespace for storing the application objects before running the installation. The default name of the application tablespace is `CISTS_01`.

**Creating the Database on UNIX**

Create the database using the Database Configuration Assistant (DBCA). Refer to the *Master Note: Overview of Database Configuration Assistant (DBCA) (Document ID: 1488770.1)* article on My Oracle Support for more information. Ensure that you set the database character set to `AL32UTF8` and national character set (NLS_NCHAR_CHARACTERSET) to `AL16UTF16`.

For more information on how to create the database, refer to the Creating the Database section.

**Creating the Database on Windows**

You should be logged in as a user who is a member of the local ORA_DBA group on that server. The `ORA_DBA` group should have "administrator" privileges assigned to it.

Create the database using the Database Configuration Assistant (DBCA). Refer to the *Master Note: Overview of Database Configuration Assistant (DBCA) (Document ID: 1488770.1)* article on [My Oracle Support](#) for more information. Ensure that you set the database character set to `AL32UTF8` and national character set (NLS_NCHAR_CHARACTERSET) to `AL16UTF16`.

For more information on how to create the database, refer to the [Creating the Database](#) section.

### 2.3.1.3   Setting the MAX_STRING_SIZE Parameter to EXTENDED

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

1. Set the `ORACLE_HOME` and `ORACLE_SID` environment variables.
2. Shutdown the target database using the following command:
   ```
   shutdown immediate
   ```
3. Start the database in the Upgrade mode using the following command:
   ```
   startup upgrade
   ```
4. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:
   ```
   alter system set max_string_size=extended scope=both;
   ```
5. Execute the `utl32k.sql` file using the following command:
   ```
   @?/rdbms/admin/utl32k.sql;
   ```
6. Restart the database in the Normal mode using the following commands:
   ```
   shutdown immediate
   startup
   ```

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

1. Set the ORACLE_HOME and ORACLE_SID environment variables.

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

2. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:
   ```
   alter system set max_string_size=extended scope=spfile;
   ```
3. Start all pluggable databases in the Upgrade mode using the following command:
   ```
   shutdown immediate
   startup upgrade
   alter pluggable database all open upgrade;
   exit
   ```
4. Create the `utl32k_cdb_pdbs_output` folder to store the log files using the following command:
   ```
   mkdir /scratch/mydir/utl32k_cdb_pdbs_output
   ```

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

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

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

```
shutdown immediate
startup
alter pluggable database all open read write;
```

## 2.3.1.4   Installing Oracle Utilities Application Framework

You need to install Oracle Utilities Application Framework Version 4.4.0.3.0 prior to Oracle Revenue Management and Billing Version 3.1.0.0.0. The files for Oracle Utilities Application Framework installation are in the `TEMPDIR\FW` folder. The installation process prompts you to provide the following information:

- The target database name in which the product is to be installed.

- A database user that will own the application schema (for example, `CISADM`).

- A database user that has read-write (select, update, insert, and delete) privileges to the objects in the application schema (for example, `CISUSER`). The application will access the database as this user.

- A database user with read-only privileges to the objects in the application schema. (For example, `CISREAD`).

- A database role that has read-write (select, update, insert, and delete) privileges to the objects in the application schema. The application will access the database as this user. (For example, `CIS_USER`).

- A database role with read-only privileges to the objects in the application schema (for example, `CIS_READ`).

- Location of the jar files. (The Jar files are bundled with the database package.)

- Java Home (for example, `C:\Java\jdk1.8.0_271`)

To install Oracle Utilities Application Framework (OUAF), you need to install the following in the specified order:

1. Oracle Utilities Application Framework Version 4.4.0.3.0
2. Rollup Pack for Oracle Utilities Application Framework Version 4.4.0.3.0

### Installing Oracle Utilities Application Framework Version 4.4.0.3.0

To install the schema for Oracle Utilities Application Framework Version 4.4.0.3.0, you should have the following:

- Java Development Kit 8.0

- Oracle Database

- Schema such as CISADM should exist in the database

---

- MAX_STRING_SIZE parameter set to EXTENDED

To install Oracle Utilities Application Framework (OUAF) Version 4.4.0.3.0:

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

   **Windows:**

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

   **AIX, Linux:**

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

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

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

   **AIX, Linux:**

   ```
   export JAR_PATH=TEMPDIR/FW/jarfiles
   ```

**Note:**

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

The `TEMPDIR` folder is the location where you have extracted the contents of the **Oracle Revenue Management and Billing V3.1.0.0.0 Oracle Database** package.

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

   **Windows:**

   ```
   SET CLASS_PATH=TEMPDIR\FW\jarfiles\*
   ```

   **AIX, Linux:**

   ```
   export CLASS_PATH=$JAR_PATH/commons-cli-1.4-
   c12260c.jar:$JAR_PATH/commons-codec-1.15.jar:$JAR_PATH/commons-
   collections-3.2.2.jar:$JAR_PATH/jackson-annotations-
   2.10.3.jar:$JAR_PATH/jackson-core-2.10.3.jar:$JAR_PATH/jackson-
   databind-2.10.3.jar:$JAR_PATH/log4j-api-
   2.13.3.jar:$JAR_PATH/log4j-core-2.13.3.jar:$JAR_PATH/ojdbc8-
   19.3.0.0.0.jar:$JAR_PATH/spl-oradbi-4.4.0.3.0.jar:$JAR_PATH/spl-
   shared-4.4.0.3.0.jar
   ```

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

   **Windows:**

   ```
   cd TEMPDIR\FW\Install-Upgrade
   ```

   **AIX, Linux:**

   ```
   cd TEMPDIR/FW/Install-Upgrade
   ```

5.  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
    ```

    **AIX, Linux:**

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

    A message appears indicating that the process is completed successfully. This process generates log files in the `TEMPDIR/FW/Install-Upgrade/Logs` directory.

6.  Ensure that you check the log files for any errors.

> **Note:** While executing the `OraDBI` utility, you may receive the following message in the display output or logs. This error can be safely ignored and the process should proceed to completion.
>
> ```
> -            2016-05-23        16:31:38,315         [main]         ERROR
> (common.cryptography.KeyStoreWrapperFactory)    The    keystore    file
> '<filename>' does not exist.…
> ```
> …
>
> This file is either provided by the `com.oracle.ouaf.system.keystore.file` property or expected to exist at the default file location null attempting to use the legacy cryptography.
>
> ```
> -  2016-05-23 16:31:38,566 [main] INFO (oem.install.OraDBI)
> ```

On installing Oracle Utilities Application Framework Version 4.4.0.3.0, various objects are created in the database under CISADM schema. The following table lists the number of objects that are created when you install framework:

| Object Type | Count |
|---|---|
| INDEX | 1017 |
| SEQUENCE | 4 |
| TABLE | 674 |
| TRIGGER | 1 |
| VIEW | 16 |

> **Note:** You should use the above object count for verification only when you are doing fresh installation on the database server and not when you are upgrading the database.

Ideally, the Oracle Utilities Application Framework Version 4.4.0.3.0 installation should approximately finish in 5 minutes. The execution time can vary to great extent depending on network speed between local machine and server location.

After setting up roles and users, the utility continues upgrading schema and system data definitions. If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

---

**Note:**

OraDBI performs the following tasks:

**>>** Interacts with the user to collect information about the name of Oracle account that will own the application schema (for example, `CISADM`), password of this account, and the name of the Oracle account that the application user will use (for example, `CISUSER`), and the name of the Oracle account that will be assigned read-only privileges to the application schema (for example, `CISREAD`).

**>>** Verifies whether tablespace names already exist in the `Storage.xml` file (if not, the process will abort).

**>>** Installs the schema, installs the system data, and configures security.

**>>** Maintains upgrade log tables in the database.

**>>** Updates release ID when the upgrade is completed successfully.

**>>** If an error occurs while executing a SQL script or another utility, it logs and displays the error message and allows you to re-execute the current step. Log files `OraDBI###.log` are created in the same folder as OraDBI and contains all the SQL commands executed against the database along with the results. The log files are incremental so that the results are never overwritten. If warning messages are generated during the upgrade, OraDBI prompts the user at the end of the process. Users should check the log files to verify the warning messages.

**>>** Warning messages are only alerts and do not necessary mean a problem exists.

**>>** Stores the Schema owner and password in the feature configuration table. The password is stored in encrypted format.

**>>** OraDBI can be executed by a non-schema owner.

---

## Installing Rollup Pack for Oracle Utilities Application Framework Version 4.4.0.3.0

You can install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.3.0 from a Windows machine or Linux Standalone server. To install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.3.0:

1. Download the Oracle Utilities Application Framework V4.4.0.3.0 Single Fix Prerequisite Rollup for RMB V3.1.0.0.0 package from the Oracle Revenue Management and Billing V3.1.0.0.0 media pack which is available on [Oracle Software Delivery Cloud](). A zip file is downloaded.

2. Unzip the downloaded file in the `TEMPDIR` folder. The contents include the `ORMB-V31000-FW-PREREQ-MultiPlatform.jar` file.

3. Decompress the JAR file using the following command:

```
cd TEMPDIR
jar -xvf ORMB-V31000-FW-PREREQ-MultiPlatform.jar
```

A sub-folder named `FW-V4.4.0.3.0-Rollup` is extracted. It contains the following two sub-folders:

- `Application`
- `Database`

4. Create a folder named `dbpatch_tools` in the `TEMPDIR` folder.
5. Copy the `db_patch_standalone.jar` file to the `dbpatch_tools` folder.
6. Decompress the JAR file using the following command:

**Windows:**

```
cd TEMPDIR\dbpatch_tools
jar -xvf db_patch_standalone.jar
```

**AIX, Linux:**

```
cd TEMPDIR/dbpatch_tools
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`

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

**Windows:**

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

**AIX, Linux:**

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

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

**Windows:**

```
cd TEMPDIR\FW-V4.4.0.3.0-Rollup\Database
```

**AIX, Linux:**

```
cd TEMPDIR/FW-V4.4.0.3.0-Rollup/Database
```

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

**Windows:**

```
ouafDatabasePatch.cmd
```

**AIX, Linux:**

```
ouafDatabasePatch.sh
```

> **Note:**
>
> On the AIX and Linux platforms, ensure that you grant the execute permission for the `ouafDatabasePatch.sh` utility using the following command:
>
> `chmod 755 ouafDatabasePatch.sh`
>
> In the previous versions of Oracle Revenue Management and Billing, you used to execute the `cdxpatch` utility while installing the rollup pack for Oracle Utilities Application Framework. Henceforth, the `cdxpatch` utility is no longer supported and you need to use the `ouafDatabasePatch` utility.

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)` <br> `OR` <br> `M (if you have MySQL database)` |
| `Enter the username that owns the schema` | `<DB_USER>` <br> 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>` |

> **Note:** If you have changed the database user password, you will not be able to install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.3.0. You will have to first change the database user password. For more information on how to change the database user password, refer to [Appendix C: Changing the DB User Password](#).

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

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

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

On installing the rollup pack for Oracle Utilities Application Framework Version 4.4.0.3.0, various objects are created in the database under CISADM schema. The following table lists the number of objects that are created when you install the framework rollup pack:

| Object Type | Count |
|---|---|
| INDEX | 1017 |
| SEQUENCE | 4 |
| TABLE | 674 |
| TRIGGER | 1 |
| VIEW | 16 |

> **Note:** You should use the above object count for verification only when you are doing fresh installation on the database server and not when you are upgrading the database.

Ideally, the framework rollup pack installation should approximately finish in 5 minutes. The execution time can vary to great extent depending on network speed between local machine and server location.

## 2.3.1.5     Installing Oracle Revenue Management and Billing

To install Oracle Revenue Management and Billing (ORMB) Version 3.1.0.0.0:

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

    **Windows:**

    `SET JAVA_HOME=<JAVA_HOME_PATH>`

    **AIX, Linux:**

    `export JAVA_HOME=<JAVA_HOME_PATH>`

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

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

    **AIX, Linux:**

    `export JAR_PATH=TEMPDIR/RMB/jarfiles`

> **Note:**
>
> The above command is applicable only for AIX and Linux platforms.
>
> The `TEMPDIR` folder is the location where you have extracted the contents of the **Oracle Revenue Management and Billing V3.1.0.0.0 Oracle Database** package.

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

    **Windows:**

    `SET CLASS_PATH=TEMPDIR\RMB\jarfiles\*`

    **AIX, Linux:**

    ```
    export CLASS_PATH=$JAR_PATH/commons-cli-1.4-
    c12260c.jar:$JAR_PATH/commons-codec-1.15.jar:$JAR_PATH/commons-
    collections-3.2.2.jar:$JAR_PATH/jackson-annotations-
    2.10.3.jar:$JAR_PATH/jackson-core-2.10.3.jar:$JAR_PATH/jackson-
    databind-2.10.3.jar:$JAR_PATH/log4j-api-
    2.13.3.jar:$JAR_PATH/log4j-core-2.13.3.jar:$JAR_PATH/ojdbc8-
    19.3.0.0.0.jar:$JAR_PATH/spl-oradbi-4.4.0.3.0.jar:$JAR_PATH/spl-
    shared-4.4.0.3.0.jar
    ```

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

    **Windows:**

    `cd TEMPDIR\RMB\Upgrade\Oracle\Install-Upgrade`

    **AIX, Linux:**

    `cd TEMPDIR/RMB/Upgrade/Oracle/Install-Upgrade`

5. 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
```

**AIX, Linux:**

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

A message appears indicating that the process is completed successfully. This process generates log files in the `TEMPDIR/FW/Install-Upgrade/Logs` directory.

6. Ensure that you check the log files for any errors.

---

**Note:** While executing the `OraDBI` utility, you may receive the following message in the display output or logs. This error can be safely ignored and the process should proceed to completion.

```
-              2016-05-23         16:31:38,315         [main]         ERROR
(common.cryptography.KeyStoreWrapperFactory)    The    keystore    file
'<filename>' does not exist.…
```

…

This file is either provided by the `com.oracle.ouaf.system.keystore.file`  property or expected to exist at the default file location null attempting to use the legacy cryptography.

```
-   2016-05-23 16:31:38,566 [main] INFO (oem.install.OraDBI)
```

---

On installing Oracle Revenue Management and Billing Version 3.1.0.0.0, various objects are created in the database under CISADM schema. The following table lists the number of objects that are created when you install ORMB:

| Object Type | Count |
|---|---|
| FUNCTION | 57 |
| INDEX | 4132 |
| PACKAGE | 5 |
| PACKAGE BODY | 5 |
| PROCEDURE | 2 |
| SEQUENCE | 43 |
| TABLE | 2561 |

| Object Type | Count |
|---|---|
| TRIGGER | 1 |
| TYPE | 12 |
| TYPE BODY | 1 |
| VIEW | 186 |

**Note:** You should use the above object count for verification only when you are doing fresh installation on the database server and not when you are upgrading the database.

Ideally, the Oracle Revenue Management and Billing Version 3.1.0.0.0 installation should approximately finish in 15 minutes. The execution time can vary to great extent depending on network speed between local machine and server location.

## 2.3.1.6   Post Installation Tasks

Once you install the Oracle Revenue Management and Billing Version 3.1.0.0.0 database, you need to do the following:

1. Apply the ORMB Patches or Apply the ORMB Rollup Packs
2. Enable USER_LOCK Package
3. Grant Permissions to the DBMS_LOCK Package and Recompile Database Objects
4. Generate Database Statistics

**Note:**

To view the list of patches that you need to apply on the database, refer to the *ORMB V3.1.0.0.0 Patch Guide (Document ID: 2815177.1)* on My Oracle Support.

Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to Appendix F: ORMB V3.1.0.0.0 Rollup Packs.

**Apply the ORMB Patches**

Once you install Oracle Revenue Management and Billing Version 3.1.0.0.0, you need to apply all patches listed in the *ORMB V3.1.0.0.0 Patch Guide (Document ID: 2815177.1)*. You can apply a patch from a Windows machine and 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 in your local folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug_<PATCH_NUMBER>_Product_Fix_Design.pdf`.
3. Unzip the `MultiPlatform.zip` file in your local folder. The contents include the `V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder.
4. Change to the `V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

   **AIX, Linux:**

   `cd <DESTINATION_FOLDER_1>/V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform`

**Windows:**

```
cd <DESTINATION_FOLDER_1>\V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
```

**Note:** The `<DESTINATION FOLDER 1>` folder is the location where you have extracted the contents of the `MultiPlatform.zip` file.

The contents include a file named `CCB.V3.1.0.0.0-<PATCH_NUMBER>.jar` and a folder named `database`.

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

    **AIX, Linux:**

    ```
    cd database/ORACLE
    ```

    **Windows:**

    ```
    cd database\ORACLE
    ```

    The contents include a zip file named `CDXPatch`.

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

    **AIX, Linux:**

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

    **Windows:**

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

    The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include utility files and a folder named `<PATCH_NUMBER>`.

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

    **Windows**:

    ```
    ouafDatabasePatch.cmd
    ```

    **AIX, Linux:**

    ```
    ouafDatabasePatch.sh
    ```

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

```
chmod 755 ouafDatabasePatch.sh
```

## Enable USER_LOCK Package

To enable inbound web services, you must grant permissions to the USER_LOCK package. This is a one-time activity. To grant permissions to the USER_LOCK package:

1. Login as `SYS` user.

2. On SQL prompt, execute the following SQL:

    ```
    @?/rdbms/admin/userlock.sql
    ```

3. Grant permission using the following SQL command:

    ```
    grant execute on USER_LOCK to public;
    ```

**Note:** You can also grant permission to a specific database user (for example, CISADM or CISUSER) instead of granting permissions to all database users.

**Grant Permissions to the DBMS_LOCK Package and Recompile Database Objects**

To grant permissions to the DBMS_LOCK package, execute the following commands:

**AIX, Linux:**

```
export ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
```

**Note:** On executing the above command, you will be prompted to enter the SYS user password.

```
grant EXECUTE, DEBUG on DBMS_LOCK to <DB_USER/[CISADM]>;
```

**Note:**

These commands should be executed using Oracle SQL Developer.

If you have created the database using any user other than CISADM, you need to specify the respective user name in the above grant statement.

After executing the above grant statement, recompile the invalid objects, if any, in the database. You can recompile all invalid objects at once using the following commands:

```
export ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
SQL> @?/rdbms/admin/utlrp.sql;
```

**Windows:**

```
set ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
```

**Note:** On executing the above command, you will be prompted to enter the SYS user password.

```
grant EXECUTE, DEBUG on DBMS_LOCK to <DB_USER/[CISADM]>;
```

**Note:**

These commands should be executed using Oracle SQL Developer.

If you have created the database using any user other than CISADM, you need to specify the respective user name in the above alter and grant statements.

After executing the above grant statement, recompile the invalid objects, if any, in the database. You can recompile all invalid objects at once using the following commands:

```
export ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
SQL> @?/rdbms/admin/utlrp.sql;
```

**Generate Database Statistics**

During the installation process, new database objects may be added to the target database. Before you use the target database, we recommend you gather statistics for the database objects. You can gather schema level statistics using the following statement:

```
BEGIN
DBMS_STATS.GATHER_SCHEMA_STATS(OWNNAME=>'CISADM', METHOD_OPT=>'FOR ALL
COLUMNS SIZE AUTO', GRANULARITY=>'ALL', CASCADE=>TRUE, DEGREE=>16);
END;
```

You can also gather the statistics for individual tables using the following statement:

```
BEGIN
DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM',
TABNAME=>'<Table_Name>', GRANULARITY=>'ALL', CASCADE=>TRUE,
METHOD_OPT=> 'FOR ALL COLUMNS SIZE AUTO', DEGREE=>32);
END;
```

We strongly recommend you schedule batch jobs to gather the schema level statistics on the daily basis in the non-peak hours. Please note that the statistics should not be gathered while the application batches are running because this will degrade the application batch performance.

## 2.3.2    Demo Install

This section describes how to install the demo database components of Oracle Revenue Management and Billing. It includes the following topics:

- Copying and Decompressing Demo Dump Patch
- Creating the Database
- Setting the MAX_STRING_SIZE Parameter to EXTENDED
- Importing the Demo Dump File
- Post Demo Database Creation Tasks

### 2.3.2.1    Copying and Decompressing Demo Dump Patch

To download and decompress the Demo Dump patch:

1. Download the domain-specific demo dump patch from My Oracle Support:

| If you belong to… | Then download… |
|---|---|
| Financial Services domain | BANKING DEMO DATA DUMP FOR RMB 3.1.0.0.0 patch (Patch Number: 33526829) |
| Health Insurance domain | HC DEMO DATA DUMP FOR RMB 3.1.0.0.0 patch (Patch Number: 33529981) |

A zip file is downloaded.

2. Create a temporary directory named TEMPDIR on your local machine.

3. Unzip the downloaded file in the `TEMPDIR` directory. The contents include the `Demo_Dump` folder and `README` file. The health insurance specific demo dump folder contains the `DemodataDump_OIRMB3.1.dmp` file and the financial services specific demo dump folder contains the `GTB31000_demodump.dmp` file.

## 2.3.2.2   Creating the Database

**Note:** You must have Oracle Database Server 19c installed on your machine in order to create the database.

**Creating the Database on UNIX**

Create the database using the Database Configuration Assistant (DBCA). Refer to the *Master Note: Overview of Database Configuration Assistant (DBCA) (Document ID: 1488770.1)* article on My Oracle Support for more information. Ensure that you set the database character set to `AL32UTF8` and national character set (NLS_NCHAR_CHARACTERSET) to `AL16UTF16`.

For more information on how to create the database, refer to the Creating the Database section.

**Creating the Database on Windows**

You should be logged in as a user who is a member of the local ORA_DBA group on that server. The ORA_DBA group should have "administrator" privileges assigned to it.

Create the database using the Database Configuration Assistant (DBCA). Refer to the *Master Note: Overview of Database Configuration Assistant (DBCA) (Document ID: 1488770.1)* article on My Oracle Support for more information. Ensure that you set the database character set to `AL32UTF8` and national character set (NLS_NCHAR_CHARACTERSET) to `AL16UTF16`.

For more information on how to create the database, refer to the Creating the Database section.

## 2.3.2.3   Setting the MAX_STRING_SIZE Parameter to EXTENDED

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

1. Set the `ORACLE_HOME` and `ORACLE_SID` environment variables.
2. Shutdown the target database using the following command:
   ```
   shutdown immediate
   ```
3. Start the database in the Upgrade mode using the following command:
   ```
   startup upgrade
   ```
4. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:
   ```
   alter system set max_string_size=extended scope=both;
   ```
5. Execute the `utl32k.sql file using the` following command:
   ```
   @?/rdbms/admin/utl32k.sql;
   ```
6. Restart the database in the Normal mode using the following commands:
   ```
   shutdown immediate
   startup
   ```

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

1. Set the `ORACLE_HOME` and `ORACLE_SID` environment variables.

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

2. Set the MAX_STRING_SIZE parameter to EXTENDED using the following command:
   ```
   alter system set max_string_size=extended scope=spfile;
   ```
3. Start all pluggable databases in the Upgrade mode using the following command:
   ```
   shutdown immediate
   startup upgrade
   alter pluggable database all open upgrade;
   exit
   ```
4. Create the `utl32k_cdb_pdbs_output` folder to store the log files using the following command:
   ```
   mkdir /scratch/mydir/utl32k_cdb_pdbs_output
   ```
5. Execute the `utl32k.sql` from the `catcon.pl` file for all pluggable databases using the following command:
   ```
   cd $ORACLE_HOME/rdbms/admin
   $ORACLE_HOME/perl/bin/perl $ORACLE_HOME/rdbms/admin/catcon.pl -u
   SYS -d $ORACLE_HOME/rdbms/admin -
   l '/scratch/mydir/utl32k_cdb_pdbs_output' -b
   utl32k_cdb_pdbs_output utl32k.sql
   ```
6. Restart the database in the Normal mode using the following commands:
   ```
   shutdown immediate
   startup
   alter pluggable database all open read write;
   ```

## 2.3.2.4    Importing the Demo Dump File

Once you create the database, you can import the demo dump file. To import the demo dump file:

1. Create a database directory named `data_pump_dir` (if not available) and then copy the `DemodataDump_OIRMB3.1.dmp` or `GTB31000_demodump.dmp` file from the `TEMPDIR\Demo_Dump` folder to the `data_pump_dir` folder.

**Note:** If you belong to the financial services domain, use the `GTB31000_demodump.dmp` file. And, if you belong to the health insurance domain, use the `DemodataDump_OIRMB3.1.dmp` file.

2. Set the `ORACLE_SID` and `ORACLE_HOME` environment variables.

3. If the target schema is `CISADM`, then use the following command to import demo dump:
   ```
   impdp system/<pwd>@<dbname>  NOLOGFILE=N DIRECTORY=DATA_PUMP_DIR
   DUMPFILE=<dumpFilename>.dmp  SCHEMAS=CISADM
   ```

4. If the target schema is other than `CISADM` (for example, `TRGSCHEM)`, then use the following command to import demo dump:
   ```
   impdp system/<pwd>@<dbname>  NOLOGFILE=N DIRECTORY=DATA_PUMP_DIR
   DUMPFILE=<dumpFilename>.dmp  REMAP_SCHEMA=CISADM:TRGSCHEMA
   ```

## 2.3.2.5　Post Demo Database Creation Tasks

Once you import the demo dump file, you need to do the following:

1. Apply the ORMB Patches or Apply the ORMB Rollup Packs
2. Enable USER_LOCK Package
3. Grant Permissions to the DBMS_LOCK Package and Recompile Database Objects
4. Generate Database Statistics

> **Note:**
>
> To view the list of patches that you need to apply on the database, refer to the *ORMB V31000 Patch Guide (Document ID: 2815177.1)* on My Oracle Support.
>
> Alternatively, instead of individually applying the patches, you can download and install the rollup packs, if available, to apply a set of patches at once. For more information about the rollup packs, refer to Appendix F: ORMB V3.1.0.0.0 Rollup Packs.

**Apply the ORMB Patches**

Once you install Oracle Revenue Management and Billing Version 3.1.0.0.0, you need to apply all patches listed in the *ORMB V31000 Patch Guide (Document ID: 2815177.1)*. You can apply a patch from a Windows machine and 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 in your local folder. The contents include three files - `README.txt`, `MultiPlatform.zip`, and `Bug_<PATCH_NUMBER>_Product_Fix_Design.pdf`.
3. Unzip the `MultiPlatform.zip` file in your local folder. The contents include the `V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder.
4. Change to the `V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

   **AIX, Linux:**
   ```
   cd <DESTINATION_FOLDER_1>/V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
   ```
   **Windows:**
   ```
   cd <DESTINATION_FOLDER_1>\V3.1.0.0.0-<PATCH_NUMBER>_MultiPlatform
   ```

> **Note:** The `<DESTINATION_FOLDER_1>` folder is the location where you have extracted the contents of the `MultiPlatform.zip` file.

   The contents include a file named `CCB.V3.1.0.0.0-<PATCH_NUMBER>.jar` and a folder named `database`.

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

   **AIX, Linux:**
   ```
   cd database/ORACLE
   ```
   **Windows:**
   ```
   cd database\ORACLE
   ```
   The contents include a zip file named `CDXPatch`.

---

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

   **AIX, Linux:**

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

   **Windows:**

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

   The contents of the zip file are extracted in the `<DESTINATION_FOLDER_2>` folder. The contents include utility files and a folder named `<PATCH_NUMBER>`.

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

   **Windows**:

   `ouafDatabasePatch.cmd`

   **AIX, Linux:**

   `ouafDatabasePatch.sh`

## Enable USER_LOCK Package

To enable inbound web services, you must grant permissions to the USER_LOCK package. This is a one-time activity. To grant permissions to the USER_LOCK package:

1. Login as `SYS` user.

2. On SQL prompt, execute the following SQL:

   @?/rdbms/admin/userlock.sql

3. Grant permission using the following SQL command:

   grant execute on USER_LOCK to public;

**Note:** You can also grant permission to a specific database user (for example, CISADM or CISUSER) instead of granting permissions to all database users.

## Grant Permissions to the DBMS_LOCK Package and Recompile Database Objects

To grant permissions to the DBMS_LOCK package, execute the following commands:

**UNIX:**

export ORACLE_SID=[DB_NAME]

sqlplus /nolog

conn sys as sysdba

**Note:** On executing the above command, you will be prompted to enter the `SYS` user password.

`grant EXECUTE, DEBUG on DBMS_LOCK to <DB_USER/[CISADM]>;`

**Note:**

These commands should be executed using Oracle SQL Developer.

If you have created the database using any user other than `CISADM`, you need to specify the respective user name in the above alter and grant statements.

After executing the above `grant` statement, recompile the invalid objects, if any, in the database. You can recompile all invalid objects at once using the following commands:

```
export ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
SQL> @?/rdbms/admin/utlrp.sql;
```

**Windows:**

```
set ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
```

**Note:** On executing the above command, you will be prompted to enter the `SYS` user password.

```
grant EXECUTE, DEBUG on DBMS_LOCK to <DB_USER/[CISADM]>;
```

**Note:**

These commands should be executed using Oracle SQL Developer.

If you have created the database using any user other than `CISADM`, you need to specify the respective user name in the above alter and grant statements.

After executing the above `grant` statement, recompile the invalid objects, if any, in the database. You can recompile all invalid objects at once using the following commands:

```
export ORACLE_SID=[DB_NAME]
sqlplus /nolog
conn sys as sysdba
SQL> @?/rdbms/admin/utlrp.sql;
```

## Generate Database Statistics

During the installation process, new database objects may be added to the target database. Before you use the target database, we recommend you gather statistics for the database objects. You can gather schema level statistics using the following statement:

```
BEGIN
DBMS_STATS.GATHER_SCHEMA_STATS(OWNNAME=>'CISADM', METHOD_OPT=>'FOR ALL
COLUMNS SIZE AUTO', GRANULARITY=>'ALL', CASCADE=>TRUE, DEGREE=>16);
END;
```

You can also gather the statistics for individual tables using the following statement:

```
BEGIN
DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM',
TABNAME=>'<Table_Name>', GRANULARITY=>'ALL', CASCADE=>TRUE,
METHOD_OPT=> 'FOR ALL COLUMNS SIZE AUTO', DEGREE=>32);
END;
```

We strongly recommend you schedule batch jobs to gather the schema level statistics on the daily basis in the non-peak hours. Please note that the statistics should not be gathered while the application batches are running because this will degrade the application batch performance.

## 2.3.3    Populating Language Data

Please note that this database contains data in the ENGLISH language only. If you use any other supported language, you can run the F1-LANG batch program to duplicate the entries for new language records. For more information on running this batch program, refer to the user documentation section "Defining Background Processes."

Please contact your Oracle representative to receive information on these packages.

# 3.  Database Design

This section provides a standard for database objects such as tables, columns, and indexes, for products using Oracle Utilities Application Framework. This standard helps in smooth integration and upgrade processes by ensuring clean database design, promoting communications, and reducing errors.

Just as Oracle Utilities Application Framework goes through innovation in every release of the software, it is also inevitable that the product will take advantage of various database vendors' new features in each release. The recommendations in the database installation section include only the ones that have been proved by vigorous QA processes, field tests and benchmarks. This section includes:

- Database Object Standard
- Column Data Type and Constraints
- Standard Columns

## 3.1  Database Object Standard

This section discusses the rules applied to naming database objects and the attributes that are associated with these objects.

### 3.1.1  Categories of Data

A table can belong to one of the three categories:

- Control (admin)
- Master
- Transaction

For purposes of physical table space design, metadata and control tables can belong to the same category.

Example of tables in each category:

- Control: SC_USER, CI_ADJ_TYPE, F1_BUS_OBJ
- Master: CI_PER, CI_PREM
- Transaction: F1_FACT, CI_FT

All tables have the category information in their index name. The second letter of the index carries this information. Refer to the Indexes section for more information.

### 3.1.2  Naming Standards

The following naming standards must be applied to database objects.

**Table**

Table names are prefixed with the owner flag value of the product. For customer modification, CM must be prefixed in the table name. The length of the table names must be less than or equal to 30 characters. A language table should be named by suffixing _L to the main table. The key table name should be named by suffixing _K to the main table.

---

It is recommended to start a table name with the 2-3 letter acronym of the subsystem name that the table belongs to. For example, MD stands for metadata subsystem and all metadata table names start with CI_MD.

Some examples are:

- CI_ADJ_TYPE
- CI_ADJ_TYPE_L

A language table stores language sensitive columns such as a description of a code. The primary key of a language table consists of the primary key of the code table plus language code (LANGAGUE_CD).

A key table accompanies a table with a surrogate key column. A key value is stored with the environment id that the key value resides in the key table.

The tables prior to V2.0.0 are prefixed with CI_ or SC_.

## Columns

The length of a column name must be less than or equal to 30 characters. For customer modification, CM must be prefixed in the column name. The following conventions apply when you define special types of columns in the database.

- Use the suffix FLG to define a lookup table field. Flag columns must be CHAR (4). Choose lookup field names carefully as these column names are defined in the lookup table (CI_LOOKUP_FIELD) and must be prefixed by the product owner flag value.
- Use the suffix CD to define user-defined codes. User-defined codes are primarily found as the key column of the admin tables.
- Use the suffix ID to define system assigned key columns.
- Use the suffix SW to define Boolean columns. The valid values of the switches are 'Y' or 'N'. The switch columns must be CHAR(1)
- Use the suffix DT to define Date columns.
- Use the suffix DTTM to define Date Time columns.
- Use the suffix TM to define Time columns.

Some examples are:

- ADJ_STATUS_FLG
- CAN_RSN_CD

## Indexes

Index names are composed of the following parts:

**[OF][*application specific prefix*][C/M/T]NNN[P/S]n**

- OF- Owner Flag. The standard is to use the two characters of the product's owner flag. Note that there may be some older indexes that use only the first character of the owner flag. For client specific implementation of index, use CM for Owner Flag. If implementation creates a CM index on table-columns for which the base product already provides an index, then the CM index will be overridden by the base index.
- Application specific prefix could be C, F, T or another letter.
- C/M/T - The second character can be either C or M or T. C is used for control tables

- (Admin tables). M is for the master tables. T is reserved for the transaction tables.
- NNN - A three-digit number that uniquely identifies the table on which the index is defined.
- P/S - P indicates that this index is the primary key index. S is used for indexes other than primary keys.
- n is the index number, unique across all indexes on a given table (0 for primary and 1, 2, etc., for the secondary indexes).

Some examples are:

- F1C066P0
- F1C066S1
- XT206C2
- CMT206S2

**Warning!** Do not use index names in the application as the names can change due to unforeseeable reasons.

**Updating Storage.xml**

The `storage.xml` file that comes with the product allocates all base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables or indexes outside of the default tablespace, then this has to be reflected in the `storage.xml` file by changing the tablespace name from the default value to a custom value, according to the format shown below:

Format:

```
<Table_Name>
    <TABLESPACE>CISTS_01</TABLESPACE>
    <PARALLEL>1</PARALLEL>
    <LOB>
        <Column Name>
            <TABLESPACE>CISTS_01</TABLESPACE>
            <SECUREFILE>Y</SECUREFILE>
            <CHUNK>8192</CHUNK>
            <CACHE>N</CACHE>
            <LOGGING>Y</LOGGING>
            <INROW>Y</INROW>
            <COMPRESS>N</COMPRESS>
        </Column Name>
    </LOB>
</Table_Name>
```

Where Parallel defines the number of threads, that Oracle DB Server will use to access a table or create an index.

We recommend you create CLOBs and store them in SECUREFILE with medium compression and cache enabled. Note that, by default, medium compression is turned-off and must be enabled only if you have the Advanced Compression license.

For instance, if a DBA decided to allocate table CI_ACCT in a tablespace MyTablespace, then they would have to change the storage.xml as follows:

```
<CI_ACCT>
    <TABLESPACE>MyTablespace</TABLESPACE>
</CI_ACCT>
```

The OraDBI process uses the `storage.xml` file to place the new database objects into defined tablespaces. A tablespace referenced in the `storage.xml` file must exist in the database.

The storage.xml file must be updated before each upgrade and/or new installation as required to allocate the tables and indexes across those tablespaces.

Table name is included as a comment for each of the indexes for clarity.

For an initial install, information for each object should be reviewed by a DBA. For each upgrade, only tablespace information for the objects added in the new release needs to be reviewed by a DBA.

Be careful while editing this file. Make sure that the tablespace names being used exist in the database. Do not change the basic format of this file.

**Sequence**

We recommend you use the following settings while creating a sequence:

- Set minimum CACHE size to 5000 to enhance performance
- Use NOORDER option so that the database does not generate sequence numbers in order of request

The base sequence name must be prefixed with the owner flag value of the product. For customer modification, CM must be prefixed in the sequence name. The sequence numbers should be named as below:

1. If the sequence is used for a specific table, then use the following sequence name:
   `[OF][C/M/T]NNN_SEQ`

   - OF stands for Owner Flag. For example, F1 stands for Framework.
   - C/M/T stands for Control (Admin)/Master/Transaction Tables.
   - NNN is a three digit unique Identifier for a table on which the sequence is defined.

   For Example: F1T220_SEQ

2. If more than one sequence is used for a specific table then use the following sequence name:
   `[OF][C/M/T]NNN_Column_Name_SEQ`

   - OF stands for Owner Flag. For example, F1 stands for Framework.
   - C/M/T stands for Control (Admin)/Master/Transaction tables.
   - NNN is a three digit unique identifier for a table on which the sequence is defined.

   For Example: F1T220_BO_STATUS_CD_SEQ and F1T220_BUS_OBJ_CD_SEQ

3. If sequence is used for a generic requirement and not specific to a table, then use the following sequence name: `[OF]Column_Name_SEQ`

   - OF stands for Owner Flag. For example, F1 stands for Framework.

   For Example: F1FKVALID_SEQ

**Trigger**

The base trigger name must be prefixed with the owner flag value of the product. When implementers add database objects, such as tables, triggers and sequences, the name of the objects should be prefixed by CM.

# 3.2  Column Data Type and Constraints

This section discusses the rules applied to column data type and constraints, and the attributes that are associated with these objects.

## 3.2.1  User Defined Code

User Defined Codes are defined as CHAR type. The length can vary by the business requirements but a minimum of eight characters is recommended. You will find columns defined in less than eight characters but with internationalization in mind, new columns should be defined as CHAR(10) or CHAR(12). Also note that when the code is referenced in the application the descriptions are shown to users in most cases.

## 3.2.2  System Assigned Identifier

System assigned random numbers are defined as CHAR type. The length of the column varies to meet the business requirements. Number type key columns are used when a sequential key assignment is allowed or number type is required to interface with external software. For example, Notification Upload Staging ID is a Number type because most EDI software uses a sequential key assignment mechanism. For sequential key assignment implementation, the DBMS sequence generator is used in conjunction with Number Type ID columns.

## 3.2.3  Date/Time/Timestamp

Date, Time and Timestamp columns are defined physically as DATE in Oracle. Non-null constraints are implemented only for the required columns.

## 3.2.4  Number

Numeric columns are implemented as NUMBER type in Oracle. The precision of the number should always be defined. The scale of the number might be defined. Non-null constraints are implemented for all number columns.

## 3.2.5  Fixed Length/Variable Length Character Columns

When a character column is a part of the primary key of a table define the column in CHAR type. For the non-key character columns, the length should be the defining factor. If the column length should be greater than 10, use VARCHAR2 type in Oracle.

## 3.2.6    Null Column Support

The product supports Nullable columns. This means that the application can write NULLs instead of a blank space or zero (for numeric columns) by using NULLABLE_SW on CI_MD_TBL_FLD. If REQUIRED_SW is set to 'N' and the NULLABLE_SW is set to 'Y', the application will write a NULL in that column. The artifact generator will create hibernate mapping files with appropriate parameters so that the framework hibernate mapping types will know if a given property supports a null value.

NULLABLE_SW is not new, but has previously been used for certain fields such as dates, and some string and number foreign-key columns. Because of this, there is the possibility that there is incorrect metadata for some columns, and that turning on this new feature could result in incorrect behavior when using that metadata. The upgrade script fixes the metadata to make sure that the existing tables will not be affected.

This new feature only supports tables maintained by Java and does not support tables maintained by a Java program converted from COBOL. Thus, enhancing any existing tables to use null columns must be done only after ensuring that the tables are maintained by Java, and not by Java converted COBOL programs.

## 3.2.7    XML Type Support

The product supports XML Type. XML Type provides following advantages:

1.  The ability to use XQuery for querying nodes in the XML document stored within a column defined as XMLType.
2.  The option to use the XML engine, which is built into the Oracle Database, to create indexes using nodes within the XML document stored in the XMLType column.

## 3.2.8    Cache and Key Validation Flags

By default, the Cache Flag is set to NONE. For most of the admin tables the CACHE Flag should be 'Cached for Batch'. This specifies that the table is cached as L2 cache to reduce database trips.

By default the Key Validation Flag is set to ALL. For tables which have the user defined keys, the KEY_VALIDATION_FLG should be set as 'ALL'. This checks the existence of the key before inserting a new one.

## 3.2.9    Table Classification and Table Volume Flags

There are multiple types of tables in the application, namely Admin system tables, Admin non-system tables, master tables and transaction tables. The Table Classification flag (TBL_CLASSIFICATION_FLG) sets the appropriate value for this lookup field to give a better view of the table classification.

Table Volume flag (TBL_VOLUME_FLG) is a customer modifiable field which is initially populated by product, but can be overridden by implementation. The field gives an idea of the relative data volume (categorized as highVolume, lowVolume and mediumVolume) of the table to make informed decisions.

### 3.2.10  Default Value Setting

The rules for setting the database default values are as follows:

- When a predefined default value is not available, set the default value of Non-null CHAR or VARCHAR columns to blank except the primary key columns.

- When a predefined default value is not available, set the default value Non-null Number columns to 0 (zero) except the primary key columns.

- No database default values should be assigned to the Non Null Date, Time, and Timestamp columns.

### 3.2.11  Foreign Key Constraints

Referential integrity is enforced by the application. You should not define foreign key constraints in the database except for the tables where the partition is required. Indexes are created on most of Foreign Key columns to increase performance. However, in the specific case of ILM implementation, some of the tables require Foreign Key constraints due to the referential partitioning.

## 3.3  Standard Columns

This section discusses the rules applied to standard columns and the attributes that are associated with these objects.

### 3.3.1  Owner Flag

Owner Flag (OWNER_FLG) columns exist on the system tables that are shared by multiple products. Oracle Utilities Application Framework limits the data modification of the tables that have owner flag to the data owned by the product.

### 3.3.2  Version

The Version column is used to for optimistic concurrency control in the application code. Add the Version column to all tables that are maintained by a Row Maintenance program.

# 4.   Exadata Database Settings

If you are using the Oracle Exadata Database machine as the database server, ensure that you do the following:

- Use the Write-Back Flash Cache feature to leverage the Exadata Flash hardware
- Use the Exadata Smart Flash Logging feature

**Note:** By default, 512 MB of the Exadata flash is allocated to Smart Flash Logging. This is sufficient enough to handle the load of 300 million transactions daily in TFM.

- Set the temporary tablespace size to at least 600 GB
- Create `CISTS_01` table space to store the `cisadm` objects using the BIGFILE and EXTENT MANAGEMENT LOCAL AUTOALLOCATE clauses. For example:

```
CREATE BIGFILE TABLESPACE CISTS_01 DATAFILE
'+DATAC1/DBNAME/datafile/cists01.dbf' SIZE 800G AUTOEXTEND ON
EXTENT MANAGEMENT LOCAL AUTOALLOCATE;
```

**Note:** Exadata servers can have two types of disks – High Capacity and High Performance. The Exadata throughput may vary depending on the disk type.

# 5. Database Implementation Guidelines

This section outlines the general implementation guidelines for the database components, including:

- Configuration Guidelines
- Implementation Guidelines

## 5.1 Configuration Guidelines

This section describes the general recommendations for configuring various database objects and includes a brief syntax overview. It covers the general aspects of the database objects and does not cover any specific implementation requirements. This section includes the following topics:

- Index
- Temporary and Undo Tablespace
- Transparent Data Encryption Recommendations
- Data Compression Recommendations
- Database Vault Recommendations
- Information Lifecycle Management (ILM) and Data Archiving Support
- Storage Recommendations
- Database Configuration Recommendations
- Database Syntax
- Database Initialization Parameters
- Shrink Tables
- Listener.ora Settings

### 5.1.1 Index

Index recommendations specify points that need to be considered when creating indexes on a table:

1. Indexes on a table should be created according to the functional requirements of the table and not in order to perform SQL tuning.

**Note:** If the implementation creates a CM index on table-columns for which the product already provides an index, then the CM index will be overridden by the base index.

Table indexes become fragmented over time. This affects the database performance. Therefore, you need to rebuild indexes periodically using the following SQL commands:

```
ALTER INDEX MY_IDX REBUILD ONLINE PARALLEL 63 NOLOGGING;

ALTER INDEX MY_IDX NOPARALLEL;

ALTER INDEX MY_IDX LOGGING;
```

## 5.1.2    Temporary and Undo Tablespace

To begin with, we recommend you set the temporary tablespace to at least 100 GB auto extendable till 500 GB and the undo tablespace to at least 100 GB auto extendable till 600 GB. The upper limit of both the tablespaces will vary as per the volume of the data and preferred chunk size of the batch. In addition, we recommend you set the value of undo retention to 50000.

## 5.1.3    Transparent Data Encryption Recommendations

Oracle Utilities supports Oracle Transparent Data Encryption (TDE). Oracle TDE is available by default in Oracle Database Enterprise Edition, but you have to purchase an Oracle Advanced Security license to use it. The application supports tablespace level encryption for all application data. Make sure that the hardware resources are sufficiently sized for this as TDE uses additional hardware resources. The Oracle Advanced Security license is a prerequisite for using TDE.

Please consider the following when implementing TDE:

- Create a wallet folder to store the master key. By default, the wallet folder should be created under `$ORACLE_BASE/admin/<sid>`.

- The wallet containing the master key can be created using the following command:

  `ALTER SYSTEM SET ENCRYPTION KEY AUTHENTICATED BY "KEYPASSWD"`

- The wallet can be closed or opened using the following commands:

  `ALTER SYSTEM SET WALLET OPEN IDENTIFIED BY "KEYPASSWD";`
  `ALTER SYSTEM SET WALLET CLOSE;`

- Column level encryption can be achieved using the following commands:

  `CREATE TABLE <TABLE_NAME> NAME VARCHAR2(200) DEFAULT ' ' NOT NULL, BO_DATA_AREA CLOB ENCRYPT USING 'AES128', BO_STATUS_CD CHAR(12) ENCRYPT USING 'AES128') LOB (BO_DATA_AREA) STORE AS SECUREFILE (CACHE COMPRESS) TABLESPACE <TABLESPACE_NAME>;`

- AES128 is the default encryption algorithm.

- Tablespace level encryption is also supported using the following command:

  `CREATE TABLESPACE <TABLESPACE_NAME> LOGGING DATAFILE '<DATAFILE LOCATION>' SIZE <INITIAL SIZE> REUSE AUTOEXTEND ON NEXT <NEXT SIZE> MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL UNIFORM SIZE <UNIFORM SIZE> ENCRYPTION USING 'AES128' DEFAULT STORAGE(ENCRYPT);`

- Indexed columns can only be encrypted using the NO SALT Option. Salt is a way to strengthen the security of encrypted data. It is a random string added to the data before it is encrypted, causing repetition of text in the clear to appear different when encrypted.

## 5.1.4    Data Compression Recommendations

Oracle Utilities supports Advanced Data Compression, available with Oracle 11gR1 onwards, to reduce the database storage footprint. Make sure that your resources are sufficiently sized for this as it uses additional system resources. Compression can be enabled at the Tablespace level or at the Table level.

### 5.1.4.1 Non-Exadata Hardware

For non-Exadata hardware the recommendations are the same as above, except that you cannot use HCC compression (it is only available in Exadata database machine). Instead of HCC, you can use any other compression tool available to you for non-Exadata hardware.

### 5.1.4.2 CLOB Fields

All CLOB fields should be stored as SecureFiles and Medium compressed. This requires a separate license for Advanced Data Compression. As a part of the schema, we create the product- owned tables with compression turned OFF at the LOB level. If you have the license for Advanced Data Compression, you can enable compression by updating the storage.xml.

Oracle 12c onwards:

- Admin and Master Data tables and their indexes will NOT be compressed.
- All Transactional Tables, including ILM enabled MOs shall be compressed.
- Compression will be done at the tablespace level.
- All multicolumn indexes on transactional/ILM tables will be compressed.
  Use 'compress advanced low'

## 5.1.5 Database Vault Recommendations

The product supports Database Vault. All non-application User IDs can be prevented from using DDL or DML statements against the application schema. So SYS and SYSTEM cannot issue DDL or DML statements against `CISADM` schema. The application-specific administration account can issue DDL statements but should not be able to perform any DML or DCL statements. Application user must be given DML only permissions. Database Vault can be used to control access during patch process and Install/Upgrade process.

## 5.1.6 Information Lifecycle Management (ILM) and Data Archiving Support

The product supports data archiving based on Information Lifecycle Management (ILM). For more information, refer to the *Oracle Revenue Management and Billing Information Lifecycle Management Implementation Guide*.

## 5.1.7 Storage Recommendations

This section specifies recommended options for storing the database objects.

### 5.1.7.1 SecureFile for Storing LOBs

The DB_SECUREFILE parameter is used to specify how to store large objects (LOBs) in the database. LOBs can now be stored as SecureFiles or BasicFiles. By default, the value for this parameter is set to PERMITTED in Oracle Database Server 12c or higher. It means the LOBs are allowed to be created as SecureFiles.

**Points to Note:**

- The storage options with SecureFiles for Heap Tables should be ENABLE STORAGE IN ROW, CACHE and COMPRESS.

---

- For the IOT Table the PCTTHRESHOLD 50 OVERFLOW clause should be specified and the storage options with SecureFiles should be ENABLE STORAGE IN ROW, CACHE and COMPRESS.

- The PCTTHRESHOLD should be specified as a percentage of the block size. This value defines the maximum size of the portion of the row that is stored in the Index block when an overflow segment is used.

- The CHUNK option for storage, which is the data size used when accessing or modifying LOB values, can be set to higher than one database block size if big LOBs are used in the IO Operation.

- For SecureFiles, ensure that the `db_securefile` initialization parameter is set to `ALWAYS`.

- The Tablespace where you are creating the SecureFiles should be enabled with Automatic Segment Space Management (ASSM). In Oracle Database 11g, the default mode of Tablespace creation is ASSM so it may already be set for the Tablespace. If it's not, then you have to create the SecureFiles on a new ASSM Tablespace.

> **Note:**
>
> To enable compression on SecureFiles, you must have an Oracle Advanced Compression license in addition to Oracle Database Enterprise Edition.
>
> If you are using Oracle Database Enterprise Edition, you must ensure that the COMPRESS flag is set to Y in the `Storage.xml` file. Refer to the [Database Syntax](#) section for more information on SecureFiles.

## 5.1.8    Database Configuration Recommendations

This section specifies the recommended methods for configuring the database with a focus on specific functional area.

### 5.1.8.1    Large Redo Log File Sizes

The Redo Log files are written by the Log Writer Background process. These log files are written in a serial manner. Once a log file is full, a log switch occurs and the next log file starts getting populated.

It is recommended that the size of the Redo Log files should be sufficiently high so that you do not see frequent Log Switches in the alert logs of the database. Frequent Log Switches impact the IO performance and can be avoided by having a larger Redo Log File size.

We recommend you set the redo log file size to at least 4GB or more depending on the volume of transactions. This will help you to ensure that there are not more than 5 to 6 log switches per hour.

## 5.1.9    Database Syntax

This sections contains the following topics:

### 5.1.9.1    SecureFile

```
CREATE TABLE <Table_Name>
(COLUMN1 ..., COLUMN2 (CLOB))
LOB(COLUMN2) STORE AS SECUREFILE (CACHE COMPRESS);
```

```
CREATE TABLE <Table_Name>
(COLUMN1 ..., COLUMN2 (CLOB) CONTRAINT <> PRIMARY KEY(...))
ORGANIZATION INDEX PCTTHRESHOLD 50 OVERFLOW
LOB(COLUMN2) STORE AS SECUREFILE (ENABLE STORAGE IN ROW CHUNK CACHE
COMPRESS);
```

## 5.1.10 Database Initialization Parameters

This section recommends value for each parameter in the `init.ora` file. These parameters are a starting point for database tuning. The actual or optimal value for a production environment may differ from one deployment to another.

The following recommendations must be treated as guidelines and not as the actual values:

| Parameter | Recommended Value | Modifiable in Pluggable Database (PDB) |
|---|---|---|
| DB_CACHE_SIZE | 4G | Yes |
| LOG_CHECKPOINT_INTERVAL | 0 | No |
| MEMORY_MAX_TARGET | 40-50% of total available RAM on the node | No |
| MEMORY_TARGET | Value should be less than or equal to the value set for the MEMORY_MAX_TARGET parameter and at the same time it should be greater than or equal to the sum of SGA_TARGET and PGA_AGGREGATE_TARGET | Yes |
| OPTIMIZER_INDEX_CACHING | 0<br><br>**Note:** The value for this parameter should not be changed because it can drastically degrade the batch performance. | Yes |
| OPTIMIZER_INDEX_COST_ADJ | 100<br><br>**Note:** The value for this parameter should not be changed because it can drastically degrade the batch performance. | Yes |
| PGA_AGGREGATE_TARGET | 2G | Yes |
| PROCESSES | 3000 | No |

| Parameter | Recommended Value | Modifiable in Pluggable Database (PDB) |
|---|---|---|
| SESSION_CACHED_CURSORS | 500 | Yes |
| SESSIONS | 4500 | Yes |
| SGA_MAX_SIZE | 70-80% of the value defined for the MEMORY_MAX_TARGET parameter | No |
| SGA_TARGET | 50-70% of the value defined for the MEMORY_TARGET parameter | Yes |
| STATISTICS_LEVEL | TYPICAL or ALL<br><br>**Note:** This parameter is mandatory when you want to use automatic memory management. | Yes |
| TRANSACTIONS | 3000 | No |
| OPEN_CURSORS | 500 | Yes |
| STREAMS_POOL_SIZE | 200M | Yes |
| OPTIMIZER_ADAPTIVE_PLANS | TRUE<br><br>**Note:** By default, the value is set to TRUE. We recommend you set the value to TRUE from 12.2 onwards. | Yes |
| OPTIMIZER_ADAPTIVE_STATISTICS | FALSE<br><br>**Note:** By default, the value is set to FALSE. We recommend you set the value to FALSE from 12.2 onwards. | Yes |
| PARALLEL_DEGREE_POLICY | Manual<br><br>**Note:** By default, the value is set to **Manual**. We recommend you use the default value. Otherwise, an error might occur while installing ORMB. | Yes |

| Parameter | Recommended Value | Modifiable in Pluggable Database (PDB) |
|---|---|---|
| CURSOR_SHARING | EXACT<br><br>**Note:** By default, the value is set to **EXACT**. We recommend you use the default value. Otherwise, the system performance would be impacted. | Yes |
| CPU_MIN_COUNT | Value should be specific to the server. Client DBA should decide the value.<br><br>**Note:** This parameter specifies the minimum number of CPUs required by a pluggable database (PDB) at any given time. This enables you to control each PDBs minimum share of CPU utilization within a container database (CDB). | Yes |
| MAX_DATAPUMP_PARALLEL_PER_JOB | Recommend range of values - 1 to 1024<br><br>**Note:** This parameter specifies the maximum number of parallel Oracle Data Pump jobs per PDB. By default, the value is set to 50. You can change the value and set it as per the requirement. | Yes |
| LOB_SIGNATURE_ENABLE | TRUE<br><br>**Note:** If this parameter is set to **TRUE**, then when you create a large object (LOB), Oracle Database automatically assigns a signature to the LOB locator. | Yes |

For example, we recommend you specify the following values for 100 GB of RAM when the Automatic Memory Management (AMM) is enabled:

```
MEMORY_MAX_TARGET = 60G
MEMORY_TARGET = 60G
STATISTICS_LEVEL = TYPICAL
```

For example, we recommend you specify the following values for 100 GB of RAM when the Automatic Shared Memory Management (ASMM) is enabled:

```
SGA_TARGET = 40G
SGA_MAX_SIZE = 40G
DB_CACHE_SIZE = 4G
PGA_AGGREGATE_TARGET = 20G
STATISTICS_LEVEL = TYPICAL
```

## 5.1.11  Shrink Tables

A large number of rows are inserted and then deleted from the following three tables:

- CI_TXN_DTL_PRITM_SUMMARY
- CI_TXN_DETAIL_STG
- CI_ROLLBACK_TXN_DETAIL

Therefore, these tables need to be shrunk periodically. This activity should be carried out when no other transactions are active on the database.

1. Extract and keep the DDL scripts for all the existing indexes on the above tables from the data dictionary.
2. Drop all the indexes on the above tables.
3. Shrink the tables by executing following statements using SQL client:

```
ALTER TABLE CI_TXN_DTL_PRITM_SUMMARY ENABLE ROW MOVEMENT;
ALTER TABLE CI_TXN_DTL_PRITM_SUMMARY SHRINK COMPACT;
ALTER TABLE CI_TXN_DETAIL_STG ENABLE ROW MOVEMENT;
ALTER TABLE CI_TXN_DETAIL_STG SHRINK COMPACT;
ALTER TABLE CI_ROLLBACK_TXN_DETAIL ENABLE ROW MOVEMENT;
ALTER TABLE CI_ROLLBACK_TXN_DETAIL SHRINK COMPACT;
```

   Alternatively, you can shrink the tables by executing the following statements during the non-peak hours which will adjust high water mark to reclaim the space:

```
ALTER TABLE CI_TXN_DTL_PRITM_SUMMARY ENABLE ROW MOVEMENT;
ALTER TABLE CI_TXN_DTL_PRITM_SUMMARY SHRINK;
ALTER TABLE CI_TXN_DETAIL_STG ENABLE ROW MOVEMENT;
ALTER TABLE CI_TXN_DETAIL_STG SHRINK;
ALTER TABLE CI_ROLLBACK_TXN_DETAIL ENABLE ROW MOVEMENT;
ALTER TABLE CI_ROLLBACK_TXN_DETAIL SHRINK;
```

4. Recreate all the indexes using scripts generated in step 1 above.

You can execute these statements either manually or through a batch process which is configured to run at regular interval.

**Note:** Shrink operations can be performed only on segments in locally managed tablespaces with Automatic Segment Space Management (ASSM).

Once the above statements are executed, you must gather statistics using the following statements:

```
BEGIN
DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM',
TABNAME=>'CI_TXN_DTL_PRITM_SUMMARY', GRANULARITY=>'ALL',
CASCADE=>TRUE, METHOD_OPT=>'FOR ALL COLUMNS SIZE AUTO', DEGREE=>32);
DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM',
TABNAME=>'CI_TXN_DETAIL_STG', GRANULARITY=>'ALL',CASCADE=>TRUE,
METHOD_OPT=>'FOR ALL COLUMNS SIZE AUTO', DEGREE=>32);
DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM',
TABNAME=>'CI_ROLLBACK_TXN_DETAIL', GRANULARITY=>'ALL', CASCADE=>TRUE,
METHOD_OPT=>'FOR ALL COLUMNS SIZE AUTO', DEGREE=>32);
END;
```

### 5.1.12  Listener.ora Settings

In the Oracle 12c container database, the client must specify a service name in order to connect to the pluggable database. If you have hard-coded connect descriptors to use SID to connect to the database, then the following error occurs:

"ORA-12505: TNS: LISTENER DOES NOT CURRENTLY KNOW OF SID GIVEN IN CONNECT DESCRIPTOR TIPS"

It means the database connection has failed. You can resolve the problem using the `USE_SID_AS_SERVICE_listener_name` parameter in the `listener.ora` file. If you set the `USE_SID_AS_SERVICE_listener_name` parameter to `on`, it instructs the listener to use the SID in the connect descriptor as a service name and connect the client to the specified database. By default, the parameter is set to **off**.

Once you set the parameter to **on**, you need to bounce or reload the listener.

# 5.2  Implementation Guidelines

This section provides specific guidelines for implementing Oracle Database.

## 5.2.1   Materialized View

Oracle Database Enterprise Edition supports query rewrite using Materialized view. If you use Oracle Database Enterprise Edition, you can create the following Materialized Views to improve the performance of the Monitor batch jobs.

**Prerequisite:-**

Please make sure the following:

1.  Set the `QUERY_REWRITE_ENABLED` parameter to `TRUE` at database level using either of the following command:

    ```
    ALTER SYSTEM SET QUERY_REWRITE_ENABLED=TRUE;
    ```
    OR
    ```
    ALTER SYSTEM SET QUERY_REWRITE_ENABLED=TRUE SCOPE=BOTH;
    ```

2.  To create a materialized view in another user's schema: You must have the CREATE ANY MATERIALIZED VIEW system privilege. The owner of the materialized view must have the CREATE TABLE system privilege. The owner must also have access to any master tables of the materialized view that the schema owner does not own (for example, if the master tables are on a remote database) and to any materialized view logs defined on those master tables, either through a SELECT object privilege on each of the tables or through the SELECT ANY TABLE system privilege.

3.  To create a refresh-on-commit materialized view (ON COMMIT REFRESH clause), in addition to the preceding privileges, you must have the ON COMMIT REFRESH object privilege on any master tables that you do not own or you must have the ON COMMIT REFRESH system privilege.

    To create the materialized view with query rewrite enabled, in addition to the preceding privileges: If the schema owner does not own the master tables, then the schema owner must have the GLOBAL QUERY REWRITE privilege or the QUERY REWRITE object privilege on each table outside the schema.

```
CREATE MATERIALIZED VIEW F1_BO_LIFECYCLE_STATUS_MVW
(
BUS_OBJ_CD,
LIFE_CYCLE_BO_CD,
BO_STATUS_CD,
BATCH_CD
)
BUILD IMMEDIATE REFRESH ON COMMIT ENABLE QUERY REWRITE AS SELECT
BO2.BUS_OBJ_CD, BO.LIFE_CYCLE_BO_CD, BOSA.BO_STATUS_CD,
LCBOS.BATCH_CD AS
LC_BATCH_CD
FROM
F1_BUS_OBJ BO2,
F1_BUS_OBJ BO,
F1_BUS_OBJ_STATUS LCBOS,
F1_BUS_OBJ_STATUS_ALG BOSA
WHERE
BO2.LIFE_CYCLE_BO_CD = BO.LIFE_CYCLE_BO_CD AND
BO.BUS_OBJ_CD = BOSA.BUS_OBJ_CD AND
BOSA.BO_STATUS_SEVT_FLG = 'F1AT' AND
LCBOS.BUS_OBJ_CD = BO.LIFE_CYCLE_BO_CD AND
LCBOS.BO_STATUS_CD = BOSA.BO_STATUS_CD
/
CREATE SYNONYM SPLUSR.F1_BO_LIFECYCLE_STATUS_MVW FOR
SPLADM.F1_BO_LIFECYCLE_STATUS_MVW;
GRANT SELECT ON F1_BO_LIFECYCLE_STATUS_MVW TO FW_DEV;
GRANT SELECT ON F1_BO_LIFECYCLE_STATUS_MVW TO SPL_USER;
GRANT SELECT ON F1_BO_LIFECYCLE_STATUS_MVW TO SPL_READ;
```

For more information, refer to the following documents:

| Topic | Reference URL |
|-------|---------------|
| Basic Query Rewrite (Oracle 11g) | https://docs.oracle.com/cd/B28359_01/server.111/b28313/qrbasic.htm |
| Basic Query Rewrite for Materialized Views (Oracle 12c) | https://docs.oracle.com/database/121/DWHSG/qrbasic.htm#DWHSG01813 |
| Troubleshooting Materialized Views | http://docs.oracle.com/database/121/ARPLS/d_mview.htm#ARPLS67193 |
| Debugging Materialized Views | http://docs.oracle.com/cd/B28359_01/server.111/b28313/qradv.htm |

**Known Issues:**

The following are some of the known issues at the time of release. For more information, refer to these articles on My Oracle Support:

- *Query Did Not Rewrite For A User Other Than The Owner Of the Materialized View (Document ID: 1594725.1)* - A patch is available for the 14772096 bug for some platforms.
- *Query rewrite not working as expected with SELECT DISTINCT (Document ID: 7661113.8)* – A bug reported in Oracle Database 11.2.0.1 and 11.1.0.7 and fixed in Oracle Database 12.1.0.1 (Base Release), 11.2.0.2 (Server Patch Set).

## 5.2.2   Increase INITRANS Values

It has been observed that while executing few batches in ORMB, customers encounter deadlock issue. Therefore, we strongly recommend to increase the INITRANS value of tables with high concurrent DML. The INITRANS values can be set as per the customer's data volume. To increase the INITRANS values of the required tables and indexes:

1. Connect to the ORMB database using any SQL client (such as Oracle SQL Developer or PL/SQL Developer) and the `cisadm` credentials.
2. Use the ALTER statement to modify the INITRANS values of the required tables.

   For example, you can increase the INITRANS value of the CI_BILL table using the following SQL statement:

   ```
   ALTER TABLE CISADM.CI_BILL INITRANS 20;
   ```

3. Use the ALTER statement to modify the INITRANS values of the required indexes.

   For example, you can increase the INITRANS value of the indexes using the following SQL statement:

   ```
   ALTER INDEX XT033P0 INITRANS 40;
   ALTER INDEX XT033S1 INITRANS 40;
   ALTER INDEX XT033S2 INITRANS 40;
   ALTER INDEX XT033S3 INITRANS 40;
   ALTER INDEX XT033S4 INITRANS 40;
   ALTER INDEX XT033S5 INITRANS 40;
   ```

With the above ALTER statements, the INITRANS applies only to the data blocks subsequently allocated for the table. It will not modify the existing data blocks. To apply the changes to the existing data blocks/extents, use the ALTER statement with MOVE command during the maintenance period. With the MOVE command, all indexes of the table become unusable and therefore, you will have to rebuild the indexes of the tables. For example, you can increase the INITRANS value of the CI_BILL table using the following ALTER TABLE MOVE command:

```
ALTER TABLE CI_BILL MOVE ONLINE INITRANS 20 NOLOGGING;
```

And, you can increase the INITRANS value of the indexes using the following ALTER INDEX REBUILD command:

```
ALTER INDEX XT033P0 REBUILD ONLINE INITRANS 40 NOLOGGING;

ALTER INDEX XT033S1 REBUILD ONLINE INITRANS 40 NOLOGGING;

ALTER INDEX XT033S2 REBUILD ONLINE INITRANS 40 NOLOGGING;

ALTER INDEX XT033S3 REBUILD ONLINE INITRANS 40 NOLOGGING;

ALTER INDEX XT033S4 REBUILD ONLINE INITRANS 40 NOLOGGING;

ALTER INDEX XT033S5 REBUILD ONLINE INITRANS 40 NOLOGGING;
```

## 5.2.3    Table Partitioning Strategy

Partitioning is powerful functionality that allows tables, indexes, and index-organized tables to be subdivided into smaller pieces, enabling these database objects to be managed and accessed at a finer level of granularity. Oracle provides a comprehensive range of partitioning schemes to address every business requirement. We recommend you partition those tables where the customers have considerable amount of data. This helps to manage data and ensure consistent system performance with the increasing data.

You need to partition the master and child tables in such a way that the referential integrity is not hampered. There are many partitioning strategies which can be used to partition tables. However, we recommend you partition the following tables using the partition type and keys as mentioned in the below table:

**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 about the sample partitioning scripts, contact Oracle Revenue Management and Billing Support team.

| Module Name | Table Name | Child Table Name | Partition Type | Partition Key | Sub-Partition Key |
|---|---|---|---|---|---|
| Transaction Feed Management (TFM) | CI_TXN_DETAIL | | RANGE (DATE INTERVAL) | CURR_SYS_PRCS_DT | - |
| | CI_TXN_DTL_PR ITM | | RANGE (DATE INTERVAL) | CURR_SYS_PRCS_DT | - |
| | CI_ROLLBACK_T XN_DETAIL | | RANGE (DATE INTERVAL) | CURR_SYS_PRCS_DT | - |
| | CI_TXN_DETAIL _EXCP | | RANGE (DATE INTERVAL) | CURR_SYS_PRCS_DT | - |
| | CI_TXN_CALC | | RANGE (DATE INTERVAL) | ILM_DT | - |
| | CI_TXN_SQ | | RANGE (DATE INTERVAL) | ILM_DT | - |
| | CI_TXN_CALC_L N | | RANGE (DATE INTERVAL) | ILM_DT | - |
| | CI_TXN_CALC_L N_CHAR | | RANGE (DATE INTERVAL) | ILM_DT | - |
| Billing | CI_BILL | | RANGE (DATE INTERVAL) | ILM_DT | BILL_ID |
| | | CI_BILL_CHA R | REFERENCE | BILL_ID | - |

| Module Name | Table Name | Child Table Name | Partition Type | Partition Key | Sub-Partition Key |
|---|---|---|---|---|---|
| | | CI_BILL_EXCP | REFERENCE | BILL_ID | - |
| | | CI_BILL_MSG_PRM | REFERENCE | BILL_ID | - |
| | | CI_BILL_ROUTING | REFERENCE | BILL_ID | - |
| | | CI_BILL_SA | REFERENCE | BILL_ID | - |
| | | CI_BILL_ACH | REFERENCE | BILL_ID | - |
| | | CI_BILL_MSGS | REFERENCE | BILL_ID | - |
| | | CI_BILL_LOG | REFERENCE | BILL_ID | - |
| | CI_BSEG | | RANGE (DATE INTERVAL) | ILM_DT | BSEG_ID |
| | | CI_BSEG_CALC | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_CALC_LN | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_CL_CHAR | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_EXCP | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_ITEM | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_MSG | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_READ | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_SQ | REFERENCE | BSEG_ID | - |
| | | CI_BSEG_EXT | REFERENCE | BSEG_ID | - |
| | CI_ADJ | | RANGE (DATE INTERVAL) | ILM_DT | ADJ_ID |
| | | CI_ADJ_APREQ | REFERENCE | ADJ_ID | - |

| Module Name | Table Name | Child Table Name | Partition Type | Partition Key | Sub-Partition Key |
|---|---|---|---|---|---|
| | | CI_ADJ_CALC_LN | REFERENCE | ADJ_ID | - |
| | | CI_ADJ_CHAR | REFERENCE | ADJ_ID | - |
| | | CI_ADJ_CL_CHAR | REFERENCE | ADJ_ID | - |
| | CI_BILL_CHG | | RANGE (DATE INTERVAL) | ILM_DT | BILLABLE_CHG_ID |
| | | CI_BCHG_READ | REFERENCE | BILLABLE_CHG_ID | - |
| | | CI_BCHG_SQ | REFERENCE | BILLABLE_CHG_ID | - |
| | | CI_BILL_CHG_CHAR | REFERENCE | BILLABLE_CHG_ID | - |
| | | CI_B_CHG_LINE | REFERENCE | BILLABLE_CHG_ID | - |
| | | CI_B_LN_CHAR | REFERENCE | BILLABLE_CHG_ID | - |
| Payment | CI_PAY | | RANGE (DATE INTERVAL) | ILM_DT | PAY_ID |
| | | CI_PAY_CHAR | REFERENCE | PAY_ID | - |
| | | CI_PAY_EXCP | REFERENCE | PAY_ID | - |
| | | CI_PAY_SEG | REFERENCE | PAY_ID | - |
| | CI_PAY_EVENT | | RANGE (DATE INTERVAL) | ILM_DT | PAY_EVENT_ID |
| | | CI_PAY_EVT_EXCP | REFERENCE | PAY_EVENT_ID | - |
| | | CI_PEVT_DST_DTL | REFERENCE | PAY_EVENT_ID | - |
| | | CI_PAY_TNDR | REFERENCE | PAY_EVENT_ID | - |
| | CI_PAY_TNDR | | REFERENCE | PAY_EVENT_ID | - |
| | | CI_APAY_CLR_STG | REFERENCE | PAY_TENDER_ID | - |

| Module Name | Table Name | Child Table Name | Partition Type | Partition Key | Sub-Partition Key |
|---|---|---|---|---|---|
| | | CI_PAY_TNDR_CHAR | REFERENCE | PAY_TENDER_ID | - |
| Financial Transaction | CI_FT | | RANGE (DATE INTERVAL) | ILM_DT | FT_ID |
| | | CI_FT_GL | REFERENCE | FT_ID | - |
| | | CI_FT_PROC | REFERENCE | FT_ID | - |
| | | CI_FT_GL_EXT | REFERENCE | FT_ID | - |
| | | C1_FT_EXT_CHAR | REFERENCE | FT_ID | - |
| | | C1_FT_EXT | REFERENCE | FT_ID | - |
| Membership | CI_MEMBERSHIP | | RANGE (DATE INTERVAL) | ILM_DT | MEMBERSHIP_ID |
| | | CI_MEMBERSHIP_CHAR | REFERENCE | MEMBERSHIP_ID | - |
| | | CI_MEMBERSHIP_PER_CHAR | REFERENCE | MEMBERSHIP_ID | - |
| | | CI_MEMBERSHIP_LOG | REFERENCE | MEMBERSHIP_ID | - |
| | | CI_MEMBERSHIP_PER | REFERENCE | MEMBERSHIP_ID | - |
| | | CI_MEMBERSHIP_SA | REFERENCE | MEMBERSHIP_ID | - |
| | | CI_MEMBERSHIP_LOG_PARM | REFERENCE | MEMBERSHIP_ID | - |
| Entity Audit | C1_AUDIT_EVENT | | RANGE (DATE INTERVAL) | ILM_DT | AUDIT_EVENT_ID |
| | | C1_AUDIT_EVENT_CHAR | REFERENCE | AUDIT_EVENT_ID | - |
| | | C1_AUDIT_EVENT_LOG | REFERENCE | AUDIT_EVENT_ID | - |

| Module Name | Table Name | Child Table Name | Partition Type | Partition Key | Sub-Partition Key |
|---|---|---|---|---|---|
| | | C1_AUDIT_EVENT_LOG_PARM | REFERENCE | AUDIT_EVENT_ID | - |
| Inbound Message | C1_INBOUND_MESSAGE | | RANGE (DATE INTERVAL) | ILM_DT | C1_INBOUND_MESSAGE_ID |
| | | C1_INBOUND_MESSAGE_CHAR | REFERENCE | C1_INBOUND_MESSAGE_ID | - |
| | | C1_INBOUND_MESSAGE_LOG | REFERENCE | C1_INBOUND_MESSAGE_ID | - |
| | | C1_INBOUND_MESSAGE_LOG_PARM | REFERENCE | C1_INBOUND_MESSAGE_ID | - |
| Pricing Calculation | CI_PRCE_CALC | | RANGE (DATE INTERVAL) | ILM_DT | PRCE_CALC_ID |
| | | CI_PRCE_CALC_LN | REFERENCE | PRCE_CALC_ID | - |
| | | CI_PRCE_CALC_PARAMS | REFERENCE | PRCE_CALC_ID | - |
| Match Event | CI_MATCH_EVT | | RANGE | MATCH_EVT_ID | - |
| Membership Repricing | CI_REPRC_REQ_DTL | | RANGE | REPRC_ENTITY_ID | - |
| | CI_REPRC_ENTITY_DTL | | RANGE | PREPRCS_REQ_ID | - |

You can use either of the following approach for partitioning tables:

- **Offline Partitioning (Using Export and Import for Table Partitioning)** – In this approach, you need to do the following:
  - Export data from the tables using the Oracle Export Data Pump functionality (i.e. expdp) with the **Data Only** option.
  - Drop the tables and recreate them with partition.
  - Import the data in the tables using the Oracle Import Data Pump functionality (i.e. impdp).
  - Create the indexes for the tables.

  **Disadvantage of using this approach:** It requires downtime.

**Advantage of using this approach:** It is faster than online partitioning. It takes approximately 12 hours for 1 TB data using 32 parallel servers execution.

- **Online Partitioning (Using the Alter Table Command for Table Partitioning)** – You can convert the table to a partitioned table using the ALTER TABLE ... MODIFY command.

    **Disadvantage of using this approach:** It requires more time than offline partitioning. It takes approximately 17 hours for 1 TB data using 32 parallel servers execution.

    **Advantage of using this approach:** It does not require downtime.

## 5.2.4　Performance Monitoring

SQLTXPLAIN, also known as SQLT, is a tool provided by Oracle Server Technologies. It enables users to analyze and tune the performance of a single SQL statement. SQLT inputs one SQL statement and outputs a set of diagnostics files. These output files are commonly used to diagnose SQL statements performing poorly. SQLT connects to the database and collects execution plans, Cost-based Optimizer CBO statistics, schema objects metadata, performance statistics, configuration parameters, and similar elements that influence the performance of the SQL being analyzed.

Refer to the *All About the SQLT Diagnostic Tool (Document ID: 215187.1)* article on My Oracle Support for more information about:

- How to install SQLT
- How to determine the SQL_ID for an SQL Statement
- How to interpret the SQLTXPLAIN Main report

Another tool named Automatic Workload Repository (AWR) is used to collect performance statistics including:

- Wait events used to identify performance problems
- Gather system and session statistics
- Object usage statistics
- Resource intensive SQL statements

To generate the AWR report, refer to the *How to Create an AWR Report at the PDB level on 12.2 or later (Document ID: 2334006.1)* article on My Oracle Support for more information.

## 5.2.5　Local Undo Mode in Oracle Database 12c Release 2

In Oracle Database 12c Release 2, each container in an instance can use its own undo tablespace. This new undo management mechanism is called local undo mode. Some of the new multitenant features in 12.2 rely on local undo. We recommend you set local undo for each pluggable database (PDB).

If you are upgrading from Oracle Database 12c Release 1, then change the undo mode from Shared to Local.

To view the current undo mode, use the following code snippet:

```
Column property_name format a30

Column property_value format a30

Select  property_name,  property_value  from  database_properties  where
property_name = 'LOCAL_UNDO_ENABLED';
```

The above query indicates the undo mode which is currently used. For example:

```
PROPERTY_NAME                      PROPERTY_VALUE

---------------------------   -----------------------------

LOCAL_UNDO_ENABLED                 TRUE
```

## 5.2.6 Memory Resource Management for PDBs in Oracle Database 12c Release 2

In the previous release of Oracle Database, there was no way to control the amount of memory used by an individual pluggable database (PDB). Oracle Database 12c Release 2 (12.2) allows you to control the amount of memory used by a PDB, making consolidation more reliable.

You can set the following memory parameters at the pluggable database level:

- **DB_CACHE_SIZE** - The minimum buffer cache size for the pluggable database.
- **SHARED_POOL_SIZE** - The minimum shared pool size for the pluggable database.
- **PGA_AGGREGATE_LIMIT** - The maximum PGA size for the pluggable database.
- **PGA_AGGREGATE_TARGET** - The target PGA size for the pluggable database.
- **SGA_MIN_SIZE** - The minimum SGA size for the pluggable database.
- **SGA_TARGET** - The maximum SGA size for the pluggable database.

The process of setting memory parameters for a pluggable database is similar to setting memory parameters for a regular instance.

## 5.2.7 Global Optimizer Statistics Settings

We recommend you implement some standard settings as mentioned in this section which will help to gather statistics in a faster way.

### 5.2.7.1 Setting Stale Percentage

Oracle determines whether the object need statistics by validating the `STALE_STATS` and `STALE_PERCENT` values. Using the following code snippet, you can collect statistics for even single row level updates for the non-partitioned and partitioned tables:

```
BEGIN

DBMS_STATS.SET_GLOBAL_PREFS('STALE_PERCENT', 0);

END;
```

You can verify the setting using the following SQL statement:

```
SELECT DBMS_STATS.GET_PREFS('STALE_PERCENT') FROM DUAL;
```

### 5.2.7.2 Incremental Statistics Gathering

We recommend you enable the incremental statistics gathering feature only for partitioned tables. This feature not only reduces the time it takes to gather global statistics, but also increases the statistics

accuracy. This feature avoids scanning whole table when computing global statistics and derives it from partition level statistics.

Set the INCREMENTAL option to TRUE for every partitioned table in the CISADM schema and set its stale percent as shown in the following code snippet:

```
BEGIN

DBMS_STATS.SET_TABLE_PREFS(NULL,'TABLE_NAME','INCREMENTAL','TRUE');

END;

BEGIN

DBMS_STATS.SET_GLOBAL_PREFS('INCREMENTAL_STALENESS',
'USE_STALE_PERCENT');

END;
```

You can verify the setting using the following SQL statement:

```
SELECT DBMS_STATS.GET_PREFS('INCREMENTAL') FROM DUAL;
```

### 5.2.7.3   Setting Auto Degree

Gathering statistics with auto sample size initiates full table scans to inspect table data. We can leverage parallel execution to make these scans complete in less time. We recommend you set the AUTO_DEGREE property at the global level using the following code snippet:

```
BEGIN

DBMS_STATS.SET_GLOBAL_PREFS('DEGREE', DBMS_STATS.AUTO_DEGREE)

END;
```

### 5.2.7.4   Automatic Statistics Gathering

Oracle Database collects statistics for database objects that do not have statistics or have stale (i.e. out of date) statistics. This is done by an automatic task that executes during a predefined maintenance window. Oracle internally prioritizes the database objects that require statistics so that objects which need statistics on priority are processed first.

You can verify the last auto gather job status using the following SQL statement:

```
SELECT  CLIENT_NAME,  JOB_STATUS,  JOB_START_TIME,  JOB_DURATION  FROM
DBA_AUTOTASK_JOB_HISTORY  WHERE  JOB_START_TIME  >  SYSTIMESTAMP – 3 AND
CLIENT_NAME='AUTO OPTIMIZER STATS COLLECTION'  ORDER  BY  JOB_START_TIME
DESC;
```

If the job is not successfully completed or is incomplete due low maintenance window, then run the optimizer advisor to identify the objects which are not processed in the job. For more information, refer to the Optimizer Statistics Advisor section.

### 5.2.7.5   Concurrent Statistics Gathering

If the concurrent statistics gathering mode is enabled, the database can simultaneously gather optimizer statistics for multiple tables in a schema, or for multiple partitions or sub partitions in a table. Gathering statistics on multiple tables and (sub) partitions concurrently can reduce the overall time it takes to gather statistics by allowing the database server to fully utilize a multi-processor environment.

Before you enable the concurrent statistics gathering mode, you must activate an Oracle Resource Manager Plan. Statistics gathering with parallel and concurrent execution has the potential to consume lots of system resources. In order to control this usage, we need the resource manager plan in place. The aim of this resource manager plan is to control the resources used by the concurrent statistics jobs.

You need to check whether a resource manager plan is active at the database level. If no value is specified for the RESOURCE_MANAGER_PLAN parameter, the database resource manager is not activated. In this case, you should not enable the concurrent statistics gathering mode. Otherwise, the following error will occur:

```
ERROR AT LINE 1:

ORA-20000: UNABLE TO GATHER STATISTICS CONCURRENTLY: RESOURCE MANAGER
IS NOT ENABLED.

ORA-06512: AT "SYS.DBMS_STATS", LINE 34634

ORA-06512: AT LINE 1
```

Assigning a resource plan is a prerequisite for using the concurrent statistics gathering feature. The user must have privileges for the following:

- CREATE JOB
- MANAGE SCHEDULER
- MANAGE ANY QUEUE

You should disable the parallel adaptive multi-user because we are using the parallel execution as part of concurrent statistics gathering. You can disable the parallel adaptive multi-user using the following statement:

```
ALTER SYSTEM SET PARALLEL_ADAPTIVE_MULTI_USER=FALSE
```

By default, the concurrency setting for statistics gathering is turned off. It can be turned on using the following code snippet:

```
BEGIN

DBMS_STATS.SET_GLOBAL_PREFS('CONCURRENT','MANUAL');

END;
```

You can verify the setting using the following SQL statement:

```
SELECT DBMS_STATS.GET_PREFS('CONCURRENT') FROM DUAL;
```

## 5.2.8    Optimizer Statistics Advisor

The Optimizer Statistics Advisor analyzes how optimizer statistics are gathered, and then makes some recommendations on how to improve the statistics gathering strategy in order to provide more efficient statistics to the Cost-Based Optimizer (CBO). This feature is available in Oracle Database 12c Release 2.

### 5.2.8.1    Creating an Optimizer Statistics Advisor Task

The DBMS_STATS.CREATE_ADVISOR_TASK function creates a task for Optimizer Statistics Advisor. You can create an advisor task using the following code snippet:

```
DECLARE

TNAME VARCHAR2(32767);
```

```
RET VARCHAR2(32767);

BEGIN

TNAME := 'RMB_ADVISOR_16';

RET := DBMS_STATS.CREATE_ADVISOR_TASK(TNAME);

END;
```

You can view the advisor task using the following SQL statement:

```
SELECT TASK_NAME, ADVISOR_NAME, CREATED, STATUS FROM DBA_ADVISOR_TASKS
WHERE ADVISOR_NAME = 'STATISTICS ADVISOR';
```

## 5.2.8.2    Creating Filters for an Optimizer Advisor Task

Filters are useful for including or excluding a specific set of rules, schemas, or operations from Optimizer Statistics Advisor tasks. The simplest way to create filters is to use the following DBMS_STATS procedures either individually or in combination:

- **CONFIGURE_ADVISOR_OBJ_FILTER** - Use this procedure to include or exclude the specified database schemas or objects.

- **CONFIGURE_ADVISOR_RULE_FILTER** - Use this procedure to include or exclude the specified rules.

- **CONFIGURE_ADVISOR_OPR_FILTER** - Use this procedure to include or exclude the specified DBMS_STATS operations.

In the following code snippet, the 1st filter will disable the advisor for all objects; 2nd, 3rd, and 4th filters will enable the AvoidStaleStats, UseIncremental, and NotUseIncremental rules for the CISADM objects; and 5th, 6th, 7th, and 8th filters will disable the respective rules.

```
DECLARE

FILTER1 CLOB;

FILTER2 CLOB;

FILTER3 CLOB;

FILTER4 CLOB;

FILTER5 CLOB;

FILTER6 CLOB;

FILTER7 CLOB;

FILTER8 CLOB;

BEGIN

FILTER1   :=   DBMS_STATS.CONFIGURE_ADVISOR_OBJ_FILTER(TASK_NAME   =>
'RMB_ADVISOR_16', STATS_ADV_OPR_TYPE => 'EXECUTE', RULE_NAME => NULL,
OWNNAME => NULL, TABNAME => NULL, ACTION => 'DISABLE');


FILTER2   :=   DBMS_STATS.CONFIGURE_ADVISOR_OBJ_FILTER(TASK_NAME   =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
```

```
'AVOIDSTALESTATS', OWNNAME => 'CISADM', TABNAME => NULL, ACTION =>
'ENABLE');


FILTER3    :=    DBMS_STATS.CONFIGURE_ADVISOR_OBJ_FILTER(TASK_NAME    =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
'USEINCREMENTAL', OWNNAME => 'CISADM', TABNAME => NULL, ACTION =>
'ENABLE');

FILTER4    :=    DBMS_STATS.CONFIGURE_ADVISOR_OBJ_FILTER(TASK_NAME    =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
'NOTUSEINCREMENTAL', OWNNAME => 'CISADM', TABNAME => NULL, ACTION =>
'ENABLE');


FILTER5    :=    DBMS_STATS.CONFIGURE_ADVISOR_RULE_FILTER(TASK_NAME    =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
'USECONCURRENT', ACTION => 'DISABLE');


FILTER6    :=    DBMS_STATS.CONFIGURE_ADVISOR_RULE_FILTER(TASK_NAME    =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
'USEDEFAULTPARAMS', ACTION => 'DISABLE');


FILTER7    :=    DBMS_STATS.CONFIGURE_ADVISOR_RULE_FILTER(TASK_NAME    =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
'USEAUTOJOB', ACTION => 'DISABLE');


FILTER8    :=    DBMS_STATS.CONFIGURE_ADVISOR_RULE_FILTER(TASK_NAME    =>
'RMB_ADVISOR_16',   STATS_ADV_OPR_TYPE   =>   'EXECUTE',   RULE_NAME   =>
'USEGATHERSCHEMASTATS', ACTION => 'DISABLE');
END;
```

### 5.2.8.3   Executing an Optimizer Statistics Advisor Task

The DBMS_STATS.EXECUTE_ADVISOR_TASK function executes a task for Optimizer Statistics Advisor. You can execute an advisor task using the following code snippet:

```
DECLARE
TNAME VARCHAR2(32767);
RET VARCHAR2(32767);
BEGIN
TNAME := 'RMB_ADVISOR_16';
RET := DBMS_STATS.EXECUTE_ADVISOR_TASK(TNAME);
END;
```

### 5.2.8.4    Generating a Report for an Optimizer Statistics Advisor Task

We recommend you configure daily job to run the advisor in the non-peak hours and generate the report. The DBMS_STATS.REPORT_ADVISOR_TASK function generates a report for an Optimizer Statistics Advisor task. The report summarizes the findings and rules violated by the findings and lists the recommendations (if any) for the finding. You can view the report using the following SQL statement:

```
SELECT
DBMS_STATS.REPORT_ADVISOR_TASK('RMB_ADVISOR_16',NULL,'TEXT','ALL','ALL
') AS REPORT FROM DUAL;
```

### 5.2.8.5    Implementing Optimizer Statistics Advisor Recommendations

You can implement all recommendations given by the advisor automatically or manually. You can use the following code snippet to implement all recommendations automatically:

```
DECLARE

TNAME VARCHAR2(32767);

RET VARCHAR2(32767);

BEGIN

TNAME := 'RMB_ADVISOR_16';

RET := DBMS_STATS.IMPLEMENT_ADVISOR_TASK(TNAME);

END;
```

Alternatively, you can implement the recommendations manually for each table using the following code snippet:

```
BEGIN

DBMS_STATS.GATHER_TABLE_STATS(OWNNAME=>'CISADM', TABNAME=>'TABLE-NAME',
GRANULARITY=>'ALL', CASCADE=>TRUE, METHOD_OPT=>'FOR ALL COLUMNS SIZE
AUTO')

END;
```

## 5.2.9    Using the Segment Advisor

A table may experience large number of updates. As a result, there might be performance issues while executing queries on these tables. In such case, we recommend you use the segment advisor. The segment advisor is used for identifying segments which are candidates for a shrink operation (i.e. releasing unused space and moving the High Water Mark).

The segment advisor can generate the advice with different degrees of granularity. For example, you can generate advice for all objects in a tablespace or for a specific table, index, or partition.

We recommend you run the segment advisor for the following:

- Objects with size more than 50 G or 100 G
- Temporary tables (such as, CI_TXN_DETAIL_STG) where there are large number of insertions and deletions

### 5.2.9.1   Manually Generating Segment Advisor Advice

To run the segment advisor manually, you need to do the following (as shown in the below code snippet):

1. Create a Task
2. Assign an Object to the Task
3. Set the Task Parameters
4. Execute the Task

```
SET SERVEROUTPUT ON
DECLARE
seg_task_id  number;
seg_task_name varchar2(100);
seg_task_desc varchar2(500);
OBJ_ID        number;
BEGIN
seg_task_name := 'ANALYZE_TABLE_DATA';
seg_task_desc := 'Manual Segment Advisor Run for table';

-- Step 1
dbms_advisor.create_task(
advisor_name => 'Segment Advisor',
task_id     => seg_task_id,
task_name   => seg_task_name,
task_desc   => seg_task_desc);

-- Step2
dbms_advisor.create_object(
task_name  => seg_task_name,
object_type => 'TABLE',
attr1       => 'CISADM',
attr2       => 'CI_BSEG_CALC',
attr3       => NULL,
attr4       => NULL,
attr5       => NULL,
object_id  => obj_id);
```

```
-- Step3
dbms_advisor.set_task_parameter(
task_name => seg_task_name,
parameter => 'recommend_all',
value    => 'TRUE');
-- Step4
DBMS_ADVISOR.EXECUTE_TASK(seg_task_name);
FOR cur_rec IN (SELECT f.impact, o.type, o.attr1, o.attr2, f.message,
f.more_info FROM dba_advisor_findings f JOIN dba_advisor_objects o ON
f.object_id  =  o.object_id  AND  f.task_name  =  o.task_name  WHERE
f.task_name = seg_task_name ORDER BY f.impact DESC)
LOOP
DBMS_OUTPUT.put_line('..');
DBMS_OUTPUT.put_line('Type           : ' || cur_rec.type);
DBMS_OUTPUT.put_line('Attr1          : ' || cur_rec.attr1);
DBMS_OUTPUT.put_line('Attr2          : ' || cur_rec.attr2);
DBMS_OUTPUT.put_line('Message        : ' || cur_rec.message);
DBMS_OUTPUT.put_line('More info      : ' || cur_rec.more_info);
END LOOP;
DBMS_ADVISOR.delete_task(task_name => seg_task_name);
EXCEPTION
WHEN OTHERS THEN
DBMS_OUTPUT.put_line('Error                          :   '   ||
DBMS_UTILITY.format_error_backtrace);
DBMS_ADVISOR.delete_task(task_name => seg_task_name);
End;
```

Similarly, you can manually generate segment advisor advice for an index. You just need to change the OBJECT_TYPE to INDEX and specify the index name in the ATTR2 in Step 2.

Using the following SQL statement, you can verify whether the advisor task is completed:

SELECT TASK_NAME, STATUS FROM    DBA_ADVISOR_TASKS WHERE ADVISOR_NAME='SEGMENT ADVISOR' AND TASK_NAME IN (' ANALYZE_TABLE_DATA');

### 5.2.9.2    Viewing Segment Advisor Advice

We recommend you configure daily job to run the advisor for selected objects in the non-peak hours and view the advisory recommendations. The advice will give an estimate about how much space can be reclaimable. Depending upon the estimate given by the segment advisor, you can decide whether to shrink table or not.

### 5.2.9.3    Shrinking Tables

Before you shrink a table, you need to enable row movement for the table using the following SQL statement:

```
ALTER TABLE SEG_TABLE ENABLE ROW MOVEMENT;
```

Then, you can shrink a table using the following SQL statement:

```
ALTER TABLE SEG_TABLE SHRINK SPACE COMPACT;
```

# Appendix A :   New Objects in the Oracle Revenue Management and Billing V3.1.0.0.0 Database

This section lists the objects that are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database. These objects are classified under the following two sections:

- Schema Changes
- New System Data

## A.1    Schema Changes

This section lists schema related changes made in the Oracle Revenue Management and Billing V3.1.0.0.0 database.

## A.1.1   New Tables

The following tables are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Table | Description |
|---|---|
| C1_ACCOUNT_ANOMALY_DETECTED | Account Anomaly Detected |
| C1_BILL_ANOMALY_REQUEST | Bill Anomaly Request |
| C1_BILL_ANOMALY_REQUEST_K | Bill Anomaly Request Key |
| C1_BSEG_ANOMALY_DETECTED | BSEG Anomaly Detected |
| C1_BSEG_ANOMALY_REQUEST | Bill Segment Anomaly Request |
| C1_BSEG_ANOMALY_REQUEST_K | Bill Segment Anomaly Request Key |
| C1_BUS_RULE_RATE_GUARANTEE | Rate Guarantee Business Rule |
| C1_ENROLLED_PROD | Enrolled Product Retail |
| C1_GL_DL_DTL | GLDL Detail Table |
| C1_GL_DL_DTL_K | GL DL Detail Key |
| C1_GL_DL_HDR | GLDL Header Table |
| C1_GL_DL_HDR_K | GL DL Header Key |
| C1_PRODUCT_DTLS | Product Details |
| C1_PRODUCT_DTLS_CHAR | Product Details Characteristic |
| C1_PRODUCT_DTLS_DIV | Product Details Division |
| C1_PRODUCT_DTLS_ELIG | Product Details Eligibility |
| C1_PRODUCT_DTLS_ELIG_DTL | Product Details Eligibility Detail |

| Table | Description |
|---|---|
| C1_PRODUCT_DTLS_ELIG_L | Product Details Eligibility Language |
| C1_PRODUCT_DTLS_L | Product Details Language |
| C1_PRODUCT_DTLS_LINK | Product Details Link |
| C1_PRODUCT_DTLS_LOG | Product Details Log |
| C1_PRODUCT_DTLS_LOG_PARM | Product Details Log Parameter |
| C1_PRODUCT_DTLS_PLIST | Product Details Price List |
| C1_PRODUCT_DTLS_SVC | Product Details Service |
| C1_PRODUCT_SVC | Product Service |
| CI_ACCUM_SSL_MEMBER_DETAILS | Accumulation SSL Member Details |
| CI_MEMBERSHIP_RATE_GUARANTEE | Membership Rate Guarantee |

## A.1.2   Added Columns

The following columns are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
| C1_BILL_LVL | IS_REFERRED_SW | Is Referred | No |
| C1_ENRL_ENTITY | ENROLL_END_BY_SYS_SW | Enroll End Date By System | Yes |
| | ENROLLMENT_ID | Enrollment ID | Yes |
| | ENTITY_CODE | Entity Code | Yes |
| | ENTITY_TYPE | Entity Type | Yes |
| | END_DT | End Date | No |
| | PRIORITY | Priority | Yes |
| | START_DT | Start Date | Yes |
| | VERSION | Version | Yes |
| C1_EXTRACT_TEMPLATE | AUDIT_LOG | Audit Log Required | Yes |
| | ERROR_LOG_SW | Error Log Required | Yes |
| C1_EXTRACT_TEMPLATE_FORMAT | FILE_LEVEL_FLG | File Level | Yes |
| | PAYLOAD_LOG_SW | Payload Log | Yes |
| | XML_NAMESPACE | XML Namespace | No |
| | FILE_NAME_FORMAT | File Name Format | No |

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
| C1_EXTRACT_TEMPLATE_LIST_DTL | XML_NAMESPACE | XML Namespace | No |
| C1_EXTRACT_TEMPLATE_MAPPING | RECORD_IDENTIFIER_SW | Record Identifier | Yes |
| | REQUIRED_SW | Required | No |
| C1_MODEL_PRICEITEM | PRICEITEM_PARM_GRP_ID | Price Item Parameters | Yes |
| C1_PRC_RULE_TYPE_PRICEITEM | RATEGRNT_SW | Rate Guarantee | No |
| | SPONSORED_SW | Sponsored | No |
| C1_PRODUCT | PROD_MNGR | Product Manager | No |
| | PROD_TYP_FLG | Product Type | No |
| | TC_TYPE_CD | Terms and Conditions | No |
| CI_APAY_CLR_STG | C1_RETRY_COUNT | Retry Counter | No |
| CI_APAY_STAGE_UP | LAST_EXTRACT_DT | Last Extract Date | No |
| CI_DATA_EX_REQ | FILENAME | File Name | Yes |
| CI_FT_GL | GL_DL_DTL_ID | GL Detail Id | No |
| CI_MEMBERSHIP_PER | CRE_DTTM | Create Date/Time | No |
| CI_POLICY | ADV_LF_ELIG_SW | Advance Level Funding Eligibility | No |
| CI_POLICY_PLAN_PRO_RULE | PRO_MEMB_TYPE_FLG | Membership Type | No |
| CI_PRCE_CALC | MEMO_SW | Memo Only, No GL | No |
| | NOWAVE_AMT | New Born Waiver Amount | No |
| | PRIMARY_PRICING_RULE_ID | Primary Pricing Rule ID | No |
| | RATE_GRNT_PRICING_RULE_ID | Rate Guarantee Pricing Rule ID | No |
| CI_PRCE_CALC_LN | NEW_BORN_CMT_FLG | New Born Waiver Comment Flag | No |
| CI_REPRC_REQ_DTL | MEMO_SW | Memo Only, No GL | No |
| | PRIMARY_PRICING_RULE_ID | Primary Pricing Rule ID | No |
| | RATE_GRNT_PRICING_RULE_ID | Rate Guarantee Pricing Rule ID | No |

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
| CI_TRL_FT_GL | GL_DL_DTL_ID | GL Detail Id | No |
| CI_TXN_CALC_ACCUM_GRP | ACCT_ID | Account ID | No |
| CI_TXN_DTL_PRITM | BILL_LVL_ID | Bill Level ID | No |
| CI_TXN_DTL_PRITM_STG | BILL_LVL_ID | Bill Level ID | No |

## A.1.3   Dropped Tables

None

## A.1.4   Dropped Columns

None

## A.1.5   Added Views

None

## A.1.6   Column Format Change

The format of the following columns is changed in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Table | Column | From | To |
|---|---|---|---|
| CI_TXN_REC_TYPE_L_UNPIVOT_VW | LANGUAGE_CD | VARCHAR2(3) | CHAR(3) |

# A.2     New System Data

The system data is used to configure various features in Oracle Revenue Management and Billing. This section lists the system data that is newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database.

## A.2.1   Algorithm Types

The following algorithm types are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Algorithm Type | Description |
|---|---|
| C1_APAYUPDT | Update Account Autopay Details on Clearing Record |
| C1_FOPAGING | This Algorithm is created for FOP aging report. |
| C1_PRDPRC_PP | Retail Banking Effective Pricing |
| C1-ANMLYBILL | This algorithm inserts bill level details in anomaly request table |
| C1-ANMLYBSCN | Bill Segment Cancel -Anomaly Status Update |

| Algorithm Type | Description |
|---|---|
| C1-ANMLYBSDL | Bill Segment Delete - Anomaly Status Update |
| C1-ANMLYBSEG | This algorithm inserts bill segment details in anomaly request table |
| C1-APTDRETML | Create Email for Debit Auto Pay Retry |
| C1-BUNDL-VAL | Bundle BO Validation for Retail Banking |
| C1-CUSTACCSA | Customer Account Contract Creation |
| C1-DISREINFO | Discrepancy Report Information |
| C1-ENRLCLSD | BO Transition to Closed Status for retail banking |
| C1-ENRLVAL | Retail Banking Enrollment BO Validation |
| C1-LATESET | Member Person Late Setup Notification |
| C1-MEMRTGRNT | Derive Rate Guarantee details for Individual membership. |
| C1-MP-VAL | Market Product BO Validation for Retail Banking |
| C1-NBORWAGE | Age Based New Born Waiver Calculation |
| C1-NWBORNTR | Tier Based New Born Waiver Calculation |
| C1-OFFER-VAL | Offer BO Validation for Retail Banking |
| C1-PDINFO | Market Product, Offer and Bundle  Information |
| C1-PRDCT-VAL | Product BO Validation for Retail Banking |
| C1-PRDINFO | Product Information |
| C1-PRDPSPR | Product Post Processing |
| C1-PRDTLSRET | Transition Market Product, Offer and Bundle to Retired status |
| C1-PRD-TRN | Transition Product to Retired status |
| C1-RATEGRNT | Rate Guarantee Derivation for Individual Membership |
| C1-TFMERREML | Create Email for TFM Errors |

## A.2.2   Algorithms

The following algorithms are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Algorithm | Description |
|---|---|
| C1_APAYUPDT | Update Account Autopay Details on Clearing Record |
| C1_FOPAGING | This Algorithm is created for FOP aging report. |
| C1_PRDPRC_PP | Retail Banking Effective Pricing |
| C1-ANMLYBILL | This algorithm inserts bill level details in anomaly request table |

| Algorithm | Description |
|---|---|
| C1-ANMLYBSCN | This algorithm will mark the Anomaly Request Bill Segment record status to 'Cancelled' on Bill Segm |
| C1-ANMLYBSEG | This algorithm inserts bill segment details in anomaly request table |
| C1-APTDRETML | Create Email for Debit Auto Pay Retry |
| C1-BNDLINFO | Bundle Information |
| C1-BUNDL-VAL | Bundle BO Validation for Retail Banking |
| C1-CUSTACCSA | Algorithm to create person, account & contracts. |
| C1-DISREINFO | Discrepancy Report Information |
| C1-ENRLCLSD | BO Transition to Closed Status for Retail Banking |
| C1-ENRLVAL | Retail Banking Enrollment BO Validation |
| C1-LATESET | Member Person Late Setup Notification |
| C1-MEMRTGRNT | Derive Rate Guarantee details for Individual membership. |
| C1-MPINFO | Market Product Information |
| C1-MP-VAL | Market Product BO Validation for Retail Banking |
| C1-NBORWAGE | Age Based New Born Waiver Calculation |
| C1-NWBORNTR | Tier Based New Born Waiver Calculation |
| C1-OFFER-VAL | Offer BO Validation for Retail Banking |
| C1-OFFRINFO | Offer Information |
| C1-PRDCT-VAL | Product BO Validation for Retail Banking |
| C1-PRDINFO | Product Information |
| C1-PRDPSPR | Product Post Processing |
| C1-PRDTLSRET | Transition Market Product, Offer, Bundle to Retired status |
| C1-PRD-TRN | Transition Product to Retired status |
| C1-RATEGRNT | Rate Guarantee Derivation for Individual Membership |
| C1-TFMERREML | Create Email for TFM Errors |

## A.2.3   Business Services

The following business services are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Business Service | Description |
|---|---|
| C1_BUNDLEADDEDITSVC | Bundle Add Edit Service |
| C1_MARKETPRODUCT | Market Product Business Service |

| Business Service | Description |
|---|---|
| C1_OFFERADDEDITSVC | Offer Add Edit Service |
| C1_OFFERBUNDSRVC | Offer and Bundle Service |
| C1_PRODUCT | Product Service to Add/ EDIT Products |
| C1_RateInfo | Rate Info |
| C1_SUBMSGSVC | Submit Button Information |
| C1-BINDERPAYBRBS | Retrieve Binder Payment Data Service |
| C1-BusRulRefValServ | Validate Referred Business Rule Id |
| C1-BusRulValAddEdit | Business Rule Value Add Edit Service |
| C1-BusRulValDelete | Business Rule Value Delete Service |
| C1-BusRulValParmSrch | Business Rule Value Parameter Fetch |
| C1-CheckMemberMovement | Check Member moved across Bill Groups |
| C1-DiscountChgPRDisp | Discount Charge price rule display |
| C1-GETBatchNbr | Get Batch Number from Batch Code |
| C1-GetHoldReqStEdDate | Get Hold Request Start and End Date |
| C1-GetMemTypeLookup | List of Membership Type Lookup |
| C1-GETPLDTL | Get pricelist detail |
| C1-GETPRODDIV | Product Division Service |
| C1-GETPRODSER | Get Prod SVC |
| C1-GETPRODSERVC | Get Prod SVC |
| C1-MLJobDetailsSearch | Ml Job Details Search Service |
| C1-MLJobUpdate | Ml Job Update Service |
| C1PRDCTENRL | Product Enrollment Retail Banking |
| C1PRODUCTSR | C1PRODUCTSRVC |
| C1-RetrieveBillCycle | List of Bill Cycle |
| C1-SSLCreditCalculationView | SSL Credit Calculation View |
| C1-STGRECORD | Retrieve Account AutoPay Staging Record |
| C1-TFMEMAILMSG | populate Email Message Content For TFM |
| C1-UpdHoldEntities | Update hold entities |

# A.2.4  Portals

The following portals are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Portal | Description |
|---|---|
| C1_DIV | Division check |
| C1BDLSRC | Bundle Search |
| C1BUNDLE | Product Bundle |
| C1GLDLL | FT GL Drill Down Details |
| C1MPSRC | Market Product Search |
| C1MRP | Market Product |
| C1OFFER | Add New Promo Offer |
| C1OFRSRC | Offer Search |
| C1PDSRC | Market Product |
| C1PRDSRC | Product Search |
| C1PROM | Product Add/Edit |

# A.2.5  Batch Controls

The following batch controls are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Batch Control | Description |
|---|---|
| C1-APRCH | Maintain Additional Information for Staging Record and set t |
| C1-BLUPG | Transaction Upgrade - Stamp Bill Level ID |
| C1-CBIPR | Process Inactivated fully-insured Pricing Rule |
| C1-GATST | Gather stats procedure batch |
| C1-LSUB | Update create date for membership person |
| C1-MLDPR | Batch to prepare historical data for ML |
| C1-MLMCR | Batch to create ML model. |
| C1-MLPRE | Bill readiness ML prediction batch |
| C1-PDTLM | BO Monitor for Market Product,Offer,Bundle |
| C1-PDTRN | Transition for Market Product,Offer,Bundle |
| C1-PRDTR | Product Transition |
| C1-PREBV | Ready to Bill-Account Level Validation |

| Batch Control | Description |
|---|---|
| C1-UPDBL | Update Bill Level |

# A.2.6   Foreign Key References

The following foreign key references are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Foreign Key Reference | Description |
|---|---|
| C1-BLINF | Bundle Information |
| C1-MPINF | Market Product Information |
| C1-OFINF | Offer Information |
| C1-PDINF | Product Information |

# A.2.7   Scripts

The following scripts are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Script | Description |
|---|---|
| C1_CLRLNK | Clear id Navigation |
| C1_MPVAL | Market Product Search - At least one search criteria validation |
| C1_PDVAL | Offer and Bundle Search - At least one search criteria validation |
| C1_PRDVAL | Product  Search - At least one search criteria validation |
| C1_ProdEdit | Product Edit |
| C1_ProdSub | Submit button Information |
| C1_REPCON | Condition Script for Reports Filter |
| C1-AddMrpd | Add Market Product . |
| C1-BILLANOML | UserFilter validation Script |
| C1-BRDefVal | Business Rule Definition Search Filter Validations |
| C1-BRulCrVal | Business Rule Criteria Filter Validations |
| C1-BRValDel | Business Rule Value Delete Action |
| C1-BRValEdit | Business Rule Value Edit Action |
| C1-BusRlSrch | Search Business Rule |
| C1-BUSRULADD | Business Rule ADD UI Maintenance |
| C1-BUSRULEDT | Business Rule EDIT UI Maintenance |
| C1-BusRulSql | Business Rule Type Search - SQL condition |

| Script | Description |
|---|---|
| C1-DISADBCHG | Disaggregation For Billable Charge |
| C1-DISADDPER | Disaggregation For Person |
| C1-DISADPAID | Disaggregation For Price Assignment |
| C1-DISADPRIT | Disaggregation For PriceItem |
| C1-FTGLDrill | Zone Visibility - FT GL Drill Down Display Zone in Portal |
| C1-HldRqEdAl | Hold Request - Hold Edit All Actions |
| C1-loadFTId | Zone Visibility Script to populate FT |
| C1-PGPRSRCH | Search customer Zone |
| C1-PRDIMAGES | Return icon with label |
| C1-ShwIndMem | Zone Visibility - Display Zone for Individual Membership |
| C1-SSLCrDtVw | Display SSL Credits on Accumulation Data |
| C1-TFMERREML | Create Email For TFM Error Summary |
| C1-ValidFTGL | Validation Script for FTGL Drill Down Filter |
| C1-ValPMRole | Validation Script for Product Manager User Name |

## A.2.8   New Zones In Existing Portals

The following new zones are added to the existing portals in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Portal | Zone | Zone Description |
|---|---|---|
| C1ACUDAT | C1-SSLCRDTVW | SSL Credits Calculation Details |
| C1BUSRD | C1-BUSRULVAL | Business Rule Criteria |
| C1BUSRUL | C1-BRRULELOG | Business Rule Log |
| C1DRDIS | C1-DISREPORT | Discrepancy Report |
| C1MEMBSP | C1-MEMRTGRT | Membership Rate Guarantee |
| C1MMCPTB | C1-SPORDCHG | Sponsor Billable Charges |
| C1PLCYPN | C1-PLANPRO | Proration Rules |
| C1PRLCLM | C1-PRDCHG | Discount Charge Pricing Rule |

# A.2.9   Zones

The following zones are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Zone | Description |
| --- | --- |
| C1_BSRUL_SRC | Parameter Search |
| C1_BUNDMAINT | Product Bundle |
| C1_MRMAINT | Market Product |
| C1_OFFRMAINT | Add New Promo Offer |
| C1_ORABILCHG | Billable Charge OraSearch |
| C1_PGPRSERH | Product Group Details |
| C1_PRODMAINT | Product Maintenance |
| C1-BILLANM | Bill Anomaly Search |
| C1-BNDLSRCH | All Bundles |
| C1-BRRULELOG | Business Rule Log |
| C1-BRVALSRCH | Business Rule Criteria Parameters Search |
| C1-BSEGAMLY | Bill Segment Anomaly |
| C1-BSRULSRC | Business Rule Criteria Search |
| C1-BUNDLSRC | Bundle Search |
| C1-BUSRULRG | Rate Guarantee Rules |
| C1-DFVPRMVAL | Predefined Parameter Value Search |
| C1-DISREPORT | Discrepancy Report |
| C1-FTGLDLADJ | Adjustment Details |
| C1-FTGLDLBIL | Bill Segment Details |
| C1-FTGLDLDTL | Financial Transaction Details |
| C1-FTGLDLPAY | Payment Details |
| C1-FTGLDTLRB | FT GL Details |
| C1-FTGLDTLTB | Trial FT GL Details |
| C1-FTGLEXTDT | GL Extract File Details |
| C1-FTGLEXTTD | GL Extract File Details |
| C1-FTGLTRBIL | Bill Segment Details |
| C1-FTGLTRDTL | Financial Transaction Details |
| C1-GETBATCHN | Get Batch Number from Batch Code |

       

| Zone | Description |
|---|---|
| C1-GETMEMMOV | Check if member moved across Bill Groups |
| C1-GETMEMTYP | Fetch Membership Type Lookup |
| C1-HLDSTED | Business Rule Criteria Parameters Search |
| C1-HLTHPLN | Get Health Plan Details from Pricing Rule |
| C1-LATESETUP | Check Late Setup Configuration |
| C1-MEMRTGRT | Membership Rate Guarantee |
| C1-MKTPRD | All Market Products |
| C1-MKTPRDSRC | Market Product Search |
| C1-MLJOBDTL | Search ML Job Details |
| C1-MRPDSRCH | Search Market Product to Offer |
| C1-OFFERSRC | Offer Search |
| C1-OFFRSRH | All Offers |
| C1-ORAGETNBR | Batch Number Search |
| C1-ORASBATCH | Batch Control Search |
| C1-ORATRLNBR | Batch Number Search |
| C1-PLANPRO | Proration Rules |
| C1-PRDCHG | Discount Charge Pricing Rule |
| C1-PRDDTLS | All Products |
| C1-PRODDTLS | My Products |
| C1-PRODSERCH | Product Search |
| C1-PRSVCSER | Product Service Search |
| C1-PRTDDORLE | To Do Role Search |
| C1-REBILLCYC | Bill Cycle List Drop Down |
| C1-SPORDCHG | Sponsor Billable Charges |
| C1-SRCHPDMN | Search Product |
| C1-SRCHPROD | Search Product |
| C1-SSLCRDTVW | SSL Credits Calculation Details |
| C1-STGRECORD | Retrieve Account AutoPay Staging Record |
| C1-VIEWFTGL | Search GL Extract File |

## A.2.10 UI Maps

The following UI maps are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| UI Map | Description |
| --- | --- |
| C1_BundleMaint | Bundle Maintenance Map |
| C1_BundleServiceFrag | Product Service Fragment |
| C1_BUS_RULE_SRCH | Business rule search |
| C1_FEEDTXNL3 | Transaction Level information |
| C1_LEGEND_FRAG | Status legend Fragment |
| C1_MarketProdMaint | Add Market Product |
| C1_MarketProdTrain | Market Product Train |
| C1_OfferMaint | Offer Maintenance Map |
| C1_OffrBunServicesFrag | Offer and Bundle Service |
| C1_OJETLIB1010 | Ojet 10.1.0 lib map |
| C1_PLM_LEGEND | Product Legend |
| C1_PRD_DTL | Product Details For Market Product |
| C1_ProdTrain | Product Train |
| C1_PRODUCT_AppTxn_Display | Display UI Map for PRODUCT Retail Banking |
| C1_PRODUCT_AppTxn_Input | Input UI Map for PRODUCT Retail Banking |
| C1_PRODUCT_AppTxn_ProductInput | Input Display for Retail Product Banking |
| C1_ProductAddMaint | Product Add Maintenance |
| C1_ProductServiceFrag | Product Service Fragment |
| C1_ResizePortalZone | Resize Portal zone |
| C1_ServiceTab | Offer and Bundle Service |
| C1-AddMrpdSrch | Search Market Products to Offer |
| C1-BinderPayAttributeData | Binder Payment Data Display |
| C1-BundleSrchFilter | Bundle Search Filter |
| C1-BusRuleValueMaint | Business Rule Criteria |
| C1-CheckServices | Check Services |
| C1-DISADDUIBCHG | Add Disaggregation Request For Billable Charge |
| C1-DISADDUIPAID | Add Disaggregation Request For Price Assignment |

| UI Map | Description |
|--------|-------------|
| C1-DISADDUIPER | Add Disaggregation Request For Person |
| C1-DISADDUIPITM | Add Disaggregation Request For Price Item |
| C1-EligibilityRuleFrag | Eligibility Rule Fragment |
| C1-EligibilityRuleJsFrag | Java script for Eligibility rule |
| C1-FTGLDrillDLDisplayFlt | FT GL Drill Down Details- Filter |
| C1-FTGLDrillDLDisplayFltN | FT GL Drill Down Details- Filter |
| C1-FTGLDrillDLTrilDisplayFlt | FT GL Drill Down Details- Filter |
| C1-FTGLFTDisplayFitr | FT Details- Filter |
| C1-HoldRecordsEditAll | Edit all Records for Hold Request |
| C1-MarketProdPL | Market Product PriceList |
| C1-MarketProdPLFrag | Market Product PriceList |
| C1-MarketProdSvcFrag | Market Product Services |
| C1-MarketProductSrchFilter | Market Product Search Filter |
| C1-MarkProdCharsMaintFrag | Deal Type Char - Input UI |
| C1-MLJOBDTLS | ML Job Details |
| C1-OfferCharsMaintFrag | Offer Char Fragment |
| C1-OfferSrchFilter | Offer Search Filter |
| C1-OffrBundlePLFrag | Offer and Bundle PriceList |
| C1-PolicyPlanMembershipType | Populate Membership Type Field |
| C1-PricingRuleDisChargeDisp | Display UI for Discount Charge Pricing Rule |
| C1-ProdCharAddDeleteBtn | Characteristics Add/Delete Button |
| C1-ProdCharsMaintFrag | Product char Input Map |
| C1-ProductCharTypeInfo | Characteristic Type Information |
| C1-ProductDivFrag | Product Division Maintenance Fragment |
| C1-ProductSrchFilter | Product Search Filter |
| C1-ProductSrchFilter1 | Product Search Filter |
| C1-ProrationRulesSrchFilter | Proration Rule Search |
| C1-RATEGUABSRLUI | Rate Guarantee Business Rule |
| C1-RMInactiveCustomerUI | RM Inactive Customer Page |
| C1-SrchProdFilterMap | Search Product Filters |

| UI Map | Description |
|---|---|
| C1-SSLCreditCalculationView | View SSL Credit Calculation Details |
| C1-SubmitInfo | Submit Button Information |
| Z1_ProductAddMaint_dup | Product Add Maintenance |

# A.2.11 Lookups

The following lookups are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Field | Field Value | Description |
|---|---|---|
| ANOMALY_STATUS_FLG | IGNR | Ignore |
|  | CLSD | Closed |
|  | CNCL | Cancel |
|  | OPEN | Open |
| BATCH_CD_ALLWD_FLG | BILL | BILLING |
|  | BLPP | C1-BLPPR |
|  | BSGR | BSGENREG |
|  | BLGN | C1-BLGEN |
|  | BOPN | BILLOPEN |
|  | PPRC | POSTPROC |
| BUS_RULE_STATUS | ACTV | Active |
|  | INAC | Inactive |
| ENRL_ACTION_FLAG | E | Edit |
|  | A | Add |
|  | C | Close |
| ENRL_STAT_FLAG | ACTV | Active |
|  | INAC | Inactive |
|  | CLSD | Closed |
| FILE_LEVEL_FLG | BOTH | Both Level File |
|  | BATC | Batch Level File |
|  | RECD | Record Level File |
| ML_ENTITY_TYPE | BILL | Bill |
|  | ALL | ALL |

| Field | Field Value | Description |
|---|---|---|
| | BSEG | Bill Segment |
| ML_JOB_STATUS | COMP | Complete |
| | PEND | Pending |
| | IPRG | In Progress |
| | EROR | Error |
| ML_JOB_TYPE | MDBL | Model Build |
| | DTPR | Data Preparation |
| | PRED | Data Prediction |
| NEW_BORN_CMT_FLG | WOGD | Without Gift days |
| | REVL | Reversal |
| PRO_MEMB_TYPE_FLG | RETR | Retiree |
| | COBR | COBRA |
| | DEFL | Default |
| | MDCR | Medicare |
| PROD_TYP_FLG | PGRP | Product Group |
| | PROD | Product |
| PRODUCT_ENTITY_TYPE_FLG | HP | Health Plan |
| | OFFR | Offer |
| | BNDL | Bundle |
| | MP | Market Product |
| RATE_GRNT_STATUS_FLG | INAC | Inactive |
| | ACTV | Active |
| VALIDITY_FLG | BYDT | By Date |
| | INDS | In Days |

## A.2.12 Characteristic Types

The following characteristic types are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Characteristic Type | Description |
|---|---|
| C1-APMSG | Indicates retry counter has hit the set limits |
| C1-DLAVG | Deal  Rate Comp to be set as avg price |

| Characteristic Type | Description |
|---|---|
| C1-MRWGD | Member Role Without New Born Gift Days |
| C1-NMBAT | Number of Re-attempts for Auto Debit Payment |
| C1-PERCT | Periodicity for Auto Debit on Division |
| C1-STWGD | Subscription Tier Without Gift Days |
| JRSDCTN | Jurisdiction |
| SPACTTYP | Sponsored Account Identifier Type |
| SPACTVAL | Sponsored Account Identifier Value |

# A.2.13 Feature Configurations

The following feature configurations are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Feature Configuration | Description |
|---|---|
| C1_CUSTINACT | Customer Inactivity Details |
| C1-PREBSEG | Before Bill segment Generation Validation |

# A.2.14 Zone Types

None

# A.2.15 Business Objects

The following business objects are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Business Object | Description |
|---|---|
| C1_BUNDLE | Bundle |
| C1_MARKET_PRODUCT | Market Product |
| C1_OFFER | offer |
| C1_PRODENRLMENT_BO | Product Enrollment for Retail Banking |
| C1_PRODUCT | Product for Retail Banking |
| C1-DiscrepancyRep | Discrepancy Report |
| C1-GLDL | GLDL Drill Down |
| C1-PrcRuleTypeDisChg | Discount Charge Pricing Rule Type |
| C1-PricingRuleDiscount | Discount Charge Pricing Rule |

## A.2.16 Maintenance Objects

The following maintenance objects are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Maintenance Object | Description |
|---|---|
| C1_PRODDTLS | Product Details |
| C1-GLDL | GLDL Drill Down |

## A.2.17 To Do Types

The following To Do types are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| To Do Type | Description |
|---|---|
| C1-APRET | Debit Autopay Retry |
| C1-BPCNA | Binder Payment Configuration Notification |
| C1-LSCN | Late Setup Notification |
| C1-PRDTD | Product To Do Type |

## A.2.18 Application Services

The following application services are newly added in the Oracle Revenue Management and Billing V3.1.0.0.0 database:

| Application Service | Description |
|---|---|
| C1_DIV | Division check |
| C1_GLDL_SERV | GLDL Drill Down |
| C1_MARKETPRODUCT | Market Product Application Service |
| C1_OFFER | Offer Application Service |
| C1_PRODDTLS | Product Details |
| C1BDLSRC | Bundle Search |
| C1BUNDLE | Product Bundle |
| C1GLDLL | FT GL Drill Down Details |
| C1MPSRC | Market Product Search |
| C1MRP | Market Product |
| C1OFFER | Add New Promo Offer |
| C1OFRSRC | Offer Search |

| Application Service | Description |
|---------------------|-------------|
| C1PDSRC | Market Product |
| C1PRDSRC | Product Search |
| C1PROM | Product Add/Edit |

# Appendix B :    Application Services Configured for Default User Group

This section lists the application services configured for the default user groups shipped with Oracle Revenue Management and Billing Version 3.1.0.0.0.

## B.1    ALL_SERVICES

The following table lists all application services configured for the ALL_SERVICES user group:

| Application Service | Application Service | Application Service |
|---|---|---|
| AFHZONE | C1-CHGTYPSA | C1-EXTSTMLOGZ |
| APPTXADM | C1-CNTRTPPTZ | C1-EXTSTMTAD |
| C1-DEALAPPR | C1-CONTRACTCHARSVALI | C1-EXTSTMTCHAR |
| BILLGCONS | C1-CONTRACTTYPECHARS | C1-EXTSTMTED |
| BILLGRAPH | C1-CTCGSRV | C1-EXTSTMTITEM |
| C1-ACCBALCNT | C1-CTRLC | C1-EXTSTMTITMCHR |
| C1-ACCCRCHM | C1-DEFAULTPP | C1-EXTSTMTRC |
| C1-ACCCURDET | C1-DELPPTMP | C1-EXTSTMTSRZ |
| C1-ACCDETAILZ | C1-DFLTPPTMP | C1-EXTSTMTZ |
| C1-ACCDISCREZ | C1-DRRDTLSZ | C1-GETADJ |
| C1-ACCNBRTYPAS | C1-DUPBTN | C1-GETEFFECTVPRICING |
| C1-ACCOUNTCURRENT | C1-EDITPPTMP | C1-GETPPTMPL |
| C1-ACCQUICED | C1-EQUITYDT | C1-GETPRICING |
| C1-ACCREDIT | C1-EXITEMDEL | C1-INS-POLICY |
| C1-ACCRLOGZ | C1-EXITEMED | C1-INSDETBAK |
| C1-ACCSELECT | C1-EXSTMVBNF | C1-ISSUEDATEPOLICYCH |
| C1-ACCURERR | C1-EXTACQRYZ | C1-LINKPPTMP |
| C1-ACCURTEXT | C1-EXTAUTREC | C1-LINKPPTMP2 |
| C1-ACNPOLSUMZ | C1-EXTERNALSTATEMENT | C1-MAINPINFR |
| C1-ACPOLSUMMZ | C1-EXTITEMAD | C1-MAINPPLAN |
| C1-ACTCATSRV | C1-EXTPENDG | C1-MAINPPTMP |
| C1-ACTPPTMPL | C1-EXTREOPN | C1-MEMBSP |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-ACURITEMD | C1-EXTSTCHM | C1-MOVEPPT |
| C1-ADJAPPRVLREQBOAS | C1-EXTSTIMP | C1-MSGTYPBASISBOAS |
| C1-APAYEXPCRREQBOAS | C1-EXTSTITCH | C1-NAVACTCUR |
| C1-APAYEXPCRTYPEBOAS | C1-EXTSTLDB | C1-NAVTOEXST |
| C1-APPTXN | C1-EXTSTMBNF | C1-OUTAGE |
| C1-APPTXNLOG | C1-EXTSTMCAN | C1-PAY-REQ |
| C1-ASGNPL | C1-EXTSTMCLD | C1-PAYMENT |
| C1-BILLCHARGE | C1-EXTSTMCLS | C1-PAYPLAN |
| C1-BRD | C1-EXTSTMDTLZ | C1-PAYPLAND |
| C1-CASEGRPSRV | C1-EXTSTMDZ | C1-PAYPLANTMPLCOMPL |
| C1-PAYPLANZ | C1-PPDUP | C1-UNLINKPP |
| C1-PAYTEMPLATEBOAS | C1-PPEDIT | C1-UPLOADCSV |
| C1-PERBALCNT | C1-PPEDTTASK | C1-WRITEOFFREQ |
| C1-PIFVIS | C1-PPLANDET | C1ACCPOR |
| C1-PINFRDISP | C1-PPPROC | C1ACCRATE |
| C1-PINVFPOST | C1-PPSACCSRC | C1ACMACR |
| C1-POINFRDET | C1-PPTCNTDETZ | C1ACMACT |
| C1-POLCANCE | C1-PPTERROR | C1ACMARQ |
| C1-POLCANZ | C1-PPTMPDISP | C1ACTPER |
| C1-POLICY | C1-PPTMPDUP | C1ACTREE |
| C1-POLICYBPA | C1-PPTMPL | C1ADJSTP |
| C1-POLICYCANRSNSERV | C1-PPTMPLD | C1ADJUPL |
| C1-POLICYCHAR | C1-PPTMPLDET | C1AGING |
| C1-POLICYDESC | C1-PPTMPLDETZ | C1APPBOCHNZN |
| C1-POLICYINVOICEFREQ | C1-PPTMPLVIS | C1APPCHN |
| C1-POLICYPLAN | C1-PPTMPLZ | C1APPCRT |
| C1-POLICYSUM | C1-PPTMPPOST | C1APPTXNBOCHN |
| C1-POLINVDETZ | C1-PRISIM | C1APPTXNBOCHNZN |
| C1-POLINVEDI | C1-PSTAKEHLD | C1APPTXNGRP |
| C1-POLINVFRE | C1-REFWOREQ | C1APROF |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-POLINVFREZ | C1-REQUEST | C1ACTIONFLAG |
| C1-POLINVFRQ | C1-REQUEST-TYPE | C1BNKREC |
| C1-POLI_FHZ | C1-RETURNDUP | C1BOCHN |
| C1-POLNOMINEZ | C1-REVRECSCHZ | C1CNTCR |
| C1-POLPERORLEAS | C1-RULEBOAS | C1COLDTL |
| C1-POLSUMZ | C1-SHDETAILSZ | C1COLTYP |
| C1-PPACCTSRC | C1-SRCHSCPT | C1CONSTRUCT |
| C1-PPACTV | C1-TXNAGG | C1CSEPOR |
| C1-PPBTNS | C1-TXNDTL | C1CTRLC |
| C1-PPDET | C1-HRCHYENTITY | C1DISAGR |
| C1-PPDETZ | C1-PRSPRODENRL | C1EXCHRT |
| C1-PPDISP | C1-UNLINK | C1FAAUD |
| C1_PROPL | C1POLSRCH | C1OFPRP |
| C1FLRQTY | C1POLSRH | C1_IM_EX |
| C1FLSRCH | C1POLTYP | PROSADD |
| C1FOAUD | C1PPCARS | PORTEST |
| C1HDRSR | C1PPLAN | C1ADDPRO |
| C1INSPAY | C1PPTMPL | C1VAR |
| C1MANAPP | C1PPTMPO | C1VARIANCE |
| C1MANLOG | C1PPVERSCHZ | C1VIEWRL |
| C1MANMOD | C1PRICEL | C1WODET |
| C1MANRES | C1PRISIM | C1_ACCNBRALG |
| C1MEMBRS | C1PRODUCT | C1_ACCTCHAR |
| C1MEMBSP | C1PROFILESRVC | C1_ACCUR |
| C1MMTYPE | C1PSNAPP | C1_ACDTLSRCH |
| C1MTRADM | C1PSNMOD | C1_ACMM |
| C1NCISPY | C1PSNRES | C1_ACMS |
| C1NCPTMP | C1PTNDRH | C1_ADDEXH |
| C1ODBUPR | C1PTPLP | C1_ADDPL |
| C1PAYPLAN | C1PYRQTY | C1_ADDPROD |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1PAYPTL | C1RECONDTL | C1_ADD_RTCMP |
| C1PAYREQ | C1REFSTP | C1_ADD_TIER |
| C1PAYRQ | C1REFUND | C1_ADMPI |
| C1PAYSRC | C1REQSTP | C1_ANSPLTCUS |
| C1PAYUPL | C1REQSTS | C1_APPAD |
| C1PERRL | C1REQTYP | C1_APPTXN_PRICEASGN |
| C1PLCYPL | C1RFWORT | C1_APPWF |
| C1PLCYPN | C1RLCHK | C1_APUR |
| C1PLCYTY | C1SAPPTM | C1_APVIG |
| C1POINFR | C1SATYPELISTZ | C1_ASNPL |
| C1POLCYN | C1SCHEDU | C1_AUDIT |
| C1POLCYP | C1SETTHR | C1_BACCGRVAL |
| C1POLICYCANRSN | C1SRCHRL | C1_BACCTDETL |
| C1POLSCH | C1TXNAGG | C1_BACCVALID |
| C1_BACTSRCHM | C1_CHKBIL_PA | C1_EXCHRT |
| C1_BAFHZ | C1_CHKTRDFLG | C1_EXHRT |
| C1_BCCSH | C1_CIAM | C1_EXPPITM |
| C1_BCONT | C1_CIGAS | C1_EXSTD |
| C1_BCON_INFO | C1_CIMAPZ | C1_EXSTL |
| C1_BCON_SRH | C1_CLACTSRCH | C1_EXSTM |
| C1_BCUSACCDT | C1_CLCSESRCH | C1_EXSTS |
| C1_BCUSACCSR | C1_CLCTRCNTR | DBMSFLJB |
| C1_BCUSGRVAL | C1_COLLN | C1_FILEHDRSR |
| C1_BCUSSRCHM | C1_COM_VALID | C1_FTRS |
| C1_BCUSTACDT | C1_COPYBND | C1_F_ACTSRCH |
| C1_BCUSVALID | C1_COPYPL | C1_F_ADDBNDT |
| C1_BFHIS | C1_CPBUNDL | C1_F_ADDCHLD |
| C1_BFH_SRH | C1_CPYBD | C1_F_ADDEXCH |
| C1_BNDMN | C1_CPYPL | C1_F_ADDMM |
| C1_BNDPRD | C1_CUSTINFO | C1_F_ADDMMSS |

| Application Service | Application Service | Application Service |
| --- | --- | --- |
| C1_BNDPRS | C1_CUST_HR | C1_F_ADDPL |
| C1_BO_OPT | C1_DEL_PRD | C1_F_ADDPRBD |
| C1_BPAYHSRCH | C1_DEL_PROD | C1_F_ADDPRD |
| C1_BPH_INFO | C1_DISPBUND | C1_F_ADDPRPL |
| C1_BPYHS | C1_DIVPERREL | C1_F_ADDPRSS |
| C1_BRD_P | C1_DRRSR | C1_F_ADDRATE |
| C1_BSRCHOVRD | C1_DSPLY_RT | C1_F_ADMPROD |
| C1_BSRPT | C1_EDIT | C1_F_ADPROD |
| C1_BTOGGLECA | C1_EDTBUND | C1_F_ADVAL |
| C1_BTREESRCH | C1_EDTER | C1_F_APVDTVL |
| C1_BTST | C1_EDTPL | C1_F_APVNFLT |
| C1_BUNDLE | C1_EDTPROD | C1_F_APVRJS |
| C1_BUNDVAL | C1_EDT_PRITM | C1_F_ASGNCUS |
| C1_BVCAC | C1_EFF_PRC | C1_F_ASGNPTP |
| C1_CASE_USR | C1_EFF_PRICE | C1_F_CHHSRCH |
| C1_CCC | C1_EFPRODSRC | C1_F_CIGG3V |
| C1_F_CLSRCH | C1_F_IGG1MM | C1_INF_PARTY |
| C1_F_CNCLMM | C1_F_IGG1MS | C1_INVCN |
| C1_F_CNCLMR | C1_F_IGG2MM | C1_INVSR |
| C1_F_CONTR | C1_F_IGG2MS | C1_LIST_TIER |
| C1_F_CON_VAL | C1_F_IGG3MM | C1_MEMBERS |
| C1_F_COPYPL | C1_F_IGG3MS | C1_MIG |
| C1_F_COPYSS | C1_F_PLCRT | C1_MIGAS |
| C1_F_CPYBNDL | C1_F_PLEDT | C1_MNG |
| C1_F_CPYPL | C1_F_PLVAL | C1_MNGRT |
| C1_F_CPYPLVL | C1_F_POPITEM | C1_MNGTR |
| C1_F_CUSSRCH | C1_F_PRCHAR | C1_MOD |
| C1_F_DELEXCH | C1_F_PRCHARS | C1_MPPA |
| C1_F_DELSCS | C1_F_PRDVL | C1_NAVIGATE |
| C1_F_DTVAL | C1_F_PRODVAL | C1_NAVUGATE |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_F_EDTBNDT | C1_F_PRODVL1 | C1_NEXT_ACTION |
| C1_F_EDTEXHR | C1_F_RSCDVAL | C1_OVR_PRITM |
| C1_F_EDTMA | C1_F_RTDESC | C1_PAYUP |
| C1_F_EDTMMBS | C1_F_SAVESCS | C1_PERRL |
| C1_F_EDTMMP | C1_F_SRPLVAL | C1_PLADPR |
| C1_F_EDTMMSS | C1_F_VAL_ACT | C1_PLAE |
| C1_F_EDTPL | C1_F_VAL_ACTDTL | C1_PLASNADD |
| C1_F_EDTPR | C1_F_VAL_CHH | C1_PLASNEDIT |
| C1_F_EDTPROD | C1_F_VAL_CLDTL | C1_PLASN_ADD |
| C1_F_EDTPRPL | C1_F_VAL_CSTDTL | C1_PLASN_EDI |
| C1_F_EDTPRSS | C1_F_VAL_CUS | C1_PLASSIGN |
| C1_F_EXCDVAL | C1_GENERICSA | C1_PLASSIGNE |
| C1_F_EXCHVAL | C1_GENRCMP | C1_PLCASSIGN |
| C1_F_EXHVAL | C1_GETTIER | C1_PLDISEDIT |
| C1_F_FH_VAL | C1_GRP | C1_PLEDIT |
| C1_F_FINHIS | C1_IGAI | C1_PLISTSRCH |
| C1_F_FINHIS1 | C1_IGIMM | C1_PLMNG |
| C1_F_GENACBO | C1_IGMMB | C1_PLPTYAINF |
| C1_PLPTYINFO | C1_PROD_ADD | C1_TXNAR |
| C1_PLSRCH | C1_PROD_EDIT | C1_VWPRD |
| C1_PLSTOGGLE | C1_PROD_SAVE | CHGTYPE |
| C1_PLVAL | C1_PROD_SRCH | CHGTYPECD |
| C1_PLVALIDAT | C1_PROVR_EDT | CIACNBTY |
| C1_PLVIEW | C1_PRZCR | CIAPAYSTGUPL |
| C1_PL_ADD | C1_PRZTR | CIAPPACCTYPE |
| C1_PL_EDIT | C1_PRZ_CR | CIAPPCRIT |
| C1_PL_PI | C1_PRZ_TR | CIAPPTXNRSN |
| C1_PMPRC | C1_PTPLA | CICHGTYPE |
| C1_POLICYTYPE | C1_RATE_DEF | CICPAYPLAN |
| C1_PPEDT | C1_RECTIFYSRCH | CIDIVPERREL |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_PPOVR | C1_RLTPM | CIFILEGRP |
| C1_PPOVRSRCH | C1_RLTVW | CIGETPRICING |
| C1_PP_DSPINF | C1_RSLV | CILAADUP |
| C1_PP_PLVAL | C1_RSN | CILAASCP |
| C1_PRCAD | C1_RTCOM_ADD | CILAAUSP |
| C1_PRCE_VALD | C1_RTC_VAL | CILACCDEL |
| C1_PRCPM | C1_RTOPT | CILACCUR |
| C1_PRC_EDIT | C1_SAVE_TIER | CILACLCP |
| C1_PRC_OVRD | C1_SHOW_IMG | CILACTCT |
| C1_PRC_TR | C1_SRCH | CILBBICP |
| C1_PRC_VALID | C1_SRCHPL | CILBBLLP |
| C1_PRDPERREL | C1_SRCHPLVAL | CILBMCRP |
| C1_PRDREL | C1_SRCHPPL | CILBSBHP |
| C1CUSTPO | C1_SRCHPRD | CILBSCCP |
| C1DAPROF | C1_SRCH_PROF | CILBSEGP |
| C1_PRIPARMREFENT | C1_SRPROD | CILBSTMP |
| C1_PRITSRCH | C1_STRTOLIST | CILCAAHP |
| C1_PROD | C1_TEMPLATE | CILCAASP |
| C1_PRODPL | C1_TIER_INP | CILCACCP |
| C1_PRODVAL | C1_TRLBL | CILCACMP |
| CILCACRP | CILCSCVP | CILIBDQP |
| CILCALZP | CILCSCZP | CILIBTVP |
| CILCAMRP | CILCSPZP | CILICOEP |
| CILCBCUP | CILCSSQP | CILINDDP |
| CILCBPGP | CILCSVAP | CILINPFP |
| CILCBRWP | CILCWOFP | CILINVVP |
| CILCCCIP | CILDATA | CILIPDQP |
| CILCCCZP | CILDIVET | CILIPRDP |
| CILCCIZP | CILDIVEXT | CILIRDQP |
| CILCCNSP | CILDRVWP | CILIRDSP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILCCNXP | CILECBLP | CILISATP |
| CILCCSCP | CILEFKRP | CILITDDP |
| CILCCSHP | CILEFLDP | CILITDQP |
| CILCCTXP | CILEMNUP | CILITMPP |
| CILCDCRP | CILEMOBP | CILITPDP |
| CILCENRP | CILENAVP | CILKTOSP |
| CILCFIZP | CILENVOP | CILLCARP |
| CILCLOAP | CILERPTP | CILLCAZP |
| CILCNBBP | CILESVCP | CILLCLPP |
| CILCPABP | CILETBLP | CILLODPP |
| CILCPASP | CILEUIZP | CILLWOPP |
| CILCPERP | CILFAFHP | CILMITMP |
| CILCPIZP | CILFBLCP | CILMITRP |
| CILCPLAS | CILFBPHP | CILMMRSP |
| CILCPMPP | CILFDRR | CILMMSUP |
| CILCPPLP | CILFFNTP | CILMRBHP |
| CILCPPTMPL | CILFFTBP | CILMRTXP |
| CILCPREP | CILFFTPP | CILMSIHP |
| CILCPRMP | CILFMVTP | CILMSLIP |
| CILCQTEP | CILFSCAP | CILMSLOP |
| CILCSALP | CILFSFHP | CILMSMHP |
| CILCSCMP | CILGENACUR | CILMTRDP |
| CILOAPTP | CILQCASP | CILTASGP |
| CILODFAP | CILQTDCP | CILTATCP |
| CILOFACP | CILQTDEP | CILTATPP |
| CILOFAZP | CILQTDLP | CILTATYP |
| CILOFORP | CILQTDQP | CILTBCRP |
| CILOFOSP | CILQTDSP | CILTBCTP |
| CILOFSUP | CILQTDTP | CILTBFFP |
| CILOOTGP | CILQTDZP | CILTBFVP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILOSFAP | CILQTSSP | CILTBIMP |
| CILPAPHP | CILQTSUP | CILTBLCP |
| CILPAPSP | CILRCMAP | CILTBLPP |
| CILPARTY | CILRENGP | CILTBNKP |
| CILPDCNP | CILRRSMP | CILTBRTP |
| CILPDCSP | CILRRTCP | CILTBSTP |
| CILPEPLP | CILRRTSP | CILTBTCP |
| CILPEQAP | CILRRTVP | CILTBTRP |
| CILPEVTP | CILRRVMP | CILTBUDP |
| CILPIREL | CILRULE | CILTBXTP |
| CILPITXNREL | CILRULTP | CILTCAGP |
| CILPPAYP | CILSTEXT | CILTCAMP |
| CILPPCAN | CILSTEXTITEM | CILTCATP |
| CILPPTSP | CILTACRP | CILTCCCP |
| CILPQADP | CILTALGP | CILTCCNP |
| CILPRCITMREL | CILTALTP | CILTCCTP |
| CILPRICEASGN | CILTAMGP | CILTCETP |
| CILPRICECOMP | CILTAMTP | CILTCHTP |
| CILPRICMPTIER | CILTAPAP | CILTCIDP |
| CILPRITEM | CILTAPFP | CILTCLGP |
| CILPRLIST | C1DEALDB | CILTCLRP |
| CILPRLISTASGN | CILTAPSP | CILTCLWP |
| CILPTCNP | CILTAROP | CILTCNTP |
| CILQATDP | CILTARTP | CILTCOCP |
| CILTCPTP | CILTMHTP | CILTSCLP |
| CILTCQTP | CILTMMTP | CILTSCYP |
| CILTCRUP | CILTMSGP | CILTSEVP |
| CILTCURP | CILTNBRP | CILTSICP |
| CILTCUSP | CILTNCDP | CILTSMIP |
| CILTDARP | CILTNUXP | CILTSMTP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTDASP | CILTOCRP | CILTSOMP |
| CILTDCAP | CILTOETP | CILTSOPP |
| CILTDCLP | CILTOPTP | CILTSPRP |
| CILTDIRP | CILTORAP | CILTSPTP |
| CILTDPRP | CILTPCRP | CILTSQIP |
| CILTDRTP | CILTPCTP | CILTSQRP |
| CILTDSTP | CILTPDRP | CILTSTMP |
| CILTDWPP | CILTPHTP | CILTSTSP |
| CILTDWTP | CILTPIFP | CILTSVTP |
| CILTEBRP | CILTPKGP | CILTSWLP |
| CILTECRP | CILTPPTP | CILTTACP |
| CILTETTP | CILTPROP | CILTTAXP |
| CILTFNDP | CILTPRTP | CILTTGRP |
| CILTFREP | CILTPSDP | CILTTMRP |
| CILTFRQP | CILTPSTP | CILTTMTP |
| CILTGLDP | CILTPTRP | CILTTNSP |
| CILTGOTP | CILTPYTP | CILTTNTP |
| CILTIDTP | CILTQRTP | CILTTOUP |
| CILTINCP | CILTREGP | CILTTSCP |
| CILTINSP | CILTREPP | CILTTTMP |
| CILTITSP | CILTRGLP | CILTTZNP |
| CILTLDIP | CILTRLEP | CILTUOMP |
| CILTLETP | CILTRSCP | CILTURPP |
| CILTLKFP | CILTRTYP | CILTUSCP |
| CILTLNGP | CILTSARP | CILTUSEP |
| CILTMCRP | CILTSATP | CILTUSGP |
| CILTWCTP | CILZFNCP | CTXTZONE |
| CILTWDCP | CILZPORP | DEMO |
| CILTWETP | CILZRBPP | DISAGGP |
| CILTWFPP | CILZRPHP | DIV_PRICEITEMS |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTWPTP | CILZRPOP | DIV_PRICELISTS |
| CILTWSCP | CILZRPTP | F1-APAYEXPCRTYPEBOAS |
| CILTWSDP | CILZSCMP | F1-ATTACHMENTBOAS |
| CILTXNCD | CILZSCRP | F1-BKTCONFIG |
| CILTXNCDL | CILZSCZP | F1-BOOKMARKS |
| CILTXNSRC | CILZTLZP | F1-DECRPTBOAS |
| CILTXNSRCL | CILZZOHP | F1-DFLTAPS |
| CILUPFTS | CILZZONP | F1-DFLTS |
| CILVFVDP | CIL_FAVORITES | F1-EXPUSERSREQBOAS |
| CILVFVSP | CIPOLICY | F1-GENPROC |
| CILVVLEP | CIPOLPERRL | F1-MIGROBJIMP |
| CILVVLSP | CIPOLPERROLE | F1-OBJREVBOAS |
| CILWDWNP | CIPRICEACCOUNT | F1-STASKTYPE |
| CILWJSDP | CIPRICEPARM | F1-SVCTASK |
| CILWJSSP | CIPYSRCH | F1-SYNCREQ |
| CILWNUPP | CIRATEUPLD | F1-SYNCREQIN |
| CILWNUSP | CIRECON | F1-SYNCREQUESTBOAS |
| CILWPROP | CIRECONDTL | F1-WEBSVCBOAS |
| CILXNDNP | CIS_DIV_ALGS | F1ADMIN |
| CILXOPTP | CIS_DIV_BICIES | F1ANN |
| CILXSENP | CIS_DIV_CST_LNGS | F1ANNTPM |
| CILYASTP | CIS_DIV_ID_TYPES | F1ANNTPS |
| CILYDBPP | CIS_DIV_INV_CURS | F1ANNTYP |
| CILYDFQP | CIS_DIV_TXN_SRCS | F1APPSEC |
| CILYDPIP | CIS_DIV_VLD_CTIES | F1ATTACH |
| CILYROBP | CIVARIANCE | F1ATTACHMENT |
| CILZAFQP | CMAGING | F1BKTCFG |
| CILZAUQP | CNCLRSN | F1BKTCFQ |
| F1BNDLEM | F1MIGRDIMP | FWLBNDLP |
| F1BNDLES | F1MIGRDS | FWLCTDEP |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1BNDLIM | F1MIGROBJ | FWLFACTP |
| F1BNDLIS | F1MIGRPLAN | FWLSTRJP |
| F1BUNEXP | F1MIGRREQ | FWLTBELP |
| F1BUNIMP | F1MIGRTIMP | FWLTBOJP |
| F1CATTCH | F1MIGRTX | FWLTBSVP |
| F1CONFIGLOG | F1MSTCFG | FWLTDARP |
| F1DEBUG | F1MTXIMP | FWLTEXSP |
| F1EXLKP | F1OBJREV | FWLTMGCT |
| F1EXLKPS | F1OBJREVCTL | FWLTOMTP |
| F1HEALTH | F1OBJRVH | FWLTSCHP |
| F1HGMAPPING | F1REQ | FWLTUIMP |
| F1IWSANM | F1REQTYP | FWLXOUTP |
| F1IWSDPL | F1REVHST | FWLZDEXP |
| F1IWSSVC | F1STRDIS | FWLZWLZP |
| F1IWSVCP | F1STREAS | GOTOREC |
| F1IWSVCS | F1SUBRQQ | PERTREE |
| F1LCAMRP | F1SYNCRM | POLICYCANRSN |
| F1LEXTLKUP | F1SYNCRQ | RECDTSTA |
| F1LTAMTP | F1TBLEXC | RECON |
| F1MESSAGE | F1UIZONE | RECONDTL |
| F1MGDEXP | F1USERLOG | SACHGLNK |
| F1MGDEXS | F1USRCHKOUT | SATYPCHG |
| F1MGDIMP | F1USRPTL | SATYPES |
| F1MGDIMS | F1WBSVCM | F1_USRSCR |
| F1MGOIMP | F1WBSVCS | FILETYPE |
| F1MGPLNM | F1WEBSVC | F1MGREQS |
| F1MGPLNS | F1_BTST | F1MIGRDEXP |
| F1MGREQM | F1_USRFAVSCH | C1PLASGNM |
| C1-USRLOGINDTLS | C1DEALPASGN | C1REFUPLREQ |
| C1BCHGUPLREQ | C1GETELIGPT | C1UPLDRQ |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1BILLCYCLEUPDTUPL | C1GLAT | C1UPLREQ |
| C1CONTRIDERUPDTUPL | C1GLATEMP | C1WOUPLREQ |
| C1DCDTLC | C1GLATRQ | C1_STDTL |
| C1DELCTL | C1HOLDUPLREQ | C1_STRTE |
| C1ELGPA | C1LASGN | C1_STRTY |
| DBMSJOB | C1PIASGN | CISTMEXCP_SERV |
| C1DEALSVC | ACRLSRCH | C1-ACCTECR |
| C1-CUSTINMSG | C1ADDRS | C1HCAPPSER |
| C1-DEALPRICING | C1ADDRSBO | C1HCBLDT |
| C1-FTDIST | C1ADDRSDP | C1HCSINF |
| C1-FTDISTRULE | C1ADDRSRC | C1INMSGP |
| C1-FTDISTTY | C1BK360 | C1INMSRH |
| C1-GENRQ | C1BKAPPSER | C1INMSTY |
| C1-INMSG | C1BKBLDT | C1PAREQ |
| C1-INMSGTYPE | C1BKSINF | C1PARQMN |
| C1-MEMBERINMSG | C1CUS360 | C1PARQTY |
| C1-PROSPECTCRET | C1DSPT | C1PAYMAN |
| C1ACCECR | C1DSPTRQ | C1PI |
| C1ACRLCL | C1DSPTRT | C1PL |
| C1ACRLTP | C1DSPTTY | C1POLPEL |
| C1ACRMVW | C1FTDIST | C1REINUPLREQ |
| C1ADDRDP | C1FTDSRL | C1_ACCRTYPE |
| C1ADDRDTL | C1FTDSTT | C1_ACCRUAL_SERV |
| C1ADDRESS | C1FTDSTY | C1_ACTVW |
| C1_ACTYP | C1_DSPT_REQ | ILM_ARC |
| C1_ACYVW | C1_TRLIN | ACCTVIEW |
| C1-ACCTAPAY_SERV | C1-DISC-REPT | C1-DRRTMPLT |
| C1-MBR-DR-TY | C1-PRC_CALC_SM | C1-PTD-CAL |
| C1-RETRIEVPROSRV | C1-REVRECPLCY | C1-RN-TY |
| C1-SCHEDULERMONITOR | C1-SCHPGMQZ | C1-SCHSCHQZ |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1ACCTAPAY | C1APAYRT | C1APAYVW |
| C1APYINS | C1AWFCHN | C1AWFCRT |
| C1AWFGRP | C1AWFRSN | C1AWFSET |
| C1CONADD | C1DISREP | C1DRDIS |
| C1DSRTY | C1MBRRCN | C1PARAM |
| C1PDSRCH | C1PERS | C1PERSDP |
| C1PERSON | C1PRDSVC | C1PRODDP |
| C1PRODUCTSERVICE | C1PVERDP | C1RCONTY |
| C1RECOLN | C1RECONCIL | C1RECONTYP |
| C1REPORT | C1RPTTMP | C1SCHCHN |
| C1SCHJOB | C1SCHPGM | C1SCHSCH |
| C1SCJMON | C1SRCAPP | C1SVCDSP |
| C1VIEPRI | PRICECOMPPRE | C1_BOCHN |
| C1_CONSTRUCT | C1_DRRSP | C1_DRRTM |
| C1_DRRTP | C1_ENLOG | C1_ENROL |
| C1_ENROLLMENT | C1_ENSCH | C1_PAYIN |
| C1_PRODUCT | C1_PRODUCT_SERVICE | C1_PRODVER |
| C1_SRCBUSSPRD | C1_SRCTECHPRD | CIAPPCHELGBL |
| CICONACT | CONRULE | CONSTRUCT |
| DDPRCSM | ACCT_SUBSCRPTN_SERV | C1-PRCRULE |
| C1-PRC_CALC_SM | C1-PRRLTYP | C1-SUBSCRTYPE |
| C1BILLSORT | C1BLLLVLUPLREQ | C1BLLSRTUPLREQ |
| C1ENTITYREPORT | DBMSRNJB | C1-DLDBACTNS |
| C1PRICINGGROUP | C1PROAPP | C1PRTYP |
| C1REPORTTMP | C1RPTAUD | C1RPTDEF |
| C1SUBSTP | C1SUBTVW | C1-DLAPPRTOD |
| C1-ACCUDATA | C1-CUSTREGTEMPL_SERV | C1-CUSTREGTYPE |
| C1-GETPRICINGENTITY | C1-PICINGRULE | C1-PRICEASGNTREE |
| C1ACUDAT | C1CREGSR | C1CTRGBK |
| C1CTRGHC | C1FILEMS | C1MASPRI |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1MPRIRQ | C1MPRISR | C1RETMPL |
| C1DLAPDB | CIDATAEXSER | DTEX_TYP |
| PRICECOMPSEQ | C1CUREG | C1CURETY |
| C1CUSTREG | C1CUSTRG | C1DTEXFL |
| AUDITEVENT | C1-AUDEVTYPE | C1-BANKING |
| C1-HEALTHCARE | C1-PRICETREE | C1-STATE |
| C1ADEVSR | C1AUDEVT | C1AUDTY |
| C1OFFADJ | C1RETMPLBK | C1RETMPLHC |
| C1STATE | C1VIPRIN | C1_BILL |
| CILCSSEP | C1DELTYP | C1-OFFPRO |
| C1DTSERH | C1ENHR | C1ENHRSR |
| C1ENTDTL C1GETELIGPRO | C1-DLTODOLST C1HIERARCHY | TSTPRICE C1HRCHYENTITY |
| C1HRYENT | C1INREQ | C1INRETY |
| C1INVRED | C1PATCH | C1PISL |
| GETDEALTYPE | C1PROSPO | C1PRSEAR |
| C1PRSSASP | C1REFPRI | C1SERDSC |
| C1SFTPUS | C1SLFSER | C1TPSTRT |
| C1TRBLHC | C1TMCND | C1_PROSPECT |
| C1-DEALAPPRWF | C1GETELIGPLPRO | C1_HLTH_PLAN |
| C1_ALRPT | C1_CHREF | C1_CONSTRUCT |
| C1_CREF | C1_DEAL | C1_DEALFETCHRATE |
| CM_TEST | C1_HEVD | C1_PDEAL |
| CMPER1 | PRTTST | C1_PRSENROLLMENT |
| C1_REF | C1GETELIGPROD | CMPERTESTASE |
| TESTPORT | CUSPRCDT | DBMSSCHD |
| DWNLFILE | C1OFPREQ | C1OFPRED |
| PORTPRAC | PORTT | PRODSTAT |
| CANCPAYM | PRICEITEM_SERV | C1-BENEFITS |
| C1-BENFITPKG | C1-DEALRVW | C1-EXTCTTEMP |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-EXTRACTTEMPLATE | C1-FIELDMAP | C1-FIELDMAP_SERV |
| C1-GETFIPRCRULE | C1-TNC | C1BENFTP |
| C1BENFTS | C1DEAL1 | C1DLPRT |
| C1DLTMPT | C1EXTCTTEMP | C1EXTTMP |
| C1FLDMAP | C1GEORTA | C1GEORTAR |
| C1_QUESN | C1IACUDT | C1PLSIM |
| C1PLSM | C1PLSMPL | C1PLSMVW |
| C1PRICELISTSIM | C1QUESRH | C1QUESTION |
| C1QUEVEW | C1RELSTR | C1RMACCSTAT |
| C1RMACCTSTAT | C1RMWRKB | C1RVTRND |
| C1STPDL | C1TCMAP | C1TERCO |
| C1TERMNCO | C1TNCSRH | C1UNPINV |
| C1_DEAL_MAPPINGS | C1_DEAL_PRICELIST | C1_DEAL_TEMPLATE |
| C1_F_POLSRCH | C1_MEMRL_SUBT | C1_RTSC |
| C1-BUSRULE | C1-BUSRULVAL | C1AWRSNP |
| C1BENSTY | C1BUSRD | C1BUSRUL |
| C1CONTDL | C1_HCPRODUCT | C1DIAGCE |
| C1MEIDTY | C1_DIV | C1_GLDL_SERV |
| C1_MARKETPRODUCT | C1_OFFER | C1_PRODDTLS |
| C1BDLSRC | C1BUNDLE | C1GLDLL |
| C1MPSRC | C1MRP | C1OFFER |
| C1OFRSRC | C1PDSRC | C1PRDSRC |
| C1PROM | - | - |

# B.2    C1_BSERVICES

The following table lists all application services configured for the C1_BSERVICES user group:

| Application Service | Application Service | Application Service |
|---|---|---|
| AFHZONE | C1-PIFVIS | C1AGING |
| APPTXADM | C1-PINFRDISP | C1APPBOCHNZN |
| ARUNTEST | C1-PINVFPOST | C1APPCHN |
| BILLGCONS | C1-POINFRDET | C1APPCRT |
| BILLGRAPH | C1-POLICY | C1APPRESP |
| C1-ACCBALCNT | C1-POLICYINVOICEFREQ | C1APPTXNBOCHN |
| C1-ACCNBRTYPAS | C1-POLINVDETZ | C1APPTXNBOCHNZN |
| C1-ADJAPPRVLREQBOAS | C1-POLINVFRE | C1APPTXNCHAIN |
| C1-APAYEXPCRREQBOAS | C1-POLINVFREZ | C1APPTXNCRI |
| C1-APAYEXPCRTYPEBOAS | C1-POLINVFRQ | C1APPTXNCRT |
| C1-APAY_STG_UP | C1-PRISIM | C1APPTXNGRP |
| C1-APPRSN | C1-REFWOREQ | C1APROF |
| C1-APPTXN | C1-REGENUI | ACCMULID |
| C1-APPTXNLOG | C1-REQUEST | C1BNKREC |
| C1-ASAPU | C1-REQUEST-TYPE | C1BOCHN |
| C1-ASGNPL | C1-RULEBOAS | C1CASEG |
| C1-BRD | C1-SRCHSCPT | C1CASETYPEMP |
| C1-CASEASGNSRV | C1-TXNAGG | C1CHECKFT |
| C1-CASEGRPSRV | C1-TXNDTL | C1COLDTL |
| C1-CONSVPROGBOAS | C1PMTP | C1COLLTYP |
| C1-CONTRACTTYPECHARS | C1_CHREF | C1COLTYP |
| C1-CTCGSRV | C1-WRITEOFFREQ | C1CPROG |
| C1-GETEFFECTVPRICING | C1ACCRATE | C1CSTYSR |
| C1-GETPRICING | C1ACMACT | C1DISAGR |
| C1-MAINPINFR | C1ACTCAT | C1EXCHRT |
| C1-OUTAGE | C1ACTPER | ACTNOCON |
| C1-PAY-REQ | C1ACTREE | C1FLRQTY |
| C1-PAYTEMPLATEBOAS | C1ACTYRSTY | C1FLSRCH |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-PERBALCNT | C1ADJSTP | C1IRSPP |
| C1-PERIDSER | C1ADJUPL | C1MANAPP |
| C1MANLOG | C1REQTYP | C1_ANSPLTCUS |
| C1MANMOD | C1RFWORT | C1_APCS |
| C1MANRES | C1RLCHK | C1_APPAD |
| C1NCISPY | C1RSTCAT | C1_APPTXN_PRICEASGN |
| C1NCPTMP | C1SACOLLECT | F1-BOOKMARKS |
| C1ODBUPR | C1SACTHI | C1_APUR |
| C1PASGAPPROVE | C1SCHEDU | C1_APVIG |
| C1PASGREADMODIFY | C1SCHTMP | C1_ASNPL |
| C1PASGREADRESOLVE | C1SETTHR | C1_AUDIT |
| C1PAYMAN | C1SRCHRL | C1_BACCGRVAL |
| C1PAYPTL | C1TXNAGG | C1_BACCTDETL |
| C1PAYREQ | ADJDETAI | C1_BACCVALID |
| C1PAYRQ | USGSETT | C1_BACTSRCHM |
| C1PAYSRC | C1TXNFD | C1_BAFH |
| C1PAYUPL | USGMISIN | C1_BAFHZ |
| C1POINFR | USGMIS | C1_BCCSH |
| C1PPCARS | C1UNAPPR | C1_BCONT |
| C1PRESTGDTLS | C1VAR | C1_BCON_INFO |
| C1PRISIM | C1VIEWRL | C1_BCON_SRH |
| C1PRODUCT | C1WODET | C1_BCUSACCDT |
| C1PROFILESRVC | C1_ACCNBRALG | C1_BCUSACCSR |
| C1PSNAPP | C1_ACCNBRTYP | C1_BCUSGRVAL |
| C1PSNMOD | C1_ACCTCHAR | C1_BCUSSRCHM |
| C1PSNRES | C1_ACDTLSRCH | C1_BCUSTACDT |
| C1PTNDRH | C1_ACMM | C1_BCUSVALID |
| C1PTPLP | C1_ACMS | C1_BDTLSRCHM |
| C1PYRQTY | C1_ADDEXH | C1_BFHIS |
| C1REFSTP | C1_ADDPL | C1_BFH_SRH |
| C1REFUND | C1_ADDPROD | C1_BNDMN |

| Application Service | Application Service | Application Service |
|---------------------|---------------------|---------------------|
| C1REQSTP | C1_ADD_RTCMP | C1_BNDPRD |
| C1REQSTS | C1_ADD_TIER | C1_BNDPRS |
| C1REQTYP | C1_ADMPI | C1_F_ADVAL |
| C1_BO_OPT | C1_DIVPERREL | C1_F_APVDTVL |
| C1_BPAYHSRCH | C1_DSPLY_RT | C1_F_APVNFLT |
| C1_BPH_INFO | C1_EDIT | C1_F_APVRJS |
| C1_BPYHS | C1_EDTBD | C1_F_ASGNCUS |
| C1_BRD_P | C1_EDTBUND | C1_F_ASGNPTP |
| C1_BSRCHOVRD | C1_EDTER | C1_F_CHHSRCH |
| C1_BSRPT | C1_EDTPL | C1_F_CIGG3V |
| C1_BTOGGLECA | C1_EDTPROD | C1_F_CNCLMM |
| C1_BTREESRCH | C1_EDT_PRITM | C1_F_CNCLMR |
| C1_BTST | C1_EFF_PRC | C1_F_CONTR |
| C1_BUNDLE | C1_EFF_PRICE | C1_F_CON_VAL |
| C1_BUNDVAL | C1_EFPRODSRC | C1_F_COPYPL |
| C1_BVCAC | C1_EXCHRT | C1_F_COPYSS |
| C1_CHKBIL_PA | C1_EXHRT | C1_F_CPYBNDL |
| C1_CHKTRDFLG | C1_EXPPITM | C1_F_CPYPL |
| C1_CIAM | C1_DEALFETCHRATE | C1_F_CPYPLVL |
| C1_CIGAS | C1_FTRS | C1_F_CUSSRCH |
| C1_COLLN | C1_F_ACTSRCH | C1_F_DELEXCH |
| C1_COLL_NZN | C1_F_ADDBNDT | C1_F_DELSCS |
| C1_COM_VALID | C1_F_ADDCHLD | C1_F_DTVAL |
| C1_COPYBND | C1_F_ADDEXCH | C1_F_EDTBNDT |
| C1_COPYPL | C1_F_ADDMM | C1_F_EDTEXHR |
| C1_CPBUNDL | C1_F_ADDMMSS | C1_F_EDTMA |
| C1_CPYBD | C1_F_ADDPL | C1_F_EDTMMBS |
| C1_CPYPL | C1_F_ADDPRBD | C1_F_EDTMMP |
| C1_CUSTINFO | C1_F_ADDPRD | C1_F_EDTMMSS |
| C1_CUST_HR | C1_F_ADDPRPL | C1_F_EDTPL |
| C1_DEGREE | C1_F_ADDPRSS | C1_F_EDTPR |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_DEL_PRD | C1_F_ADDRATE | C1_F_EDTPROD |
| C1_DEL_PROD | C1_F_ADMPROD | C1_F_EDTPRPL |
| C1_DISPBUND | C1_F_ADPROD | C1_PLASSIGNE |
| C1_F_EDTPRSS | C1_GENRCMP | C1_PLCASSIGN |
| C1_F_EXCDVAL | C1_GETTIER | C1_PLDISEDIT |
| C1_F_EXCHVAL | C1_GRP | C1_PLEDIT |
| C1_F_EXHVAL | C1_IGAI | C1_PLISTSRCH |
| C1_F_FH_VAL | C1_IGIMM | C1_PLMNG |
| C1_F_FINHIS | C1_IGMMB | C1_PLPTYAINF |
| C1_F_FINHIS1 | C1_INF_PARTY | C1_PLPTYINFO |
| C1_F_GENACBO | C1_INVCN | C1_PLSRCH |
| C1_F_IGG1MM | C1_INVSR | C1_PLSTOGGLE |
| C1_F_IGG1MS | C1_LIST_TIER | C1_PLVAL |
| C1_F_IGG2MM | C1_MEMBERS | C1_PLVALIDAT |
| C1_F_IGG2MS | C1_MIG | C1_PLVIEW |
| C1_F_IGG3MM | C1_MIGAS | C1_PL_ADD |
| C1_F_IGG3MS | C1_MNG | C1_PL_EDIT |
| C1_F_PLCRT | C1_MNGRT | C1_PL_PI |
| C1_F_PLEDT | C1_MNGTR | C1_PMPRC |
| C1_F_PLVAL | C1_MOD | C1_PPEDT |
| C1_F_POPITEM | C1_MPPA | C1_PPOVR |
| C1_F_PRCHAR | C1_NAVIGATE | C1_PPOVRSRCH |
| C1_F_PRCHARS | C1_NAVUGATE | C1_PP_DSPINF |
| C1_F_PRDVL | C1_OVR_PRITM | C1_PP_PLVAL |
| C1_F_PRODVAL | C1_PAYUP | C1_PRCAD |
| C1_F_PRODVL1 | C1_PAY_BTN | C1_PRCE_VALD |
| C1_F_RSCDVAL | C1_PERRL | C1_PRCPM |
| C1_F_RTDESC | C1_PLADPR | C1_PRC_EDIT |
| C1_F_SAVESCS | C1_PLAE | C1_PRC_OVRD |
| C1_F_SRPLVAL | C1_PLASNADD | C1_PRC_TR |
| C1_F_VAL_ACT | C1_PLASNEDIT | C1_PRC_VALID |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_F_VAL_ACTDTL | C1_PLASN_ADD | C1_PRDPERREL |
| C1_F_VAL_CHH | C1_PLASN_EDI | C1_PRDREL |
| C1_F_VAL_CUS | C1_PLASSIGN | CILACTTY |
| GETDEALTYPE | C1_SRCHPLVAL | CILBBICP |
| C1_PROSPECT | C1_SRCHPPL | CILBBLLP |
| C1_PRITSRCH | C1_SRCHPRD | CILBSBHP |
| C1_PROD | C1_SRCH_PROF | CILBSCCP |
| C1_PRODPL | C1_SRCH_TEMP | CILBSEGP |
| C1_PRODVAL | C1_SRPROD | CILBSTMP |
| C1_PROD_ADD | C1_STRTOLIST | CILCAASP |
| C1_PROD_EDIT | C1_TEMPLATE | CILCACCP |
| C1_PROD_SAVE | C1_TIER_INP | CILCACMP |
| C1_PROD_SRCH | C1_TRLBL | CILCALZP |
| C1_PROVR_EDT | C1_TXNAR | CILCAMRP |
| C1_PRZCR | C1_VWPRD | CILCASEEXTN |
| C1_PRZTR | CIACNBTY | CILCBCUP |
| C1_PRZ_CR | CIACTTYP | CILCBRWP |
| C1_PRZ_TR | CIAPAYSTGUPL | CILCCCIP |
| C1_PTPLA | CIAPPACCTYPE | CILCCCZP |
| C1_PYHST | CIAPPACTTYPE | CILCCIZP |
| C1_RATE_DEF | CIAPPCHELGBL | CILCCNSP |
| C1_RECTIFYSRCH | CIAPPCRIT | CILCCNXP |
| C1_RLTPM | CIAPPTXNCHAIN | CILCCSCP |
| C1_RLTVW | CIAPPTXNRSN | CILCCSHP |
| C1_RSLV | CIDIVPERREL | CILCCTXP |
| C1_RSN | CIDIVPRITMPERREL | CILCENRP |
| C1_RTCOM_ADD | CIFILEGRP | CILCFIZP |
| C1_RTC_VAL | CIGETPRICING | CILCONPREF |
| C1_RTOPT | CILAADUP | CILCPERP |
| C1_RTSC | CILAASCP | CILCPLAS |
| C1_SAVE_TIER | CILAAUSP | CILCPPLP |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_SHOW_IMG | CILACLCP | CILCPRMP |
| C1_SRCH | CILACTCT | CILCQTEP |
| C1_SRCHPL | CILACTHI | CILQATDP |
| CILCSALP | CILICOEP | CILQCASP |
| CILCSESA | CILITDDP | CILQTDEP |
| CILCSSEP | CILITDQP | CILQTDLP |
| CILCSVAP | CILITPDP | CILQTDQP |
| CILDATA | CILLCAZP | CILQTDSP |
| CILDIVET | CILLODPP | CILQTDTP |
| CILDIVEXT | CILMRBHP | CILQTDZP |
| CILDRVWP | CILPAPHP | CILQTSSP |
| CILECBLP | CILPAPSP | CILQTSUP |
| CILEFKRP | CILPARTY | CILRCMAP |
| CILEFLDP | CILPDCNP | CILRENGP |
| CILEMNUP | CILPDCSP | CILRRSMP |
| CILEMOBP | CILPEPLP | CILRRTCP |
| CILEMPDTLS | CILPEQAP | CILRRTSP |
| CILENAVP | CILPEVTP | CILRRTVP |
| CILENVOP | CILPICHAR | CILRRVMP |
| CILERPTP | CILPIDIV | CILRSCAT |
| CILESVCP | CILPILANG | CILRSTTY |
| CILETBLP | CILPIREL | CILRULE |
| CILEUIZP | CILPITXNREL | CILRULTP |
| CILEXCHRATE | CILPPAYP | CILSCHEDULE |
| CILFAFHP | CILPPCAN | CILTACRP |
| CILFBLCP | CILPPTSP | CILTALGP |
| CILFFEXP | CILPQADP | CILTALTP |
| CILFFNTP | CILPRCITMREL | CILTAMGP |
| CILFFTBP | CILPRICELISTCHAR | CILTAMTP |
| CILFFTPP | CILPRITEM | CILTAPAP |
| CILFLGRP | CILPRLIST | CILTAPFP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILFMVTP | CILPRLISTDIV | CILTAPRP |
| CILFSFHP | CILPRLISTL | CILTAPSP |
| CILIBTVP | CILPTCNP | CILTLNGP |
| CILTAROP | CILTCPRP | CILTMCRP |
| CILTARTP | CILTCQTP | CILTMHTP |
| CILTASGP | CILTCRUP | CILTMSGP |
| CILTATCP | CILTCURP | CILTNBRP |
| CILTATPP | CILTCUSP | CILTNCDP |
| CILTATYP | CILTCVTP | CILTNUXP |
| CILTBCRP | CILTDARP | CILTOCRP |
| CILTBCTP | CILTDASP | CILTOETP |
| CILTBFFP | CILTDCAP | CILTOPTP |
| CILTBFVP | CILTDCLP | CILTORAP |
| CILTBIMP | CILTDIRP | CILTPCRP |
| CILTBLCP | CILTDLOP | CILTPCTP |
| CILTBLPP | CILTDPRP | CILTPDRP |
| CILTBNKP | CILTDSTP | CILTPHTP |
| CILTBRTP | CILTDWPP | CILTPKGP |
| CILTBSTP | CILTDWTP | CILTPMDP |
| CILTBTCP | CILTEBRP | CILTPPTP |
| CILTBTRP | CILTECRP | CILTPROP |
| CILTBUDP | CILTETTP | CILTPRTP |
| CILTBXTP | CILTFAAP | CILTPSDP |
| CILTCAMP | CILTFNDP | CILTPSTP |
| CILTCATP | CILTFRQP | CILTPTRP |
| CILTCCCP | CILTFWLP | CILTPYTP |
| CILTCCTP | CILTGLDP | CILTQRTP |
| CILTCHTP | CILTIDTP | CILTRGLP |
| CILTCIDP | CILTINCP | CILTRLEP |
| CILTCLGP | CILTINSP | CILTRSCP |
| CILTCLWP | CILTITTP | CILTRTYP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTCNTP | CILTLDIP | CILTSATP |
| CILTCOCP | CILTLETP | CILTSCLP |
| CILTCOTP | CILTLKFP | CILXJSVP |
| CILTSCYP | CILTWSDP | CILXNDNP |
| CILTSICP | CILTXNDETAIL | CILXOPTP |
| CILTSOMP | CILTXNDISAGGEXC | CILXRCVP |
| CILTSOPP | CILTXNDISAGGREQ | CILXRTTP |
| CILTSQIP | CILTXNHEADER | CILXSENP |
| CILTSQRP | CILTXNRECTYPE | CILXSVXP |
| CILTSVTP | CILTXNSOURCE | CILXTPCP |
| CILTSWLP | CILTXNSRC | CILXXSCP |
| CILTTACP | CILTXNSRCD | CILXXUPP |
| CILTTAXP | CILTXNSRCL | CILYASTP |
| CILTTGRP | CILUPFTS | CILYDBPP |
| CILTTMRP | CILVFVDP | CILYDFQP |
| CILTTMTP | CILVFVSP | CILYDPIP |
| CILTTNSP | CILVVLEP | CILYENRP |
| CILTTNTP | CILVVLSP | CILYROBP |
| CILTTOUP | CILWDWNP | CILZAFQP |
| CILTTRAP | CILWJSDP | CILZAUQP |
| CILTTRCP | CILWJSSP | CILZFNCP |
| CILTTTMP | CILWNUPP | CILZPORP |
| CILTTZNP | CILWNUSP | CILZRBPP |
| CILTUOMP | CILWPROP | CILZRPHP |
| CILTURPP | CILXADPP | CILZRPOP |
| CILTUSCP | CILXAIEP | CILZSCMP |
| CILTUSEP | CILXAIIP | CILZSCRP |
| CILTUSGP | CILXCLSP | CILZSCZP |
| CILTWCTP | CILXCONP | CILZTLZP |
| CILTWDCP | CILXENHP | CILZZOHP |
| CILTWETP | CILXFRMP | CILZZONP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTWFPP | CILXGRPP | CIL_FAVORITES |
| CILTWPTP | CILXJDBP | CIMOAPPCHAIN |
| CILTWSCP | CILXJMSP | F1MIGRTIMP |
| CIPCHT3L | F1-WEBSVCBOAS | F1MIGRTX |
| CIPFAFHP | F1ADMIN | F1MTXIMP |
| CIPOLICY | F1APPSEC | F1OBJREVCTL |
| CIPRICEACCOUNT | F1ATTACH | F1OBJRVH |
| CIPRICEPARM | F1ATTACHMENT | F1REQ |
| CIPYSRCH | F1BUNEXP | F1REVHST |
| CIRECON | F1BUNIMP | F1STRDIS |
| CIRECONSEG | F1CATTCH | F1STREAS |
| CIRSTTYP | F1CONFIGLOG | F1SUBRQQ |
| CIS_DIV_ALGS | F1DEBUG | F1SYNCRM |
| CIS_DIV_BICIES | F1EXLKP | F1SYNCRQ |
| CIS_DIV_CST_LNGS | F1EXLKPS | F1TBLEXC |
| CIS_DIV_ID_TYPES | F1LCAMRP | F1UIZONE |
| CIS_DIV_INV_CURS | F1LEXTLKUP | F1USERLOG |
| CIS_DIV_TXN_SRCS | F1LTAMTP | F1USRCHKOUT |
| CIS_DIV_VLD_CTIES | F1MESSAGE | F1WBSVCM |
| CTXTZONE | F1MGDEXP | F1WBSVCS |
| DIVS | F1MGDEXS | F1WEBSVC |
| DIV_PRICEITEMS | F1MGDIMP | F1_BTST |
| DIV_PRICELISTS | F1MGDIMS | F1_USRFAVSCH |
| F1-APAYEXPCRTYPEBOAS | F1MGOIMP | FILETYPE |
| F1-ATTACHMENTBOAS | F1MGPLNM | FWLBNDLP |
| F1-DFLTAPS | F1MGPLNS | FWLCTDEP |
| F1-DFLTS | F1MGREQM | FWLFACTP |
| F1-GENPROC | F1MGREQS | FWLSTRJP |
| F1-MIGROBJIMP | F1MIGRDEXP | FWLTBELP |
| F1-STASKTYPE | F1MIGRDIMP | FWLTBOJP |
| F1-SVCTASK | F1MIGRDS | FWLTBSVP |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1-SYNCREQ | F1MIGROBJ | FWLTDARP |
| F1-SYNCREQIN | F1MIGRPLAN | GOTOREC |
| F1-SYNCREQUESTBOAS | F1MIGRREQ | PERTREE |
| FWLTEXSP | FWLXOUTP | VALIDCHARS |
| FWLTMGCT | FWLZDEXP | C1LASGN |
| FWLTOMTP | FWLZWLZP | C1PIASGN |
| FWLTSCHP | FWLTUIMP | C1PLASGNM |
| C1-BILLCHARGE | C1ELGPA | C1REFUPLREQ |
| C1BCHGUPLREQ | C1GETELIGPT | C1UPLDRQ |
| C1BILLCYCLEUPDTUPL | C1GLAT | C1UPLREQ |
| C1CONTRIDERUPDTUPL | C1GLATEMP | C1WOUPLREQ |
| C1DCDTLC | C1GLATRQ | C1_STRTE |
| C1DELCTL | C1HOLDUPLREQ | CILCPASP |
| ACRLSRCH | C1ADDRESS | C1DSPT |
| C1-ACCTECR | C1ADDRS | C1DSPTRQ |
| C1-FTDIST | C1ADDRSBO | C1DSPTRT |
| C1-FTDISTRULE | C1ADDRSDP | C1DSPTTY |
| C1-FTDISTTY | C1ADDRSRC | C1FTDIST |
| C1TNCSRH | C1BK360 | C1FTDSRL |
| C1ACCECR | C1BKAPPSER | C1FTDSTT |
| C1ACRLCL | C1BKBLDT | C1FTDSTY |
| C1ACRLTP | C1BKSINF | C1HCSINF |
| C1ACRMVW | C1PL | C1_ACTVW |
| C1ADDRDP | C1SAPPTM | C1_ACTYP |
| C1ADDRDTL | C1_ACCRUAL_SERV | C1_TRLIN |
| C1_ACYVW | C1_DSPT_REQ | F1-ARQPR |
| F1-AVALG | F1-LKPIL | F1-SICRL |
| F1-AVBT | F1-MGDIM | F1-SRCRL |
| F1-AVMO | F1-MGDPR | F1-SRLRQ |
| F1-AVTBL | F1-MGOAP | F1-STATSM |
| F1-AVTD | F1-MGOPR | F1-STCRL |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1-BFCRL | F1-MGTAP | F1-STKDF |
| F1-BSFLG | F1-MGTPR | F1-STKTR |
| F1-BUNPR | F1-NDPUR | F1-SUBRQ |
| F1-DTDOM | F1-ORCRL | F1-SYNEF |
| F1-FCTRN | F1-OUCRL | F1-SYNIL |
| F1-FKVBP | C1BUNDLE | F1-SYNRQ |
| F1-FLUSH | F1ACGRPM | F1-SYSRQ |
| F1-ILMIN | F1-REQTY | F1-TDCRL |
| F1-LANG | F1-REVPR | F1-TDEER |
| F1-LDAP | F1-SAKRQ | F1-TDPG |
| F1-XMLPG | ACCTVIEW | C1-ACCTAPAY_SERV |
| C1-DISC-REPT | C1-DRRTMPLT | C1-PRC_CALC_SM |
| C1-REVRECSCHZ | C1-SCHEDULERMONITOR | C1-SCHPGMQZ |
| C1-SCHSCHQZ | C1APAYRT | C1APAYVW |
| C1APYINS | C1AWFCHN | C1AWFCRT |
| C1AWFGRP | C1AWFRSN | C1AWFSET |
| C1CONADD | BFEECONT | BILLVARI |
| C1PARAM | C1PDSRCH | C1PERS |
| C1PERSDP | C1PERSON | C1PRDSVC |
| C1PRODDP | C1PRODUCTSERVICE | C1PVERDP |
| C1REPORT | C1RPTTMP | C1SCHCHN |
| C1SCHJOB | C1SCHPGM | C1SCHSCH |
| C1SCJMON | C1SRCAPP | C1SVCDSP |
| C1VIEPRI | C1-DEALAPPR | C1_BOCHN |
| C1_CONSTRUCT | C1_DRRSP | C1_DRRSR |
| C1_DRRTM | C1_DRRTP | C1_ENLOG |
| C1_ENROL | C1_ENROLLMENT | C1_ENSCH |
| C1_PRODUCT | C1_PRODUCT_SERVICE | C1_PRODVER |
| CICONACT | CILFDRR | CONRULE |
| CONSTRUCT | DDPRCSM | PRICECOMPPRE |

| Application Service | Application Service | Application Service |
|---|---|---|
| ACCT_SUBSCRPTN_SERV | C1-PRC_CALC_SM | C1-PRRLTYP |
| C1-SUBSCRTYPE | C1ACTSBS | C1ASBSVW |
| C1BANK | C1BANKVW | C1ENTITYREPORT |
| C1PRICINGGROUP | C1PROAPP | C1PRTYP |
| C1RPTAUD | C1RPTDEF | C1SUBSTP |
| C1SUBTVW | C1_SRCBUSSPRD | C1_SRCTECHPRD |
| C1-CUSTREGTEMPL_SERV | C1-CUSTREGTYPE | C1-DUPBTN |
| C1-GETPRICINGENTITY | C1-PRICEASGNTREE | C1MASPRI |
| C1MPRIRQ | C1MPRISR | C1RETMPL |
| F1MSTCFG | F1OUMSTQ | F1OUMSTY |
| PRICECOMPSEQ | C1CREGSR | C1CTRGBK |
| C1CUREG | C1CURETY | C1CUSTREG |
| AUDITEVENT | C1-AUDEVTYPE | C1-BANKING |
| C1-PRICETREE | C1ADEVSR | C1AUDEVT |
| C1AUDTY | C1RETMPLBK | C1VIPRIN |
| C1_BILL | USRACCS | WEIGHTAV |
| C1-HRCHYENTITY | C1ADDPRO | C1CUSTPO |
| C1DAPROF | C1DEALDB | C1DEALPASGN |
| C1DEALSVC | C1DELTYP | USMISINV |
| C1DTSERH | C1ENHR | C1ENHRSR |
| C1ENTDTL | C1FILEMS | C1OFPREQ |
| C1-DLAPPRTOD | C1GETELIGPRO | C1HIERARCHY |
| C1HRCHYENTITY | C1HRYENT | C1INREQ |
| C1INRETY | C1INVRED | C1PISL |
| C1OFPRED | C1PROSPO | C1PRSEAR |
| C1PRSSASP | C1REFPRI | C1SERDSC |
| C1SLFSER | C1_ALRPT | C1-DLDBACTNS |
| C1_CONSTRUCT | C1_CREF | CANCPAYM |
| PRICEITEM_SERV | C1_DEAL | C1_DEALAPPSER |
| C1_HEVD | C1_PDEAL | C1_PRSENROLLMENT |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_REF | CANCPAYM | CDUPPROD |
| CMPERTESTASE | CM_TEST | CNSTRTEM |
| CONTEXTR | CRITBLAN | CUSDREN |
| CUSPRCDT | CUSTHRCH | CUSTINVM |
| DATAVAL | DENTREJ | DUMMYACT |
| DUMMYCIS | F1TODOMG | ICRGRPID |
| INCRADDR | INCRBILL | INCRINAC |
| INCRSTAC | INCRUSAC | INCURRAD |
| INVCARGR | INVLDCSK | INVOICSE |
| INVSTLAC | MGCEXP | MISSETCO |
| MULCSKY | NOBILLCH | NOCISKEY |
| NOCUSTYP | NOSTDPRC | NUSG |
| OVRDPRIC | OVRRDPRC | C1-DLTODOLST |
| PNDPYMNT | PORTEST | PORTT |
| PRDPROF | PRODSTAT | PROITMPR |
| PROSADD | PRTTST | C1DLAPDB |
| SETACCMP | STDPLREV | STNPRLST |
| TBDCONIN | TBDINQAC | TRADING |
| TRANSREJ | TRIALBL | TRLBILDT |
| TRSREJPR | C1GETELIGPROD | C1GETELIGPLPRO |
| UAINVCNS | USAGINVA | USGACC |
| C1-DEALRVW | C1-EXTCTTEMP | C1-EXTRACTTEMPLATE |
| C1-FIELDMAP | C1-FIELDMAP_SERV | C1-PROSPECTCRET |
| C1-PRSPRODENRL | C1-TNC | C1DEAL1 |
| C1DLPRT | C1DLTMPT | C1EXTCTTEMP |
| C1EXTTMP | C1PLSIM | C1PLSM |
| C1PLSMPL | C1PLSMVW | C1PRICELISTSIM |
| C1QUESTION | C1STPDL | C1TCMAP |
| C1TERCO | F1ACGRPQ | F1ALGQ |
| F1ALGTQ | F1APPSVM | F1APPSVQ |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1BOQ | F1BSVQ | F1BTCHQ |
| F1CHRTYP | F1CHRTYQ | F1DTARQ |
| F1FCFGQ | F1FIELD | F1FKRFQ |
| F1FLDQ | F1LKUPQ | F1MANCQ |
| F1MENUQ | F1MOQ | F1MSG |
| F1MSGC | F1MSGQ | F1NAVKQ |
| F1NAVOQ | F1PRTL | F1PRTLQ |
| F1SCRQ | F1TABLE | F1TBLQ |
| F1TDDASH | F1TMZNM | F1TODO |
| F1TODOEQ | F1UIMPQ | F1WRKCAL |
| F1WRKCLQ | F1ZONE | F1ZONEQ |

# B.3     HCADMIN

The following table lists all application services configured for the HCADMIN user group:

| Application Service | Application Service | Application Service |
|---|---|---|
| AFHZONE | C1-INS-POLICY | C1-SRCHSCPT |
| APPTXADM | C1-INSDETBAK | C1-UNLINK |
| BILLGCONS | C1-MAINPINFR | C1-UNLINKPP |
| BILLGRAPH | C1-MEMBSP | C1-UPLOADCSV |
| C1-ACCBALCNT | C1-NAVACTCUR | C1-WRITEOFFREQ |
| C1-ACCCURDET | C1-NAVTOEXST | C1ACCRATE |
| C1-ACCDISCREZ | C1-PAY-REQ | C1ACINSP |
| C1-ACCURTEXT | C1-PAYMENT | C1ACTPER |
| C1-ACNPOLSUMZ | C1-PAYTEMPLATEBOAS | C1ACTREE |
| C1-ACPOLSUMMZ | C1-PERBALCNT | C1ADJSTP |
| C1-ADJAPPRVLREQBOAS | C1-PIFVIS | C1ADJUPL |
| C1-APAYEXPCRREQBOAS | C1-PINFRDISP | C1APPBOCHNZN |
| C1-APAYEXPCRTYPEBOAS | C1-PINVFPOST | C1APPCHN |
| C1-APPRSN | C1-POINFRDET | C1APPCRT |
| C1-APPTXN | C1-POLICYINVOICEFREQ | C1APPRESP |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-APPTXNLOG | C1-POLICYPLAN | C1APPTXNBOCHN |
| C1-ASAPU | C1-POLINVDETZ | C1APPTXNBOCHNZN |
| C1-ASGNPL | C1-POLINVEDI | C1APPTXNCHAIN |
| C1-BILLCHARGE | C1-POLINVFRE | C1APPTXNCRI |
| C1-BRD | C1-POLINVFREZ | C1APPTXNCRT |
| C1-CNTRTPPTZ | C1-POLINVFRQ | C1APPTXNGRP |
| C1-CONTRACTCHARSVALI | C1-PPACCTSRC | C1BOCHN |
| C1-CONTRACTTYPECHARS | C1-PPPROC | C1FLRQTY |
| C1-DEFAULTPP | C1-PPTERROR | C1FLSRCH |
| C1-DFLTPPTMP | C1-QUICKPAGINATION | C1INSPAY |
| C1-DRRDTLSZ | C1-REFWOREQ | C1MANAPP |
| C1-DUPBTN | C1-REQUEST-TYPE | C1MANLOG |
| C1-GETADJ | C1-RETURNDUP | C1MANMOD |
| C1-GETEFFECTVPRICING | C1-REVRECSCHZ | C1MANRES |
| C1-GETPPTMPL | C1-SHDETAILSZ | C1MEMBRS |
| C1MEMBSP | C1PTPLP | C1_BRD_P |
| C1NCISPY | C1PYRQTY | C1_BUNDLE |
| C1NCPTMP | C1REFSTP | C1_CHKBIL_PA |
| C1ODBUPR | C1REFUND | C1_CHKTRDFLG |
| C1PASGAPPROVE | C1REQSTS | C1_CIGAS |
| C1PASGREADMODIFY | C1REQTYP | C1_CIMAPZ |
| C1PASGREADRESOLVE | C1RFWORT | C1_COM_VALID |
| C1PAYMAN | C1SAPPTM | C1_COPYPL |
| C1PAYPTL | C1SATYPELISTZ | C1_CPBUNDL |
| C1PAYREQ | C1SCHEDU | C1_CPYPL |
| C1PAYRQ | C1VAR | C1_CUSTINFO |
| C1PAYSRC | C1WODET | C1_DEL_PRD |
| C1PAYUPL | C1_ADDEXH | C1_DEL_PROD |
| C1PERRL | C1_ADDPL | C1_DISPBUND |
| C1PLCYPL | C1_ADDPROD | C1_DRRSR |
| C1PLCYPN | C1_ADD_RTCMP | C1_DSPLY_RT |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1PLCYTY | C1_ADD_TIER | C1_EDTBUND |
| C1POINFR | C1_ADMPI | C1_EDTER |
| C1POLACL | C1_ANSPLTCUS | C1_EDTPL |
| C1POLCYN | C1_APCS | C1_EDTPROD |
| C1POLCYP | C1_APPAD | C1_EDT_PRITM |
| C1POLPEL | C1_APPTXN_PRICEASGN | C1_EFF_PRC |
| C1POLSCH | C1_APPWF | C1_EFF_PRICE |
| C1POLSRCH | C1_APUR | C1_EFPRODSRC |
| C1POLTYP | C1_APVIG | C1_EXCHRT |
| C1PPCARS | C1_ASNPL | C1_EXHRT |
| C1PPDUP | C1_BACCGRVAL | C1_EXPPITM |
| C1PRISIM | C1_BAFHZ | C1_FTRS |
| C1PRODUCT | C1_BFHIS | C1_F_ADDCHLD |
| C1PSNAPP | C1_BNDMN | C1_F_ADDEXCH |
| C1PSNMOD | C1_BNDPRD | C1_F_ADDPL |
| C1PSNRES | C1_BNDPRS | C1_F_ADDPRD |
| C1PTNDRH | C1_BO_OPT | C1_F_ADDPRPL |
| C1_F_ADDPRSS | C1_F_IGG2MS | C1_OVR_PRITM |
| C1_F_ADDRATE | C1_F_IGG3MM | C1_PAYUP |
| C1_F_ADMPROD | C1_F_IGG3MS | C1_PCUSSRCH |
| C1_F_ADPROD | C1_F_PERSRCH | C1_PLADPR |
| C1_F_APVDTVL | C1_F_PLCRT | C1_PLAE |
| C1_F_APVNFLT | C1_F_PLEDT | C1_PLASNADD |
| C1_F_ASGNCUS | C1_F_PLVAL | C1_PLASNEDIT |
| C1_F_ASGNPTP | C1_F_POPITEM | C1_PLASN_ADD |
| C1_F_CIGG3V | C1_F_PRCHAR | C1_PLASN_EDI |
| C1_F_COPYPL | C1_F_PRCHARS | C1_PLASSIGN |
| C1_F_CPYBNDL | C1_F_PRDVL | C1_PLASSIGNE |
| C1_F_CPYPL | C1_F_PRODVAL | C1_PLCASSIGN |
| C1_F_CPYPLVL | C1_F_PRODVL1 | C1_PLEDIT |
| C1_F_CUSSRCH | C1_F_RSCDVAL | C1_PLISTSRCH |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_F_DELEXCH | C1_F_RTDESC | C1_PLMNG |
| C1_F_DELSCS | C1_F_SAVESCS | C1_PLPTYAINF |
| C1_F_DTVAL | C1_F_SRPLVAL | C1_PLPTYINFO |
| C1_F_EDTEXHR | C1_F_VAL_CUS | C1_PLSRCH |
| C1_F_EDTMMP | C1_GENERICSA | C1_PLSTOGGLE |
| C1_F_EDTPL | C1_GENRCMP | C1_PLVAL |
| C1_F_EDTPR | C1_GETTIER | C1_PLVALIDAT |
| C1_F_EDTPROD | C1_GRP | C1_PLVIEW |
| C1_F_EDTPRPL | C1_IGMMB | C1_PL_ADD |
| C1_F_EDTPRSS | C1_INF_PARTY | C1_PL_EDIT |
| C1_F_EXCDVAL | C1_INVC | C1_PL_PI |
| C1_F_EXCHVAL | C1_LIST_TIER | C1_PMPRC |
| C1_F_EXHVAL | C1_MIG | C1_POLICYTYPE |
| C1_F_GENACBO | C1_MIGAS | C1_PPEDT |
| C1_F_IGG1MM | C1_MNGRT | C1_PPOVR |
| C1_F_IGG1MS | C1_MNGTR | C1_PPOVRSRCH |
| C1_F_IGG2MM | C1_MPPA | C1_PP_DSPINF |
| C1_PP_PLVAL | C1_SRCHPL | CILBSBHP |
| C1_PRCAD | C1_SRCHPLVAL | CILBSCCP |
| C1_PRCE_VALD | C1_SRCHPPL | CILBSEGP |
| C1_PRCPM | C1_SRCHPRD | CILBSTMP |
| C1_PRC_EDIT | C1_SRCH_PROF | CILCAAHP |
| C1_PRC_OVRD | C1_SRPROD | CILCAASP |
| C1_PRC_TR | C1_STRTOLIST | CILCACCP |
| C1_PRC_VALID | C1_TEMPLATE | CILCALZP |
| C1_PRDREL | C1_TIER_INP | CILCAMRP |
| C1-OFFPRO | C1_VWPRD | CILCBCUP |
| C1_PRITSRCH | CHGTYPE | CILCCCIP |
| C1_PROD | CHGTYPECD | CILCCCZP |
| C1_PRODPL | CIACNBTY | CILCCIZP |
| C1_PROD_ADD | CIAPAYSTGUPL | CILCCNSP |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_PROD_EDIT | CIAPPACCTYPE | CILCCNXP |
| C1_PROD_SRCH | CIAPPCHELGBL | CILCCSCP |
| C1_PROVR_EDT | CIAPPCRIT | CILCCSHP |
| C1_PRZCR | CIAPPTXNCHAIN | CILCCTXP |
| C1_PRZTR | CIAPPTXNRSN | CILCFIZP |
| C1_PRZ_CR | CICASE | CILCPERP |
| C1_PRZ_TR | CICASECREATE | CILCPLAS |
| C1_PTPLA | CICHGTYPE | CILCPPLP |
| C1_RATE_DEF | CICREATEPAYMENTS | CILCPRMP |
| C1_RECTIFYSRCH | CIGETPRICING | CILCSALP |
| C1_RSN | CILAADUP | CILCSSEP |
| C1_RTCOM_ADD | CILAASCP | CILCSVAP |
| C1_RTC_VAL | CILAAUSP | CILDATA |
| C1_RTOPT | CILACCDEL | CILDIVET |
| C1_SAVE_TIER | CILACLCP | CILDIVEXT |
| C1_SHOW_IMG | CILBBICP | CILECBLP |
| C1_SRCH | CILBBLLP | CILEFKRP |
| CILEFLDP | CILPILANG | CILRRVMP |
| CILEMNUP | CILPIREL | CILSACHG |
| CILEMOBP | CILPITXNREL | CILTACRP |
| CILENAVP | CILPOLMO | CILTALGP |
| CILENVOP | CILPPAYP | CILTALTP |
| CILERPTP | CILPPCAN | CILTAMGP |
| CILESVCP | CILPPTSP | CILTAMTP |
| CILETBLP | CILPQADP | CILTAPAP |
| CILEUIZP | CILPRCITMREL | CILTAPFP |
| CILEXCHRATE | CILPRICELISTCHAR | CILTAPSP |
| CILFAFHP | CILPRITEM | CILTAROP |
| CILFBLCP | CILPRLIST | CILTARTP |
| CILFBPHP | CILPRLISTDIV | CILTASGP |
| CILFDRR | CILPRLISTL | CILTATCP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILFFNTP | CILPTCNP | CILTATPP |
| CILFFTBP | CILQATDP | CILTATYP |
| CILFFTPP | CILQCASP | CILTBCRP |
| CILFLGRP | CILQTDEP | CILTBCTP |
| CILFMVTP | CILQTDLP | CILTBFFP |
| CILFSFHP | CILQTDQP | CILTBFVP |
| CILITPDP | CILQTDSP | CILTBIMP |
| CILLODPP | CILQTDTP | CILTBLCP |
| CILPAPHP | CILQTDZP | CILTBLPP |
| CILPAPSP | CILQTSSP | CILTBNKP |
| CILPDCNP | CILQTSUP | CILTBRTP |
| CILPDCSP | CILRCMAP | CILTBSTP |
| CILPEPLP | CILRENGP | CILTBTCP |
| CILPEQAP | CILRRSMP | CILTBTRP |
| CILPEVTP | CILRRTCP | CILTBXTP |
| CILPICHAR | CILRRTSP | CILTCAMP |
| CILPIDIV | CILRRTVP | CILTCATP |
| CILTCCCP | CILTITTP | CILTSARP |
| CILTCCTP | CILTLDIP | CILTSATP |
| CILTCHTP | CILTLETP | CILTSCLP |
| CILTCIDP | CILTLKFP | CILTSCYP |
| CILTCLGP | CILTLNGP | CILTSICP |
| CILTCLRP | CILTMCRP | CILTSOMP |
| CILTCLWP | CILTMHTP | CILTSOPP |
| CILTCNTP | CILTMSGP | CILTSQIP |
| CILTCOCP | CILTNUXP | CILTSQRP |
| CILTCQTP | CILTOCRP | CILTSTMP |
| CILTCURP | CILTOETP | CILTSVTP |
| CILTCUSP | CILTOPTP | CILTSWLP |
| CILTDARP | CILTORAP | CILTTACP |
| CILTDASP | CILTPCRP | CILTTAXP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTDCAP | CILTPCTP | CILTTGRP |
| CILTDCLP | CILTPDRP | CILTTMRP |
| CILTDIRP | CILTPHTP | CILTTMTP |
| CILTDPRP | CILTPIFP | CILTTNSP |
| CILTDSTP | CILTPKGP | CILTTNTP |
| CILTDWPP | CILTPMDP | CILTTOUP |
| CILTDWTP | CILTPPTP | CILTTRAP |
| CILTEBRP | CILTPRTP | CILTTTMP |
| CILTECRP | CILTPSDP | CILTTZNP |
| CILTETTP | CILTPSTP | CILTUOMP |
| CILTFNDP | CILTPTRP | CILTURPP |
| CILTFRQP | CILTPYTP | CILTUSCP |
| CILTFWLP | CILTQRTP | CILTUSEP |
| CILTGLDP | CILTRGLP | CILTUSGP |
| CILTIDTP | CILTRLEP | CILTWCTP |
| CILTINCP | CILTRSCP | CILTWDCP |
| CILTINSP | CILTRTYP | CILTWETP |
| CILTWFPP | CILXOPTP | CISATYCHG |
| CILTWPTP | CILXRCVP | CTXTZONE |
| CILTWSCP | CILXRTTP | DIVS |
| CILTWSDP | CILXSENP | DIV_PRICEITEMS |
| CILTXNDETAIL | CILXSVXP | DIV_PRICELISTS |
| CILTXNSRC | CILXTPCP | F1-APAYEXPCRTYPEBOAS |
| CILTXNSRCD | CILXXSCP | F1-ATTACHMENTBOAS |
| CILTXNSRCL | CILXXUPP | F1-DECRPTBOAS |
| CILUPFTS | CILYASTP | F1-DFLTAPS |
| CILVFVDP | CILYDBPP | F1-DFLTS |
| CILVFVSP | CILYDFQP | F1-EXPUSERSREQBOAS |
| CILVVLEP | CILYDPIP | F1-GENPROC |
| CILVVLSP | CILYENRP | F1-MIGROBJIMP |
| CILWDWNP | CILYROBP | F1-STASKTYPE |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILWJSDP | CILZAFQP | F1-SVCTASK |
| CILWJSSP | CILZAUQP | F1-SYNCREQ |
| CILWNUPP | CILZFNCP | F1-SYNCREQIN |
| CILWNUSP | CILZPORP | F1-SYNCREQUESTBOAS |
| CILWPROP | CILZRBPP | F1-WEBSVCBOAS |
| CILXADPP | CILZRPHP | F1ADMIN |
| CILXAIEP | CILZRPOP | F1ATTACH |
| CILXAIIP | CILZRPTP | F1ATTACHMENT |
| CILXCLSP | CILZSCRP | F1CATTCH |
| CILXCONP | CILZSCZP | F1CONFIGLOG |
| CILXENHP | CILZTLZP | F1DEBUG |
| CILXFRMP | CILZZOHP | F1EXLKP |
| CILXGRPP | CILZZONP | F1EXLKPS |
| CILXJDBP | CIL_FAVORITES | F1LCAMRP |
| CILXJMSP | CIPRICEACCOUNT | F1LEXTLKUP |
| CILXJSVP | CISACHG | F1LTAMTP |
| CILXNDNP | CISACHGTYPE | F1MGDEXP |
| F1MGDEXS | F1_USRFAVSCH | F1SUBRQQ |
| F1MGDIMP | FILETYPE | F1SYNCRM |
| F1MGDIMS | FWLCTDEP | F1SYNCRQ |
| F1MGOIMP | FWLFACTP | F1TBLEXC |
| F1MGPLNM | FWLSTRJP | F1UIZONE |
| F1MGPLNS | FWLTBELP | F1USERLOG |
| F1MGREQM | FWLTBOJP | F1WBSVCM |
| F1MGREQS | FWLTBSVP | F1WBSVCS |
| F1MIGRDEXP | FWLTDARP | F1WEBSVC |
| F1MIGRDIMP | FWLTEXSP | F1_BTST |
| F1MIGRDS | FWLTMGCT | F1REQTYP |
| F1MIGROBJ | FWLTOMTP | F1STRDIS |
| F1MIGRPLAN | FWLTSCHP | F1STREAS |
| F1MIGRREQ | FWLTUIMP | PERTREE |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1MIGRTIMP | FWLXOUTP | SACHGLNK |
| F1MIGRTX | FWLZDEXP | SATYPCHG |
| F1MTXIMP | FWLZWLZP | C1LASGN |
| F1REQ | GOTOREC | C1PIASGN |
| C1BCHGUPLREQ | C1DELCTL | C1PLASGNM |
| C1BILLCYCLEUPDTUPL | C1ELGPA | C1REFUPLREQ |
| C1CONTRIDERUPDTUPL | C1GETELIGPT | C1UPLDRQ |
| C1DCDTLC | C1HOLDUPLREQ | C1UPLREQ |
| C1WOUPLREQ | CILCPASP | C1HCSINF |
| C1-ACCNBRTYPAS | C1ADDRESS | C1INMSGP |
| C1-CUSTINMSG | C1ADDRS | C1INMSRH |
| C1-GENRQ | C1ADDRSBO | C1INMSTY |
| C1-INMSG | C1ADDRSRC | C1PAREQ |
| C1-INMSGTYPE | C1CUS360 | C1PARQMN |
| C1-MEMBERINMSG | C1DSPT | C1PARQTY |
| C1-POLPERORLEAS | C1DSPTRQ | C1PI |
| C1-PROSPECTCRET | C1DSPTRT | C1PL |
| C1-REQUEST | C1DSPTTY | C1PRICEASGN |
| C1ADDRDP | C1HCAPPSER | C1REINUPLREQ |
| C1ADDRDTL | C1HCBLDT | CILTTHDP |
| C1_DSPT_REQ | CIPOLPERROLE | F1-ARQPR |
| F1-AVALG | F1-LKPIL | F1-SICRL |
| F1-AVBT | F1-MGDIM | F1-SRCRL |
| F1-AVMO | F1-MGDPR | F1-SRLRQ |
| F1-AVTBL | F1-MGOAP | F1-STATSM |
| F1-AVTD | F1-MGOPR | F1-STCRL |
| F1-BFCRL | F1-MGTAP | F1-STKDF |
| F1-BSFLG | F1-MGTPR | F1-STKTR |
| F1-BUNPR | F1-NDPUR | F1-SUBRQ |
| F1-DTDOM | F1-ORCRL | F1-SYNEF |
| F1-FCTRN | F1-OUCRL | F1-SYNIL |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1-FKVBP | F1ALGQ | F1-SYNRQ |
| F1-FLUSH | F1ALGTQ | F1-SYSRQ |
| F1-ILMIN | F1-REQTY | F1-TDCRL |
| F1-LANG | F1-REVPR | F1-TDEER |
| F1-LDAP | F1-SAKRQ | F1-TDPG |
| F1-XMLPG | ACCTVIEW | C1-ACCTAPAY_SERV |
| C1-DISC-REPT | C1-DRRTMPLT | C1-MBR-DR-TY |
| C1-REVRECPLCY | C1ACCTAPAY | C1APAYRT |
| C1APAYVW | C1APYINS | C1DISREP |
| C1DRDIS | C1DSRTY | C1ENTDTL |
| C1OFPRP | C1MBRRCN | C1PARAM |
| C1PERS | C1PERSDP | C1PERSON |
| C1RCONTY | C1RECOLN | C1RECONCIL |
| C1RECONTYP | C1SRCAPP | C1VIEWRL |
| C1_BPYHS | C1_DRRSP | C1_DRRTM |
| C1_DRRTP | C1_INVCN | C1_PAYIN |
| C1_PRODUCT | C1_RLTPM | C1_RLTVW |
| CILRULTP | CONRULE | PRICECOMPPRE |
| GETDEALTYPE | C1-PRRLTYP | C1-RULEBOAS |
| C1-TXNAGG | C1-TXNDTL | C1-TXNREC |
| C1_TRLBL | C1BILLLVL | C1BILLSORT |
| C1_TRLIN | C1BLLLVLUPLREQ | C1BLLSRTUPLREQ |
| C1DISAGR | C1ENTITYREPORT | C1PRICINGGROUP |
| C1PROAPP | C1PRTYP | C1SRCHRL |
| C1TXNAGG | TRIALBL | F1TODOMG |
| C1TXNFD | C1OFPRED | C1GETELIGPLPRO |
| C1_BUNDVAL | C1_COPYBND | C1_CPYBD |
| C1OFPREQ | C1_PRICE | C1_TXNAR |
| CILTXNSOURCE | CIPRICEPARM | F1APPLYBNDL |
| F1BNDLEM | F1BNDLES | F1BNDLIM |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1BNDLIS | F1BUNEXP | F1BUNIMP |
| F1IWSDPL | F1IWSSVC | F1IWSVCP |
| F1IWSVCS | FWLBNDLP | C1-ACCUDATA |
| C1-CUSTREGTEMPL_SERV | C1-CUSTREGTYPE | C1-GETPRICINGENTITY |
| C1-PICINGRULE | C1ACUDAT | C1MASPRI |
| C1MPRISR | C1RETMPL | F1OUMSTQ |
| F1OUMSTY | PRICECOMPSEQ | C1CREGSR |
| C1CTRGHC | C1CUREG | C1CURETY |
| C1CUSTREG | C1CUSTRG | AUDITEVENT |
| C1-AUDEVTYPE | C1-HEALTHCARE | C1ADEVSR |
| C1AUDEVT | C1AUDTY | C1RETMPLHC |
| C1STATE | C1_BILL | C1INREQ |
| C1INRETY | C1INVRED | C1TRBLHC |
| C1-BENEFITS | C1-BENFITPKG | C1-FIELDMAP |
| C1-FIELDMAP_SERV | C1-GETFIPRCRULE | C1-TNC |
| C1BENFTP | C1BENFTS | C1FLDMAP |
| C1GEORTA | C1GEORTAR | C1RELSTR |
| C1TERCO | C1TERMNCO | C1TNCSRH |
| C1_MEMRL_SUBT | PRICEITEM_SERV | C1-BUSRULE |
| C1-BUSRULVAL | C1BENSTY | C1BUSRD |
| C1BUSRUL | C1MEIDTY | C1_HCPRODUCT |
| C1_HLTH_PLAN | F1APPSVM | F1APPSVQ |
| F1BOQ | F1BSVQ | F1BTCHQ |
| F1CHRTYP | F1CHRTYQ | F1DTARQ |
| F1FCFGQ | F1FIELD | F1FKRFQ |
| F1FLDQ | F1LKUPQ | F1MANCQ |
| F1MENUQ | F1MESSAGE | F1MOQ |
| F1MSG | F1MSGC | F1MSGQ |
| F1NAVKQ | F1NAVOQ | F1PRTL |
| F1PRTLQ | F1SCRQ | F1TABLE |

| Application Service | Application Service | Application Service |
|---------------------|---------------------|---------------------|
| F1TBLQ | F1TDDASH | F1TMZNM |
| F1TODO | F1TODOEQ | F1UIMPQ |
| F1WRKCAL | F1WRKCLQ | F1ZONE |
| F1ZONEQ | - | - |

# B.4    INADMIN

The following table lists all application services configured for the INADMIN user group:

| Application Service | Application Service | Application Service |
|---------------------|---------------------|---------------------|
| AFHZONE | C1-CNTRTPPTZ | C1-EXTSTMICHZ |
| APPTXADM | C1-CONTRACTCHARSVALI | C1-EXTSTMLOGZ |
| BILLGCONS | C1-CONTRACTTYPECHARS | C1-EXTSTMTAD |
| BILLGRAPH | C1-CTRLC | C1-EXTSTMTCHAR |
| C1-ACCBALCNT | C1-DEFAULTPP | C1-EXTSTMTED |
| C1-ACCCRCHM | C1-DELPPTMP | C1-EXTSTMTITEM |
| C1-ACCCURDET | C1-DFLTPPTMP | C1-EXTSTMTITMCHR |
| C1-ACCDETAILZ | C1-DRRDTLSZ | C1-EXTSTMTRC |
| C1-ACCDISCREZ | C1-DUPBTN | C1-EXTSTMTSRZ |
| C1-ACCOUNTCURRENT | C1-EDITPPTMP | C1-EXTSTMTZ |
| C1-ACCQUICED | C1-EQUITYDT | C1-GETADJ |
| C1-ACCREDIT | C1-EXITEMDEL | C1-GETEFFECTVPRICING |
| C1-ACCRLOGZ | C1-EXITEMED | C1-GETPPTMPL |
| C1-ACCSELECT | C1-EXSTMVBNF | C1-INSDETBAK |
| C1-ACCURERR | C1-EXTACQRYZ | C1-ISSUEDATEPOLICYCH |
| C1-ACCURTEXT | C1-EXTAUTREC | C1-LINKPPTMP |
| C1-ACNPOLSUMZ | C1-EXTERNALSTATEMENT | C1-LINKPPTMP2 |
| C1-ACPOLSUMMZ | C1-EXTITEMAD | C1-MAINPINFR |
| C1-ACTPPTMPL | C1-EXTPENDG | C1-MAINPPLAN |
| C1-ACURITEMD | C1-EXTREOPN | C1-MAINPPTMP |
| C1-ADJAPPRVLREQBOAS | C1-EXTSTCHM | C1-MOVEPPT |
| C1-APAYEXPCRREQBOAS | C1-EXTSTIMP | C1-NAVACTCUR |
| C1-APAYEXPCRTYPEBOAS | C1-EXTSTITCH | C1-NAVTOEXST |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-APPRSN | C1-EXTSTLDB | C1-PAY-REQ |
| C1-APPTXN | C1-EXTSTMBNF | C1-PAYMENT |
| C1-APPTXNLOG | C1-EXTSTMCAN | C1-PAYPLAN |
| C1-ASAPU | C1-EXTSTMCLD | C1-PAYPLAND |
| C1-ASGNPL | C1-EXTSTMCLS | C1-PAYPLANTMPLCOMPL |
| C1-BILLCHARGE | C1-EXTSTMDTLZ | C1-PAYPLANZ |
| C1-BRD | C1-EXTSTMDZ | C1-PAYPLNBPA |
| C1-PAYTEMPLATEBOAS | C1-PPDUP | C1ACINSP |
| C1-PERBALCNT | C1-PPEDIT | C1ACTPER |
| C1-PIFVIS | C1-PPEDTTASK | C1ACTREE |
| C1-PINFRDISP | C1-PPLANDET | C1ADJSTP |
| C1-PINVFPOST | C1-PPPROC | C1ADJUPL |
| C1-POINFRDET | C1-PPSACCSRC | C1APPBOCHNZN |
| C1-POLCANCE | C1-PPTCNTDETZ | C1APPCHN |
| C1-POLCANZ | C1-PPTERROR | C1APPCRT |
| C1-POLICY | C1-PPTMPDISP | C1APPRESP |
| C1-POLICYBPA | C1-PPTMPDUP | C1APPTXNBOCHN |
| C1-POLICYCANRSNSERV | C1-PPTMPL | C1APPTXNBOCHNZN |
| C1-POLICYCHAR | C1-PPTMPLD | C1APPTXNCHAIN |
| C1-POLICYDESC | C1-PPTMPLDET | C1APPTXNCRI |
| C1-POLICYINVOICEFREQ | C1-PPTMPLDETZ | C1APPTXNCRT |
| C1-POLICYSUM | C1-PPTMPLVIS | C1APPTXNGRP |
| C1-POLINVDETZ | C1-PPTMPLZ | C1BOCHN |
| C1-POLINVEDI | C1-PPTMPPOST | C1CCACCT |
| C1-POLINVFRE | C1-PSTAKEHLD | C1CCPORT |
| C1-POLINVFREZ | C1-QUICKPAGINATION | C1CNTCR |
| C1-POLINVFRQ | C1-RECVAL | C1CTRLC |
| C1-POLI_FHZ | C1-REFWOREQ | C1FLRQTY |
| C1-POLNOMINEZ | C1-REQUEST-TYPE | C1FLSRCH |
| C1-POLPERORLEAS | C1-RETURNDUP | C1INSPAY |
| C1-POLREINSTSR | C1LISTBL | F1TODOMG |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1-POLSUMZ | C1-SHDETAILSZ | C1MANAPP |
| C1-PPACCTSRC | C1-SRCHSCPT | C1MANLOG |
| C1-PPACTV | C1-UNLINK | C1MANMOD |
| C1-PPBTNS | C1-UNLINKPP | C1MANRES |
| C1-PPDET | C1-UPLOADCSV | C1NCISPY |
| C1-PPDETZ | C1-WRITEOFFREQ | C1NCPTMP |
| C1-PPDISP | C1ACCRATE | C1ODBUPR |
| C1PASGAPPROVE | C1PTPLP | C1_BACCGRVAL |
| C1PASGREADMODIFY | C1PYRQTY | C1_BAFHZ |
| C1PASGREADRESOLVE | C1RECDTLSTAT | C1_BFHIS |
| C1PAYMAN | C1RECONDTL | C1_BNDMN |
| C1PAYPLAN | C1REFSTP | C1_BNDPRD |
| C1PAYPTL | C1REFUND | C1_BNDPRS |
| C1PAYREQ | C1REQSTS | C1_BO_OPT |
| C1PAYRQ | C1REQTYP | C1_BRD_P |
| C1PAYSRC | C1RFWORT | C1_BUNDLE |
| C1PAYUPL | C1SAPPTM | C1_CHKBIL_PA |
| C1PERRL | C1SATYPELISTZ | C1_CHKTRDFLG |
| C1POINFR | C1SCHEDU | C1_CIGAS |
| C1POLACL | C1VAR | C1_CIMAPZ |
| C1POLICYCANRSN | C1VARIANCE | C1_COM_VALID |
| C1POLPEL | C1WODET | C1_COPYPL |
| C1POLSRH | C1_ACCUR | C1_CPBUNDL |
| C1POLTYP | C1_ACUNV | C1_CPYPL |
| C1PPCARS | C1_ADDEXH | C1_CUSTINFO |
| C1PPDUP | C1_ADDPL | C1_DEL_PRD |
| C1PPLAN | C1_ADDPROD | C1_DEL_PROD |
| C1PPSRH | C1_ADD_RTCMP | C1_DISPBUND |
| C1PPSRS | C1_ADD_TIER | PRICECOMPPRE |
| C1PPTMPL | C1_ADMPI | C1_DSPLY_RT |
| C1PPTMPO | C1_ANSPLTCUS | C1_EDTBUND |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1PPVERSCHZ | C1_APCS | C1_EDTER |
| C1PRISIM | C1_APPAD | C1_EDTPL |
| C1PRODUCT | C1_APPTXN_PRICEASGN | C1_EDTPROD |
| C1PSNAPP | C1_APPWF | C1_EDT_PRITM |
| C1PSNMOD | C1_APUR | C1_EFF_PRC |
| C1PSNRES | C1_APVIG | C1_EFF_PRICE |
| C1PTNDRH | C1_ASNPL | C1_EFPRODSRC |
| C1_EXCHRT | C1_F_EDTMMP | C1_F_VAL_CUS |
| C1_EXHRT | C1_F_EDTPL | C1_GENERICSA |
| C1_EXPPITM | C1_F_EDTPR | C1_GENRCMP |
| C1_EXSTD | C1_F_EDTPROD | C1_GETTIER |
| C1_EXSTL | C1_F_EDTPRPL | C1_GRP |
| C1_EXSTM | C1_F_EDTPRSS | C1_IGMMB |
| C1_EXSTS | C1_F_EXCDVAL | C1_INF_PARTY |
| C1_FTRS | C1_F_EXCHVAL | C1_INS_SRCH |
| C1_F_ADDCHLD | C1_F_EXHVAL | C1_INVC |
| C1_F_ADDEXCH | C1_F_GENACBO | C1_LIST_TIER |
| C1_F_ADDPL | C1_F_IGG1MM | C1_MIG |
| C1_F_ADDPRD | C1_F_IGG1MS | C1_MIGAS |
| C1_F_ADDPRPL | C1_F_IGG2MM | C1_MNGRT |
| C1_F_ADDPRSS | C1_F_IGG2MS | C1_MNGTR |
| C1_F_ADDRATE | C1_F_IGG3MM | C1_MPPA |
| C1_F_ADMPROD | C1_F_IGG3MS | C1_OVR_PRITM |
| C1_F_ADPROD | C1_F_PERSRCH | C1_PAYUP |
| C1_F_APVDTVL | C1_F_PLCRT | C1_PCUSSRCH |
| C1_F_APVNFLT | C1_F_PLEDT | C1_PLADPR |
| C1_F_ASGNCUS | C1_F_PLVAL | C1_PLAE |
| C1_F_ASGNPTP | C1_F_POLSRCH | C1_PLASNADD |
| C1_F_CIGG3V | C1_F_POPITEM | C1_PLASNEDIT |
| C1_F_COPYPL | C1_F_PRCHAR | C1_PLASN_ADD |
| C1_F_CPYBNDL | C1_F_PRCHARS | C1_PLASN_EDI |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_F_CPYPL | C1_F_PRDVL | C1_PLASSIGN |
| C1_F_CPYPLVL | C1_F_PRODVAL | C1_PLASSIGNE |
| C1_F_CUSSRCH | C1_F_PRODVL1 | C1_PLCASSIGN |
| C1_F_DELEXCH | C1_F_RSCDVAL | C1_PLEDIT |
| C1_F_DELSCS | C1_F_RTDESC | C1_PLISTSRCH |
| C1_F_DTVAL | C1_F_SAVESCS | C1_PLMNG |
| C1_F_EDTEXHR | C1_F_SRPLVAL | C1_PLPTYAINF |
| C1_PLPTYINFO | C1_PRZCR | CIAPPCHELGBL |
| C1_PLSRCH | C1_PRZTR | CIAPPCRIT |
| C1_PLSTOGGLE | C1_PRZ_CR | CIAPPTXNCHAIN |
| C1_PLVAL | C1_PRZ_TR | CIAPPTXNRSN |
| C1_PLVALIDAT | C1_PTPLA | CICASE |
| C1_PLVIEW | C1_RATE_DEF | CICASECREATE |
| C1_PL_ADD | C1_RECON | CICHGTYPE |
| C1_PL_EDIT | C1_RECTIFYSRCH | CICPAYPLAN |
| C1_PL_PI | C1_RSN | CICREATEPAYMENTS |
| C1_PMPRC | C1_RTCOM_ADD | CIGETPRICING |
| C1_PPEDT | C1_RTC_VAL | CILAADUP |
| C1_PPOVR | C1_RTOPT | CILAASCP |
| C1_PPOVRSRCH | C1_SAVE_TIER | CILAAUSP |
| C1_PP_DSPINF | C1_SHOW_IMG | CILACCDEL |
| C1_PP_PLVAL | C1_SRCH | CILACLCP |
| C1_PRCAD | C1_SRCHPL | CILBBICP |
| C1_PRCE_VALD | C1_SRCHPLVAL | CILBBLLP |
| C1_PRCPM | C1_SRCHPPL | CILBMCRP |
| C1_PRC_EDIT | C1_SRCHPRD | CILBSBHP |
| C1_PRC_OVRD | C1_SRCH_PROF | CILBSCCP |
| C1_PRC_TR | C1_SRPROD | CILBSEGP |
| C1_PRC_VALID | C1_STRTOLIST | CILBSTMP |
| C1_PRDREL | C1_TEMPLATE | CILCAAHP |
| C1GETELIGPLPRO | C1_TIER_INP | CILCAASP |

| Application Service | Application Service | Application Service |
|---|---|---|
| C1_PRITSRCH | C1_VIEW | CILCACCP |
| C1_PROD | C1_VWPRD | CILCALZP |
| C1_PRODPL | CHGTYPE | CILCAMRP |
| C1_PROD_ADD | CHGTYPECD | CILCBCUP |
| C1_PROD_EDIT | CIACNBTY | CILCCCIP |
| C1_PROD_SRCH | CIAPAYSTGUPL | CILCCCZP |
| C1_PROVR_EDT | CIAPPACCTYPE | CILCCIZP |
| CILCCNSP | CILFBLCP | CILPRLIST |
| CILCCNXP | CILFBPHP | CILPRLISTDIV |
| CILCCSCP | CONRULE | CILPRLISTL |
| CILCCSHP | CILFFNTP | CILPTCNP |
| CILCCTXP | CILFFTBP | CILQATDP |
| CILCFIZP | CILFFTPP | CILQCASP |
| CILCLOAP | CILFLGRP | CILQTDEP |
| CILCPERP | CILFMVTP | CILQTDLP |
| CILCPLAS | CILFSFHP | CILQTDQP |
| CILCPPLP | CILITPDP | CILQTDSP |
| CILCPPTMPL | CILLODPP | CILQTDTP |
| CILCPRMP | CILPAPHP | CILQTDZP |
| CILCSALP | CILPAPSP | CILQTSSP |
| CILCSSEP | CILPDCNP | CILQTSUP |
| CILCSVAP | CILPDCSP | CILRCMAP |
| CILDATA | CILPEPLP | CILRENGP |
| CILDIVET | CILPEQAP | CILRRSMP |
| CILDIVEXT | CILPEVTP | CILRRTCP |
| CILECBLP | CILPICHAR | CILRRTSP |
| CILEFKRP | CILPIDIV | CILRRTVP |
| CILEFLDP | CILPILANG | CILRRVMP |
| CILEMNUP | CILPIREL | CILSACHG |
| CILEMOBP | CILPITXNREL | CILSTEXTITEM |
| CILENAVP | CILPOLMO | CILTACRP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILENVOP | CILPPAYP | CILTALGP |
| CILERPTP | CILPPCAN | CILTALTP |
| CILESVCP | CILPPTSP | CILTAMGP |
| CILETBLP | CILPQADP | CILTAMTP |
| CILEUIZP | CILPRCITMREL | CILTAPAP |
| CILEXCHRATE | CILPRICELISTCHAR | CILTAPFP |
| CILFAFHP | CILPRITEM | CILTAPRP |
| CILTAPSP | CILTCQTP | CILTOETP |
| CILTAROP | CILTCURP | CILTOPTP |
| CILTARTP | CILTCUSP | CILTORAP |
| CILTASGP | CILTDARP | CILTPCRP |
| CILTATCP | CILTDASP | CILTPDRP |
| CILTATPP | CILTDCAP | CILTPHTP |
| CILTATYP | CILTDCLP | CILTPIFP |
| CILTBCRP | CILTDIRP | CILTPKGP |
| CILTBCTP | CILTDPRP | CILTPMDP |
| CILTBFFP | CILTDSTP | CILTPPTP |
| CILTBFVP | CILTDWPP | CILTPRTP |
| CILTBIMP | CILTDWTP | CILTPSDP |
| CILTBLCP | CILTEBRP | CILTPSTP |
| CILTBLPP | CILTECRP | CILTPTRP |
| CILTBNKP | CILTFNDP | CILTPYTP |
| CILTBRTP | CILTFRQP | CILTQRTP |
| CILTBSTP | CILTFWLP | CILTRGLP |
| CILTBTCP | CILTGLDP | CILTRLEP |
| CILTBTRP | CILTIDTP | CILTRSCP |
| CILTBXTP | CILTINCP | CILTRTYP |
| CILTCAMP | CILTINSP | CILTSATP |
| CILTCATP | CILTITTP | CILTSCLP |
| CILTCCCP | CILTLDIP | CILTSCYP |
| CILTCCTP | CILTLETP | CILTSICP |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTCHTP | CILTLKFP | CILTSOMP |
| CILTCIDP | CILTLNGP | CILTSOPP |
| CILTCLGP | CILTMCRP | CILTSQIP |
| CILTCLRP | CILTMHTP | CILTSQRP |
| CILTCLWP | CILTMSGP | CILTSTMP |
| CILTCNTP | CILTNUXP | CILTSVTP |
| CILTCOCP | CILTOCRP | CILTSWLP |
| CILTTACP | CILWDWNP | CILYROBP |
| CILTTAXP | CILWJSDP | CILZAFQP |
| CILTTGRP | CILWJSSP | CILZAUQP |
| CILTTMRP | CILWNUPP | CILZFNCP |
| CILTTMTP | CILWNUSP | CILZPORP |
| CILTTNSP | CILWPROP | CILZRBPP |
| CILTTNTP | CILXADPP | CILZRPHP |
| CILTTOUP | CILXAIEP | CILZRPOP |
| CILTTRAP | CILXAIIP | CILZRPTP |
| CILTTTMP | CILXCLSP | CILZSCRP |
| CILTTZNP | CILXCONP | CILZSCZP |
| CILTUOMP | CILXENHP | CILZTLZP |
| CILTURPP | CILXFRMP | CILZZOHP |
| CILTUSCP | CILXGRPP | CILZZONP |
| CILTUSEP | CILXJDBP | CIL_FAVORITES |
| CILTUSGP | CILXJMSP | CIPOLICY |
| CILTWCTP | CILXJSVP | CIPOLPERRL |
| CILTWDCP | CILXJSVP | CIPOLPERROLE |
| CILTWETP | CILXNDNP | CIPOLREINSTRSN |
| CILTWPTP | CILXOPTP | CIPRICEACCOUNT |
| CILTWSCP | CILXRCVP | CIREC |
| CILTWSDP | CILXRTTP | CIRECCUSTSUB |
| CILTXNDETAIL | CILXSENP | CIRECON |
| CILTXNSRC | CILXSVXP | CIRECONDTL |
| | CILXTPCP | |

| Application Service | Application Service | Application Service |
|---|---|---|
| CILTXNSRCD | CILXXSCP | CIRECONSEG |
| CILTXNSRCL | CILXXUPP | CIRECPRTL |
| CILUPFTS | CILYASTP | CISACHG |
| CILVFVDP | CILYDBPP | CISACHGTYPE |
| CILVFVSP | CILYDFQP | CISATYCHG |
| CILVVLEP | CILYDPIP | CIVARIANCE |
| CILVVLSP | CILYENRP | CNCLRSN |
| CTXTZONE | F1MGDIMP | FILETYPE |
| DIVS | F1MGDIMS | FWLCTDEP |
| DIV_PRICEITEMS | F1MGOIMP | FWLFACTP |
| DIV_PRICELISTS | F1MGPLNM | FWLSTRJP |
| F1-APAYEXPCRTYPEBOAS | F1MGPLNS | FWLTBELP |
| F1-ATTACHMENTBOAS | F1MGREQM | FWLTBOJP |
| F1-DECRPTBOAS | F1MGREQS | FWLTBSVP |
| F1-DFLTAPS | F1MIGRDEXP | FWLTDARP |
| F1-DFLTS | F1MIGRDIMP | FWLTEXSP |
| F1-EXPUSERSREQBOAS | F1MIGRDS | FWLTMGCT |
| F1-GENPROC | F1MIGROBJ | FWLTOMTP |
| F1-MIGROBJIMP | F1MIGRPLAN | FWLTSCHP |
| F1-STASKTYPE | F1MIGRREQ | FWLTUIMP |
| F1-SVCTASK | F1MIGRTIMP | FWLXOUTP |
| F1-SYNCREQ | F1MIGRTX | FWLZDEXP |
| F1-SYNCREQIN | F1MTXIMP | FWLZWLZP |
| F1-SYNCREQUESTBOAS | F1REQ | GOTOREC |
| F1-WEBSVCBOAS | F1REQTYP | LISTBILLVIEW |
| F1ADMIN | F1STRDIS | PERTREE |
| F1ATTACH | F1STREAS | POLICYCANRSN |
| F1ATTACHMENT | F1SUBRQQ | RECDTSTA |
| F1CATTCH | F1SYNCRM | RECON |
| F1CONFIGLOG | F1SYNCRQ | RECONDTL |
| F1DEBUG | F1TBLEXC | RSTRSN |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1EXLKP | F1UIZONE | SACHGLNK |
| F1EXLKPS | F1USERLOG | SATYPCHG |
| F1LCAMRP | F1WBSVCM | SATYPES |
| F1LEXTLKUP | F1WBSVCS | F1_BTST |
| F1LTAMTP | F1WEBSVC | F1_USRFAVSCH |
| F1MGDEXP | F1MGDEXS | C1LASGN |
| C1BCHGUPLREQ | C1DELCTL | C1PIASGN |
| C1BILLCYCLEUPDTUPL | C1ELGPA | C1PLASGNM |
| C1CONTRIDERUPDTUPL | C1GETELIGPT | C1REFUPLREQ |
| C1DCDTLC | C1HOLDUPLREQ | C1UPLDRQ |
| C1UPLREQ | C1WOUPLREQ | CILCPASP |
| C1-PROSPECTCRET | C1ADDRS | C1DSPTTY |
| C1ACRLCL | C1ADDRSBO | C1PAREQ |
| C1ACRLTP | C1ADDRSRC | C1PARQMN |
| C1ADDRDP | C1DSPT | C1PARQTY |
| C1ADDRDTL | C1DSPTRQ | C1PI |
| C1ADDRESS | C1DSPTRT | C1PL |
| C1PRICEASGN | C1_DSPT_REQ | F1-ARQPR |
| F1-AVALG | F1-LKPIL | F1-SICRL |
| F1-AVBT | F1-MGDIM | F1-SRCRL |
| F1-AVMO | F1-MGDPR | F1-SRLRQ |
| F1-AVTBL | F1-MGOAP | F1-STATSM |
| F1-AVTD | F1-MGOPR | F1-STCRL |
| F1-BFCRL | F1-MGTAP | F1-STKDF |
| F1-BSFLG | F1-MGTPR | F1-STKTR |
| F1-BUNPR | F1-NDPUR | F1-SUBRQ |
| F1-DTDOM | F1-ORCRL | F1-SYNEF |
| F1-FCTRN | F1-OUCRL | F1-SYNIL |
| F1-FKVBP | F1ACGRPM | F1-SYNRQ |
| F1-FLUSH | F1ACGRPQ | F1-SYSRQ |
| F1-ILMIN | F1-REQTY | F1-TDCRL |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1-LANG | F1-REVPR | F1-TDEER |
| F1-LDAP | F1-SAKRQ | F1-XMLPG |
| C1-DISC-REPT | C1-PTD-CAL | C1APAYRT |
| C1OFPRED | C1OFPREQ | C1PARAM |
| C1PERS | C1PERSDP | C1PERSON |
| C1SRCAPP | C1VIEWRL | C1_INVCN |
| C1_PRODUCT | C1_RLTPM | C1_RLTVW |
| CILRULTP | C1-PRRLTYP | C1ENTITYREPORT |
| C1PROAPP | C1PRTYP | C1_PRICE |
| CIPRICEPARM | C1-CUSTREGTEMPL_SERV | C1-CUSTREGTYPE |
| C1-GETPRICINGENTITY | C1MASPRI | C1MPRISR |
| C1RETMPL | F1OUMSTQ | F1OUMSTY |
| PRICECOMPSEQ | C1CREGSR | C1CTRGHC |
| C1CUREG | C1CURETY | C1CUSTREG |
| C1CUSTRG | AUDITEVENT | C1-AUDEVTYPE |
| C1-HEALTHCARE | C1ADEVSR | C1AUDEVT |
| C1AUDTY | C1RETMPLHC | C1ENTDTL |
| C1INREQ | C1INRETY | C1INVRED |
| GETDEALTYPE | C1-FIELDMAP | C1-FIELDMAP_SERV |
| C1-TNC | C1FLDMAP | C1RELSTR |
| C1TERCO | C1TERMNCO | C1TNCSRH |
| C1_MEMRL_SUBT | PRICEITEM_SERV | C1MEIDTY |
| C1BENSTY | C1BUSRD | F1ALGQ |
| F1ALGTQ | F1APPSVM | F1APPSVQ |
| F1BOQ | F1BSVQ | F1BTCHQ |
| F1CHRTYP | F1CHRTYQ | F1DTARQ |
| F1FCFGQ | F1FIELD | F1FKRFQ |
| F1FLDQ | F1LKUPQ | F1MANCQ |
| F1MENUQ | F1MOQ | F1MSG |
| F1MSGC | F1MSGQ | F1NAVKQ |

| Application Service | Application Service | Application Service |
|---|---|---|
| F1NAVOQ | F1PRTL | F1PRTLQ |
| F1SCRQ | F1TABLE | F1TBLQ |
| F1TDDASH | F1TMZNM | F1TODO |
| F1TODOEQ | F1UIMPQ | F1WRKCAL |
| F1WRKCLQ | F1ZONE | F1ZONEQ |

# Appendix C : Changing the DB User Password

If you have changed the database user password, you need to execute the following steps before installing the rollup pack for Oracle Utilities Application Framework Version 4.4.0.3.0:

1. Download and apply the single fix available for Bug 22505470 - PATCHES APPEND EXTRA SPACE TO STRINGS AND ADD DB SERVICE CONNECTION SUPPORT on the application and database environments.

2. Perform the following steps on the application environment:

   a. Change the DB Name using the `configureEnv` command.

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

   **AIX, Linux:**

   `$SPLEBASE/bin/initialSetup.sh`

   **Windows:**

   `%SPLEBASE%\bin\initialSetup.cmd`

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

   **AIX, Linux:**

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

   **Windows:**

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

# Appendix D : New Objects in the Oracle Utilities Application Framework V4.4.0.3.0 Database

This section lists the objects that are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database. These objects are classified under the following two sections:

- Schema Changes
- New System Data

## D.1   Schema Changes

This section lists schema related changes made in the Oracle Utilities Application Framework V4.4.0.3.0 database.

## D.1.1   New Tables

The following tables are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Table | Description |
| --- | --- |
| CI_ACC_GRP_ROLE | Access Group Role |
| F1_ACTION_METHOD | Action Method |
| F1_ACTION_METHOD_CHAR | Action Method Characteristic |
| F1_ACTION_METHOD_L | Action Method Language |
| F1_COLOR_OPT | Color Option |
| F1_COLOR_OPT_ITEM | Color Option Item |
| F1_COLOR_OPT_L | Color Option Language |
| F1_DATA_EXPORT_CTRL | Data Export Control |
| F1_DATA_EXPORT_CTRL_LOG | Data Export Control Log |
| F1_DATA_EXPORT_CTRL_LOG_PARM | Data Export Control Log Parameters |
| F1_FILE_INT_REC | File Integration Record |
| F1_FILE_INT_REC_ALG | File Integration Record Algorithm |
| F1_FILE_INT_REC_L | File Integration Record Language |
| F1_FILE_INT_TYPE | File Integration Type |
| F1_FILE_INT_TYPE_L | File Integration Type Language |
| F1_INSIGHT_GRP | Insight Group |
| F1_INSIGHT_GRP_CHAR | Insight Group Characteristics |

| Table | Description |
|---|---|
| F1_INSIGHT_GRP_L | Insight Group Language |
| F1_INSIGHT_GRP_TYPE | Insight Group Type |
| F1_INSIGHT_GRP_VISUAL_STR | Insight Group Valid Visual Structure |
| F1_INSIGHT_TYPE | Insight Type |
| F1_INSIGHT_TYPE_ALG | Insight Type Algorithm |
| F1_INSIGHT_TYPE_CHAR | Insight Type Characteristic |
| F1_INSIGHT_TYPE_L | Insight Type Language |
| F1_INSIGHT_TYPE_USER_ACT | Insight Type User Action |
| F1_INSIGHT_TYPE_USER_ACT_ALG | Insight Type User Action Algorithm |
| F1_INSIGHT_TYPE_VISUAL_SETTING | Insight Type Visual Setting |
| F1_MD_BI_TBL | Analytics Table |
| F1_MD_BI_TBL_FLD | Analytics Table / Field |
| F1_MD_BI_TBL_L | Analytics Table Language |
| F1_MO_UPD | Data Export Update |
| F1_TREE | Tree |
| F1_TREE_L | Tree Language |
| F1_TREE_NODE | Tree Node |
| F1_TREE_NODE_ALG | Tree Node Algorithms |
| F1_TREE_NODE_L | Tree Node Language |

## D.1.2  Added Views

The following views are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| View | Description |
|---|---|
| F1_CAL_FISC_PERIOD_D | Fiscal Calendar Period Dimension View |
| F1_CAL_FISC_QUARTER_D | Fiscal Calendar Quarter Dimension View |
| F1_CAL_FISC_YEAR_D | Fiscal Calendar Year Dimension View |
| F1_CAL_MONTH_D | Calendar Month Dimension View |
| F1_CAL_QUARTER_D | Calendar Quarter Dimension View |
| F1_CAL_WEEK_D | Calendar Week Dimension View |
| F1_CAL_YEAR_D | Calendar Year Dimension View |

# D.1.3 Dropped Tables

None

# D.1.4 Unsupported Tables

None

# D.1.5 Added Columns

The following columns are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
| CI_BATCH_INST | END_DTTM | End Date/Time | No |
| | FILE_DETAILS | File Details | No |
| | START_DTTM | Start Date/Time | No |
| CI_BATCH_JOB | SUBMIT_METH_FLG | Submission Method | Yes |
| | SUBMIT_USER_ID | Submission User | Yes |
| CI_CHAR_TYPE | FLD_NAME | Field | No |
| CI_MD_FLD_L | CONTEXT_LABEL1 | Context Label 1 | Yes |
| | CONTEXT_LABEL2 | Context Label 2 | Yes |
| | CONTEXT_LABEL3 | Context Label 3 | Yes |
| | CONTEXT_LABEL_TYPE1 | Context Type 1 | Yes |
| | CONTEXT_LABEL_TYPE2 | Context Type 2 | Yes |
| | CONTEXT_LABEL_TYPE3 | Context Type 3 | Yes |
| | OVRD_CONTEXT_LABEL1 | Override Label 1 | Yes |
| | OVRD_CONTEXT_LABEL2 | Override Label 2 | Yes |
| | OVRD_CONTEXT_LABEL3 | Override Label 3 | Yes |
| CI_MD_TBL | KEY_PREFIX_FLD_NAME | Inherited Key Field | No |
| CI_TD_ENTRY_OPEN_VW | DKSQ1 | Drill Key Sequence 1 | No |
| | DKSQ2 | Drill Key Sequence 2 | No |
| | DKSQ3 | Drill Key Sequence 3 | No |
| | DKSQ4 | Drill Key Sequence 4 | No |
| | DKSQ5 | Drill Key Sequence 5 | No |
| | SKSQ1 | Sort Key Sequence 1 | No |
| | SKSQ2 | Sort Key Sequence 2 | No |

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
| | SKSQ3 | Sort Key Sequence 3 | No |
| | SKSQ4 | Sort Key Sequence 4 | No |
| | SKSQ5 | Sort Key Sequence 5 | No |
| F1_CAL_FISC_PERIOD_D | F1_FISC_QUARTER_FLG | Fiscal Quarter | No |
| | F1_FISC_QUARTER_END_DT | Fiscal Quarter End Date | No |
| | F1_FISC_QUARTER_KEY | Fiscal Quarter Key | No |
| | F1_FISC_QUARTER_START_DT | Fiscal Quarter Start Date | No |
| | F1_FISC_QUARTER_IN_YEAR | Fiscal Quarter in Year | No |
| | F1_FISC_YEAR | Fiscal Year | No |
| | F1_FISC_YEAR_END_DT | Fiscal Year End Date | No |
| | F1_FISC_YEAR_START_DT | Fiscal Year Start Date | No |
| | F1_FISC_PERIOD_FLG | Period | No |
| | F1_FISC_PERIOD_END_DT | Period End Date | No |
| | F1_FISC_PERIOD_KEY | Period Key | No |
| | F1_FISC_PERIOD_START_DT | Period Start Date | No |
| | F1_FISC_PERIOD_IN_QUARTER | Period in Quarter | No |
| | F1_FISC_PERIOD_IN_YEAR | Period in Year | No |
| F1_CAL_FISC_QUARTER_D | F1_FISC_QUARTER_FLG | Fiscal Quarter | No |
| | F1_FISC_QUARTER_END_DT | Fiscal Quarter End Date | No |
| | F1_FISC_QUARTER_KEY | Fiscal Quarter Key | No |
| | F1_FISC_QUARTER_START_DT | Fiscal Quarter Start Date | No |
| | F1_FISC_QUARTER_IN_YEAR | Fiscal Quarter in Year | No |
| | F1_FISC_YEAR | Fiscal Year | No |
| | F1_FISC_YEAR_END_DT | Fiscal Year End Date | No |
| | F1_FISC_YEAR_START_DT | Fiscal Year Start Date | No |
| F1_CAL_FISC_YEAR_D | F1_FISC_YEAR | Fiscal Year | No |
| | F1_FISC_YEAR_END_DT | Fiscal Year End Date | No |
| | F1_FISC_YEAR_START_DT | Fiscal Year Start Date | No |
| F1_CAL_MONTH_D | F1MONTH_ABBR | Month | No |
| | F1_MONTH_END_DT | Month End Date | No |

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
| | F1_MONTH_KEY | Month Key | No |
| | F1_MONTH_START_DT | Month Start Date | No |
| | F1_MONTH_IN_QUARTER | Month in Quarter | No |
| | F1_MONTH_IN_YEAR | Month in Year | No |
| | F1_CAL_QUARTER_FLG | Quarter | No |
| | F1_CAL_QUARTER_END_DT | Quarter End Date | No |
| | F1_CAL_QUARTER_KEY | Quarter Key | No |
| | F1_CAL_QUARTER_START_DT | Quarter Start Date | No |
| | F1_CAL_QUARTER_IN_YEAR | Quarter in Year | No |
| | F1_CAL_YEAR | Year | No |
| | F1_CAL_YEAR_END_DT | Year End Date | No |
| | F1_CAL_YEAR_NAME | Year Name | No |
| | F1_CAL_YEAR_START_DT | Year Start Date | No |
| F1_CAL_QUARTER_D | F1_CAL_QUARTER_FLG | Quarter | No |
| | F1_CAL_QUARTER_END_DT | Quarter End Date | No |
| | F1_CAL_QUARTER_KEY | Quarter Key | No |
| | F1_CAL_QUARTER_START_DT | Quarter Start Date | No |
| | F1_CAL_QUARTER_IN_YEAR | Quarter in Year | No |
| | F1_CAL_YEAR | Year | No |
| | F1_CAL_YEAR_END_DT | Year End Date | No |
| | F1_CAL_YEAR_NAME | Year Name | No |
| | F1_CAL_YEAR_START_DT | Year Start Date | No |
| F1_CAL_WEEK_D | F1_WEEK_END_DT | Week End Date | No |
| | F1_WEEK_KEY | Week Key | No |
| | F1_WEEK_NAME | Week Name | No |
| | F1_WEEK_START_DT | Week Start Date | No |
| | F1_WEEK_IN_YEAR | Week in Year | No |
| F1_CAL_YEAR_D | F1_CAL_YEAR | Year | No |
| | F1_CAL_YEAR_END_DT | Year End Date | No |
| | F1_CAL_YEAR_NAME | Year Name | No |

| Table | Column | Column Description | Required (Yes or No) |
|---|---|---|---|
|  | F1_CAL_YEAR_START_DT | Year Start Date | No |
| F1_IWS_SVC | IWS_REST_VER_FLG | REST Engine Version | No |
| F1_LGCY_OBJ | LGCY_CAT_FLG | Category | Yes |
|  | CHANGE_REF_NAME | Change Reference | No |
| F1_MIGR_DATA_ST_TBL | RECORD_COUNT | Record Count | No |
| SC_USER | DASHBOARD_LOC_FLG | Dashboard Location | No |
|  | DASHBOARD_STATE_FLG | Dashboard State | No |

## D.1.6  Dropped Columns

None

## D.1.7  Dropped Lookups

The following lookups are removed from the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Field | Description |
|---|---|
| XAI_COMMAND_FLG | Display Registry |
|  | MPL Refresh Executer |
|  | MPL Refresh Receiver |
|  | MPL Refresh Sender |
|  | MPL Start Receiver |
|  | MPL Stop |
|  | MPL Stop Receiver |
|  | MPL Trace Off |
|  | MPL Trace On |
|  | Refresh Code and Description |
|  | Refresh Registry |
|  | Refresh Schema |
|  | Refresh Service |
|  | Refresh XSL |
|  | Trace Off |
|  | Trace On |

| Field | Description |
|---|---|
| | XAI Trace Clear |
| | XAI Trace Swap |

## D.1.8   Column Format Change

The format of the following columns is changed in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Table | Column | From | To |
|---|---|---|---|
| CI_ALG_PARM | ALG_PARM_VAL | VARCHAR2(2000) | VARCHAR2(32767) |
| CI_ZONE_PRM | ZONE_PARM_VAL | VARCHAR2(4000) | VARCHAR2(32767) |

# D.2   New System Data

The system data is used to configure various features in Oracle Utilities Application Framework. This section lists the system data that is newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database.

## D.2.1   Algorithms

The following algorithms are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Algorithm | Description |
|---|---|
| F1-ACCGRPBO | Determine Access Group BO |
| F1-APPSVCBO | Determine Application Service BO |
| F1BTMONPR | Batch Monitoring - Create Log / Check Database Operations |
| F1-BTMON-SR | Batch Monitoring Select Records |
| F1CHARMAPINF | Characteristic Mapping Information |
| F1CHARMAPVAL | Validate Characteristic Mapping Configuration |
| F1CHRMAPP | Characteristic Mapping - Default Rules |
| F1-CHRTYPBO | Determine Characteristic Type BO |
| F1CLROPTINFO | Color Option Information |
| F1COLORINFO | Color Information |
| F1DAEXCNAUD | Data Export Audit |
| F1DAEXCNVAL | Data Export Validation |
| F1DEXCTRLINF | Data Export Control Information |
| F1-FILEX-PR | Extract File Integration Record |

| Algorithm | Description |
|-----------|-------------|
| F1-FLDBO | Determine Field BO |
| F1HEXCOLOR | Validate Hex Color Code |
| F1LKUPINF | Lookup Information |
| F1MGPRORDINF | Migration Import Processing Order Information |
| F1-MO-REGCHN | Capture Change for Ongoing Export |
| F1-MSGBO | Determine Message BO |
| F1-MSGCBO | Determine Message Category BO |
| F1MSGCINFO | Message Category Information |
| F1NAVKINFO | Navigation Key Information |
| F1-NEXT-TDNS | Get Next To Do Assignment - No Skill Match |
| F1-NEXT-TDSK | Get Next To Do Assignment - Match Skills |
| F1-PORTALBO | Determine Portal BO |
| F1PORTALPST | Maintain Portal Artifacts |
| F1RELTDINFO | Related To Do Count |
| F1SFHINTINFO | Search Filter Hint Information |
| F1-TABLEBO | Determine Table BO |
| F1-TMZNBO | Determine Time Zone BO |
| F1-TODOBO | Determine To Do Entry BO |
| F1UNSMDVAL | Unsupported Metadata Validation |
| F1-UNSPRTD | Unsupported Metadata |
| F1USRCHINF | Unified Search Information |
| F1VALINSGVS | Validate Insight Group Visual Structure |
| F1-WRKCALBO | Determine Work Calendar BO |
| F1-ZONEBO | Determine Zone BO |

## D.2.2   Algorithm Types

The following algorithm types are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Algorithm Type | Description |
|----------------|-------------|
| F1BTMONPR | Batch Monitoring - Create Log / Check Database Operations |
| F1CHARMAPINF | Characteristic Mapping Information |
| F1CHARMAPVAL | Validate Characteristic Mapping Configuration |

| Algorithm Type | Description |
|---|---|
| F1CHRMAPP | Characteristic Mapping - Default Rules |
| F1CLROPTINFO | Color Option Information |
| F1COLORINFO | Color Information |
| F1DAEXCNAUD | Data Export Audit |
| F1DAEXCNVAL | Data Export Validation |
| F1DEXCTRLINF | Data Export Control Information |
| F1-FILEX-PR | File Integration Record Extraction |
| F1HEXCOLOR | Validate Hex Color Code |
| F1LKUPINF | Lookup Information |
| F1MGPRORDINF | Migration Import Processing Order Information |
| F1-MO-REGCHN | Capture Change for Ongoing Export |
| F1MSGCINFO | Message Category Information |
| F1NAVKINFO | Navigation Key Information |
| F1PORTALPST | Maintain Portal Artifacts |
| F1PRFMDELAY | Perform Delay of Processing |
| F1RELTDINFO | Related To Do Count |
| F1SFHINTINFO | Search Filter Hint Information |
| F1UNSMDVAL | Unsupported Metadata Validation |
| F1USRCHINF | Unified Search Information |
| F1VALINSGVS | Validate Insight Group Visual Structure |

## D.2.3  Zones

The following zones are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Zone | Description |
|---|---|
| F1-ACCGRP | Access Group |
| F1-ACCGRPQ | Access Group Search |
| F1-ACCGRPQ1 | Access Group Information |
| F1-ACMTHD | Action Method |
| F1-ACMTHLIST | Action Method List |
| F1-ALGSRCHQ | Algorithm Search |
| F1-ALGTYPQ | Algorithm Type Search |

| Zone | Description |
|------|-------------|
| F1-ALGTYPQ1 | Algorithm Type Information |
| F1-ANTBCHAR | Analytics Table's Characteristics Tables |
| F1-APPSVC | Application Service |
| F1-APPSVCQ1 | Application Service Information |
| F1-BOSRAIN | Additional Information |
| F1-BOSRCHQ | Business Object Search |
| F1-BPASCSRCH | BPA Script Search |
| F1-BTCTLQ2 | Additional Information |
| F1-CHKRUNBAT | Check if Batch is Running |
| F1-CHMPSEQ | Characteristic Mapping Sequence Rules |
| F1-CHTYPM | Characteristic Type |
| F1-CHTYPQ | Characteristic Type Search |
| F1-CHTYPQ1 | Characteristic Type Information |
| F1-CNVENTBTC | Batch Controls |
| F1-CNVENTDUP | Duplicate Keys |
| F1-CNVENTERR | Validation Errors |
| F1-CNVENTERS | Error Summary |
| F1-CNVENTQ | Conversion Entity Search |
| F1-CNVENTQ1 | Conversion Entity Information |
| F1-CNVENTTBL | Tables |
| F1-DECEXPELG | Eligible Entities |
| F1-DECEXPENT | Export Entities |
| F1-DEXPCNTS | Data Export Control Search |
| F1-DSICONSRH | Display Icon Reference Search |
| F1-FILINTDSP | File Integration Type |
| F1-FILINTYQ | File Integration Type Search |
| F1-FILINTYQ1 | File Integration Type Information |
| F1-FILRECLST | File Integration Records |
| F1-FLDSRCHQ2 | Additional Information |
| F1-GENEXBACN | Generalized Initial Export Batch Controls |
| F1-INHKEY | Get Inheritance Key |

| Zone | Description |
|------|-------------|
| F1-LKUPQ | Lookup Search |
| F1-LKUPQ1 | Lookup Information |
| F1-MANINSTYP | Retrieve Visual Structure lookup values |
| F1-MANTDTYPE | Retrieve Manual To Do Types |
| F1-MESSAGES | Messages |
| F1-MIGRREQCB | Migration Request - Entities Exist |
| F1-MIGRREQCL | Migration Request Entities |
| F1-MOBTCHCD | MO Batch Codes |
| F1-MOCNVBAT | MO Conversion Batch Codes |
| F1-MOCNVBTCR | Conversion Batch Controls |
| F1-MOQ1 | Maintenance Object Information |
| F1-MOQ2 | Additional Information |
| F1-MOTABLES | Tables for a Maintenance Object |
| F1-MOTRNS | MOs that are Translatable (Internal Use Only) |
| F1-MSGSRCHC | Message Category Information |
| F1-MSGSRCHM | Message Information |
| F1-MSGSRCHQ | Message Search |
| F1-RELATEDTD | Related To Do Entries |
| F1-RELTDCNT | Related To Do Entries Count |
| F1-SCRQ | Script Search |
| F1-SDR-HC | Schemas with Potential Hard-coded Labels |
| F1-SDR-MO | Maintenance Object ILM Configuration |
| F1-SDR-SC | Script Configuration |
| F1-SDR-ZN | Zone Configuration |
| F1-SELZNTYPE | Select Zone Type |
| F1-SPEEXELMO | MOs Eligible for Specialized Export |
| F1-TBLCONST | Table Constraints |
| F1-TBLCSTREF | Referred By Constraints |
| F1-TBLFLDS | Fields |
| F1-TBLMO | Maintenance Object for Table |
| F1-TBLRECCNT | Table Record Count |

| Zone | Description |
|------|-------------|
| F1-TBLSRCH2 | Additional Information |
| F1-TBLSRCHQ | Table Search |
| F1-TDCHARS | To Do Characteristics |
| F1-TDEM | To Do Entry |
| F1-TDEQ1 | To Do Entry Identifier |
| F1-TDEQ2 | To Do Type |
| F1-TDEQRY | To Do Entry Search |
| F1-TODOLOG | To Do Log |
| F1-TREEM | Tree |
| F1-TREENODE | Tree Node |
| F1-TREEQ | Tree Search |
| F1-TREEQ1 | Tree Information |
| F1-UIMPAI | Additional Information |
| F1-UNSADD | Objects to Add |
| F1-UNSLOG | Log |
| F1-UNSMDEX | Unsupported Metadata Exists |
| F1-UNSMOPK | MO / PK |
| F1-UNSPMD | Unsupported Metadata |
| F1-UNSPMDQ | Unsupported Metadata Search |
| F1-UNSPMDQ1 | Unsupported Metadata Information |
| F1-UNSSDL | System Data Log |
| F1-USRTDVAL | User Valid for Role |
| F1-WORKCALQ | Work Calendar Search |
| F1-WRKCAL | Work Calendar |
| F1-WRKCALHOL | Work Calendar Holidays |
| F1-ZONESRCHQ | Zone Search |
| F1-ZONSRCH2 | Additional Information |
| F1ALGQ1 | Algorithm Information |
| F1ALGQ2 | Additional Information |
| F1ANLDEXFLDS | Excluded Fields |
| F1ANLDMNCHR | Characteristic Mapping |

| Zone | Description |
|------|-------------|
| F1ANLDMNFDO | Fields |
| F1ANLDMNINFO | Dimensions |
| F1ANLFACTFDO | Fields |
| F1ANLLGDM | Logical Dimensions |
| F1ANLREFBY | Referenced By |
| F1ANLYDMN | Analytics Table |
| F1ANLYTBLQ | Analytics Table Search |
| F1ANLYTBLQ1 | General Information |
| F1BSVQ1 | Business Service Information |
| F1BSVQ2 | Additional Information |
| F1BSVQS | Business Service Search |
| F1CHARMPQ | Characteristic Mapping Search |
| F1CHARMPQ2 | Characteristic Mapping Information |
| F1COLORLST | Color Option List |
| F1COLOROPT | Color Option |
| F1DEXCNTL | Data Export Control |
| F1DEXCNTRLOG | Data Export Control Log |
| F1DTARAI | Additional Information |
| F1DTARQS | Data Area Search |
| F1ETLQ1 | ETL Mapping Control Information |
| F1FCFGQ1 | Feature Configuration Information |
| F1FCFGQS | Feature Configuration Search |
| F1FKRFQ1 | Foreign Key Reference Information |
| F1FKRFQS | Foreign Key Reference Search |
| F1FLDM | Field |
| F1FLDTF | Tables Using Field |
| F1INSGPLST | Insight Group List |
| F1INSTGRP | Insight Group |
| F1INSTYLST | Insight Type List |
| F1INSTYPE | Insight Type |
| F1MANCQS | Managed Content Search |

| Zone | Description |
|---|---|
| F1MENUQ1 | Menu Information |
| F1MENUQS | Menu Search |
| F1MEXENS | Entity Summary |
| F1MEXENTEX | Migration Data Set Export Entities Exist |
| F1MGDENS | Entity Summary |
| F1MGDEXS2 | Identifier |
| F1MGDIMS3 | Identifier |
| F1MGRQCOEN | Check if Migration Request Contains Entity |
| F1MIGRQCOLEN | Collect Entity |
| F1MSG | Message |
| F1MSGC | Message Category |
| F1MTXENS | Entity Summary |
| F1NAVKQ1 | Navigation Key Information |
| F1NAVKQS | Navigation Key Search |
| F1NAVOQ1 | Navigation Option Information |
| F1NAVOQS | Navigation Option Search |
| F1OPTFK | Get Option FK Reference Details |
| F1PRGCOM | Program Component Search |
| F1PRTLAPS | Portal Additional Display Details |
| F1PRTLCTXZ | Context Sensitive Zones |
| F1PRTLM | Portal |
| F1PRTLOPT | Options |
| F1PRTLQS | Portal Search |
| F1PRTLTABS | Tabs |
| F1PRTLTABSE | Main portal's tab portals |
| F1PRTLTMS | Main portals referencing a tab portal |
| F1RELINSGRPS | Related Insight Groups |
| F1RELINSTY | Related Insight Types |
| F1SCRQ1 | Script Information |
| F1SCRQ2 | Step Information |
| F1TBLCLSCST | Table fields for defining a constraint |

| Zone | Description |
|------|-------------|
| F1TBLERD | Table ERD Information |
| F1TBLERDM | Entity Relationship Diagram |
| F1TBLM | Table |
| F1TBLREFCST | Referring Constraint Search |
| F1TDDAGE | To Do Entries by Days Old |
| F1TDDPRI | To Do Entries by Priority |
| F1TDDROLE | To Do Entries by Role |
| F1TDDSTAT | To Do Entries by Status |
| F1TDDTYPE | To Do Entries by Type |
| F1TIMEZONEL | Time Zone List |
| F1TREENDS | Other Tree Nodes |
| F1TREENODES | Tree Nodes |
| F1TZONEM | Time Zone |
| F1UIMPQS | UI Map Search |
| F1UNSRCHS | Unified Searches |
| F1VALINSTYPE | Valid Insight Types for Insight Group |
| F1ZNFLTRS | Filters |
| F1ZNMQRYOPTS | Query Options |
| F1ZNPRMS | General Parameters |
| F1ZNPRMSEDT | General Parameters Maintenance |
| F1ZNSQLPARMS | SQL Parameters Maintenance |
| F1ZNSQLPRMS | SQL Configuration |
| F1ZNSQLS | SQLs |
| F1ZNUSED | Zone References |
| F1ZONEM | Zone |

## D.2.4   New Zones In Existing Portals

The following new zones are added to the existing portals in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Portal | Zone | Zone Description |
|--------|------|------------------|
| CI_DASHBOARD | F1MIGRQCOLEN | Collect Entity |
| F1ESRCFG | F1-GENEXBACN | Generalized Initial Export Batch Controls |

| Portal | Zone | Zone Description |
|---|---|---|
|  | F1-MOCNVBTCR | Conversion Batch Controls |
| F1MGDEXP | F1MEXENS | Entity Summary |
| F1MGDIMP | F1MGDENS | Entity Summary |
| F1MGREQM | F1-MIGRREQCL | Migration Request Entities |
| F1MTXIMP | F1MTXENS | Entity Summary |
| F1SYSDRV | F1-SDR-MO | Maintenance Object ILM Configuration |
|  | F1-SDR-SC | Script Configuration |
|  | F1-SDR-ZN | Zone Configuration |
| F1TBLEXC | F1-SDR-HC | Schemas with Potential Hard-coded Labels |

## D.2.5   UI Maps

The following UI maps are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| UI Map | Description |
|---|---|
| F1-AlgQueryFilter | Algorithm Query Filter |
| F1-AnalyticsFieldInfo | Analytics Table |
| F1AnDmChSS | Dimension Characteristic Mapping |
| F1-CharacteristicsMaint | Maintain Characteristics Input |
| F1-CheckInstallModeFragment | Function to check if install mode is cloud |
| F1-ColorDisplay | Color Preview Display |
| F1-ColorMaint | Color Maintenance with Preview |
| F1-ConversionEntityInfoFilter | Conversion Entity Search by Info - Filter |
| F1-DataExportControlUserLogAdd | Data Export Control - Add User Log Entry |
| F1-DEChartVisOptions | Data Explorer Chart Visualization Options |
| F1-FieldAddtlFilter | Field Additional Attribute Filter |
| F1-FieldHelpText | Field Help Text Elements |
| F1-FileIntRecordLayoutDisp | File Integration Record Layout Display |
| F1-HelpTextDisp | Help Text Display |
| F1-InsightPreview | Insight Preview |
| F1-InsTypeVisualSettingsDispla | Insight Type Visual Settings - Display |
| F1-InsTypeVisualSettingsInput | Insight Type Visual Settings - Maintenance |
| F1-MaintainOptionsInp | Maintain Options - Functions |

| UI Map | Description |
|---|---|
| F1-MessageCategoryMessages | Messages Maintenance |
| F1-MigrationReqCollectEntity | Collect Entity - Dashboard Zone |
| F1-MigrDataSetBatchStatus | Migration Data Set Batch Status |
| F1-MigrReqCriteriaBsdSrchFltr | Migration Request - Criteria Based Filter |
| F1-MOPKforPage | MO / PK for current page |
| F1-MOSearchFilter | Maintenance Object Search Filter |
| F1-NavOptQueryFilter | Navigation Option Query Filter |
| F1-OJETLIBSR | OJET libraries (Redwood Version) |
| F1-OverrideDescription | Description Display Only |
| F1-OverrideMessageText | Message Text Display Only |
| F1-PortalMainDisp | Portal Additional Fields |
| F1-PortalMainInp | Portal Additional Fields |
| F1-PortalOptionsInp | Portal Options Input |
| F1-PortalRecordInfo | Portal Record Information |
| F1-PortalTabsEdit | Portal Tabs Edit |
| F1-RecordInfoREST | Inbound REST Web Service Record Info |
| F1-RelatedObject | Related Object Display |
| F1-RelatedToDoInformation | To Do Entry - Related To Do Information |
| F1-RetreiveMoOptionExpBatCtrl | Display MO Export Batch Control |
| F1-TableAuditInp | Table Audit Program |
| F1-TableConstEdit | Table Constraint Maintenance |
| F1-TableConstFieldsEdit | Table Constraint Fields Maintenance |
| F1-TableERD | Table ERD |
| F1-TableERDInc | Table ERD Functions |
| F1-TableFieldHelpText | Table Field Help Text Elements |
| F1-TableFieldsEditAll | Table Fields Maintenance |
| F1-TableMODisp | Table Maintenance Object Display |
| F1-ToDoActions | To Do Entry Actions |
| F1-ToDoAddInfo | To Do Entry - Add Information |
| F1-ToDoBatchDisplay | To Do Entry - Batch Process Display |
| F1-ToDoDrillKeyDisplay | To Do Drill Key Display |

| UI Map | Description |
|---|---|
| F1-ToDoEntUserQueryFilter | Valid User To Do Types Query Filter |
| F1-ToDoExpandedMessage | Display To Do Message |
| F1-ToDoSortKeyDisplay | To Do Sort Key Display |
| F1-ToDoUserLogAdd | To Do Entry - Add User Log Entry |
| F1-TreeFragment | Generic Tree |
| F1-UnifiedSearchFiltersDisp | Unified Search Filters - Display |
| F1-UnifiedSearchWidget | Unified Search Widget |
| F1-UnsMDAddObjectFltr | Add Objects for Unsupported Metadata - Filter |
| F1-UnsMDFltr | Unsupported Metadata - Filter |
| F1-UnsuppMDMOPKFilter | Search for Entities to Add by MO and PKs |
| F1-WorkCalendarHolidayMaint | Work Calendar Holiday Maintenance |
| F1-ZoneAdditionalActions | Zone Additional Actions |
| F1-ZoneColEdit | Zone Column Maintenance |
| F1-ZoneColHelpDisp | Zone Column Help Text Display |
| F1-ZoneColHelpLnk | Zone Column Help Link |
| F1-ZoneHelpText | Zone Help Text Elements |
| F1-ZoneParametersFilter | Zone parameters Filter |
| F1-ZoneRequiredParameters | Zone Required Parameters |
| F1-ZoneSQL | Zone SQL Text |
| F1-ZoneSQLCols | Zone SQL Columns |
| F1-ZoneSQLParms | Zone SQL Parameters |

# D.2.6   Maintenance Objects

The following maintenance objects are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Maintenance Object | Description |
|---|---|
| F1-ACTNMETHD | Action Method |
| F1-ANALYTICS | Analytics Table |
| F1-COLOROPT | Color Option |
| F1-DAEXPCTRL | Data Export Control |
| F1-FILEINT | File Integration Type |

| Maintenance Object | Description |
|---|---|
| F1-FLINREC | File Integration Record |
| F1-INSIGHGRP | Insight Group |
| F1-INSIGHTYP | Insight Type |
| F1-TABMD | Tab Metadata |
| F1-TREE | Tree |
| F1-UNSPRTD | Unsupported Metadata |

## D.2.7   To Do Types

None

## D.2.8   Business Services

The following business services are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Business Service | Description |
|---|---|
| F1-ANTBCHAR | Analytics Table's Characteristics Tables |
| F1-BatchMonitoringProbeService | Batch Probe Monitor |
| F1-CHKRUNBAT | Check if Batch is Running |
| F1-CHMPSEQ | Characteristic Mapping Sequence Rules |
| F1-DBMSCancelSteps | DBMS Scheduler - Interrupt Job Steps |
| F1-ExpandTreeNode | Expand Tree Node |
| F1-FleIntRecordSchemaRetriever | File Integration Record Schema Retriever |
| F1-FlushAllService | Flush the Server Cache |
| F1-GenericDataExplorer | Generic Data Explorer |
| F1-GETMANIFESTDETAIL | Verify Manifest File |
| F1-INHKEY | Get Inheritance Key |
| F1-InsightActionProcessor | Insight Action Processor |
| F1-MigRqContainsEntity | Check if Migration Request Contains Entity |
| F1-MOBTCHCD | MO Batch Codes |
| F1-MOCNVBAT | MO Conversion Batch Codes |
| F1-MOTABLES | Tables for a Maintenance Object |
| F1-MOTRNS | MOs that are Translatable (Internal Use Only) |
| F1OPTFK | Get Option FK Reference Details |

| Business Service | Description |
|---|---|
| F1-PrepareTreeNode | Prepare Tree Node |
| F1-ProgComTab-Add | Program Component Tab - Add |
| F1-ProgComTab-Delete | Program Component Tab - Delete |
| F1PRTLAPS | Portal Additional Display Details |
| F1PRTLTABSE | Main portal's tab portals |
| F1PRTLTMS | Main portals referencing a tab portal |
| F1-RELTDCNT | Related To Do Entries Count |
| F1-RetrieveActionMethodDetails | Retrieve Action Method Details |
| F1-RetrieveInsights | Retrieve Insights |
| F1-RetrieveTableInheritedFld | Retrieve Table's Inherited Key Field |
| F1-RetrieveTimeZoneNames | Retrieve Standard Time Zone Names |
| F1-SPEEXELMO | MOs Eligible for Specialized Export |
| F1-TableAuditProgramSearch | Table Audit Program |
| F1TBLCLSCST | Table fields for defining a constraint |
| F1TBLERD | Table ERD Information |
| F1-TBLMO | Maintenance Object for a Table |
| F1-TBLRECCNT | Table Record Count |
| F1TBLREFCST | Referring Constraint Search |
| F1-ToDoExtraActions | To Do Entry - Extra Actions |
| F1TREENDS | Other Tree Nodes |
| F1-UNSMDEX | Unsupported Metadata Exists |
| F1UNSRCHS | Unified Searches |
| F1-UserDashboardUpdate | Update User Dashboard Settings |
| F1-USRTDVAL | User Valid for Role |
| F1VALINSTYPE | Valid Insight Types for Insight Group |
| F1ZNPRMSEDT | General Parameters Maintenance |
| F1ZNSQLPARMS | SQL Parameters Maintenance |

# D.2.9   Portals

The following portals are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Portal | Description |
|---|---|
| F1ACGRPM | Access Group |
| F1ACGRPQ | Access Group Query |
| F1ACMTHD | Action Method |
| F1ALGQ | Algorithm Query |
| F1ALGTQ | Algorithm Type Query |
| F1ANALYT | Analytics Dimension |
| F1ANFACT | Analytics Fact |
| F1ANLYTS | Analytics Table Query |
| F1APPSVM | Application Service |
| F1APPSVQ | Application Service Query |
| F1BOQ | Business Object Query |
| F1BSVQ | Business Service Query |
| F1BTCHQ | Batch Control Query |
| F1CHRMAP | Characteristic Mapping Query |
| F1CHRTYP | Characteristic Type |
| F1CHRTYQ | Characteristic Type Query |
| F1COLOPT | Color Option |
| F1CVENTD | Conversion Entity Dashboard |
| F1CVENTQ | Conversion Entity Query |
| F1CVENTVE | Conversion Validation Errors |
| F1DECLOG | Data Export Control Log |
| F1DEXCNS | Data Export Control Query |
| F1DEXCNT | Data Export Control |
| F1DTARQ | Data Area Query |
| F1FCFGQ | Feature Configuration Query |
| F1FIELD | Field |
| F1FKRFQ | Foreign Key Reference Query |
| F1FLDQ | Field Query |
| F1FLINTP | File Integration Type |

| Portal | Description |
|--------|-------------|
| F1FLINTS | File Integration Type Query |
| F1GEXDAS | Generalized Export Dashboard |
| F1INSTGP | Insight Group |
| F1INSTYP | Insight Type |
| F1LKUPQ | Lookup Query |
| F1MANCQ | Managed Content Query |
| F1MENUQ | Menu Query |
| F1MGDIMO | Migration Data Set Import Object |
| F1MGDIMT | Migration Data Set Import Transaction |
| F1MOQ | Maintenance Object Query |
| F1MSG | Message |
| F1MSGC | Message Category |
| F1MSGQ | Message Query |
| F1NAVKQ | Navigation Key Query |
| F1NAVOQ | Navigation Option Query |
| F1PRTL | Portal |
| F1PRTLQ | Portal Query |
| F1PRUSEM | Product Use Metrics |
| F1SCRQ | Script Query |
| F1TABLE | Table |
| F1TBLCST | Table Constraints |
| F1TBLQ | Table Query |
| F1TBLRL | Relationship |
| F1TDDASH | To Do Dashboard |
| F1TMZNM | Time Zone |
| F1TODO | To Do Entry |
| F1TODOEQ | To Do Entry Query |
| F1TODOL | To Do Log |
| F1TREEM | Tree |
| F1TREEQ | Tree Query |
| F1UIMPQ | UI Map Query |

| Portal | Description |
|---|---|
| F1UNSPMD | Unsupported Metadata |
| F1UNSPMQ | Unsupported Metadata Query |
| F1WRKCAL | Work Calendar |
| F1WRKCLQ | Work Calendar Query |
| F1ZONE | Zone |
| F1ZONEQ | Zone Query |
| F1ZONEUSD | Zone References |

# D.2.10 Business Objects

The following business objects are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Business Object | Description |
|---|---|
| F1-AccessGroup | Access Group |
| F1-AccessGroupBundlingAddBO | Bundling Add BO for Access Group |
| F1-ActionMethodPhysicalBO | Physical BO for Action Method |
| F1-ActionMethodRole | Action Method Role |
| F1-AnalyticsDimension | Analytics Dimension |
| F1-AnalyticsFact | Analytics Fact |
| F1-AnalyticsTablePhysicalBO | Physical BO for Analytics Table |
| F1-ApplicationService | Application Service |
| F1-AVAnalyticsOptions | Analytics Options |
| F1-BusinessFlagPhysicalBO | Physical BO for Business Flag |
| F1-CharacteristicType | Characteristic Type |
| F1-CharMapping | Characteristic Mapping |
| F1-Color | Color |
| F1-ColorCombo | Color Combination |
| F1-ColorOptionPhysicalBO | Physical BO for Color Option |
| F1-ContextualInsightType | Contextual Insight Type |
| F1-DBMSJobStatus | DBMS Job Status |
| F1-ExtractFileIntegrationRec | Extract File Integration Record |
| F1-ExtractFileIntegrationType | Extract File Integration Type |
| F1-Field | Field |

| Business Object | Description |
|---|---|
| F1-FileIntegRecBundlingAddBO | File Integration Record Bundling Add BO |
| F1-FilIntegrationRecPhysicalBO | Physical BO for File Integration Record |
| F1-FilIntegrationTypPhysicalBO | Physical BO for File Integration Type |
| F1-GeneralizedDataExport | Generalized Data Export Control |
| F1-InsightGroup | Insight Group |
| F1-InsightGroupPhysicalBO | Physical BO for Insight Group |
| F1-InsightTypePhysicalBO | Physical BO for Insight Type |
| F1-KeyRingPhysicalBO | Physical BO for Key Ring |
| F1-Message | Message |
| F1-MessageCategory | Message Category |
| F1-MigrImportProcessingOrder | Migration Import Processing Order |
| F1-OutboundMessagePhysicalBO | Physical BO for Outbound Message |
| F1-Portal | Portal |
| F1-PortalTab | Portal Tab |
| F1-RedirectionSecurityContext | Redirection Security Context |
| F1-RedirectionTargetsConfig | Redirection Targets Configuration |
| F1-SearchFilterHint | Search Filter Hint |
| F1-SearchFilterRule | Search Filter Rule |
| F1-ServiceTaskPhysicalBO | Physical BO for Service Task |
| F1-SpecializedDataExport | Specialized Data Export Control |
| F1-TabelInheritanceKey | Update Inheritance Key |
| F1-Table | Table |
| F1-TablePhysicalBO | Physical BO for Table |
| F1-TimeZone | Time Zone |
| F1-ToDoEntry | To Do Entry |
| F1-Tree | Tree |
| F1-TreePhysicalBO | Physical BO for Tree |
| F1-UnifiedSearch | Unified Search |
| F1-UnsupportedMetadata | Unsupported Metadata |
| F1-WorkCalendar | Work Calendar |
| F1-Zonebo | Zone |

# D.2.11 Lookups

The following lookups are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Field | Field Value | Description |
|---|---|---|
| APPLY_HEADER_STYLE_FLG | F1NO | No |
| | F1YS | Yes |
| BROADCAST_NODE_FLG | F1YS | Yes |
| | F1NO | No |
| COLOR_OPT_CLASS_FLG | F1SC | Single Combination |
| | F1SE | Series |
| CONTEXT_LABEL_TYPE_FLG | F1TM | Time |
| | F1DT | Date |
| | F1BS | Date and Time Base |
| CTXT_MENU_USAGE_FLG | F1NO | None |
| | F1CM | Override |
| | F1DF | Default |
| DASHBOARD_LOC_FLG | F1DL | Left |
| | F1DR | Right |
| DASHBOARD_STATE_FLG | F1DC | Closed |
| | F1DO | Open |
| F1_AGG_RULE_FLG | CNT | Count |
| | STD | Standard Deviation |
| | AVG | Average |
| | FRST | First |
| | MED | Median |
| | MAX | Max |
| | NONE | N/A |
| | LAST | Last |
| | MIN | Min |
| | CNTD | Count Distinct |
| | STDP | Standard Deviation POP |

| Field | Field Value | Description |
|---|---|---|
|  | SUM | Sum |
| F1_BI_FLD_TYPE_FLG | F1CP | Computed |
|  | F1PH | Physical |
| F1_BI_TABLE_TYPE_FLG | F1FC | Fact |
|  | F1DM | Dimension |
| F1_CNV_STEP_FLG | 2KEY | Key Assignment |
|  | 1VAL | Validation |
|  | 4INS | Insert to Production |
|  | 3XML | XML Resolution |
| F1_DATA_EXPORT_CLS_FLG | F1GE | Generalized Export |
|  | F1SE | Specialized Export |
| F1_INIT_EXPORT_FLG | F1CO | Completed |
|  | F1ST | Started |
| F1_INSIGHT_MODE_FLG | F1EX | Perform |
|  | F1PR | Preview |
| F1_KEY_LEVEL_FLG | 3 | 3 |
|  | 1 | 1 |
|  | 5 | 5 |
|  | 2 | 2 |
|  | 4 | 4 |
| F1_MAP_OPT_FLG | F1MP | Mapped |
|  | F1NM | Not Mapped |
|  | F1AL | All |
| F1_ONGEXP_STATUS_FLG | F1DS | Disabled |
|  | F1EN | Enabled |
| F1_PROC_OPT_FLG | F1PR | Pre-aggregation |
|  | F1PS | Post-aggregation |
| F1_REDIRECTION_TARGET_FLG | F1DS | Digital Self Service |
| F1_RESTART_INIT_EXPORT | F1YS | Yes |
|  | F1NO | No |

| Field | Field Value | Description |
|---|---|---|
| F1_WORK_FLD_FLG | F1NO | No |
| | F1YS | Yes |
| FILE_INT_CLASS_FLG | F1EX | Extract |
| FILE_INT_REC_SEVT_FLG | F1FR | Extract Record |
| FILE_INT_REC_STATUS_FLG | F1IN | Inactive |
| | F1AC | Active |
| FILE_INT_STATUS_FLG | F1IN | Inactive |
| | F1AC | Active |
| HEADER_CAT_FLG | F1ER | Error |
| | F1WN | Warning |
| | F1IN | Information |
| INITIALLY_EXPAND_FLG | F1YS | Yes |
| | F1NO | No |
| INSIGHT_ACT_CLASS_FLG | F1NG | Negative |
| | F1NA | Not Applicable |
| | F1DU | Dismissed by User |
| | F1NT | Neutral |
| | F1PO | Positive |
| INSIGHT_ACT_DISP_TYPE | F1BT | Button |
| INSIGHT_ACT_FLD_FLG | F1DC | Decline |
| | F1AC | Accept |
| INSIGHT_ACT_SEVT_FLG | F1IA | User Action |
| INSIGHT_ACT_TRACK_FLG | F1NO | No |
| INSIGHT_SEVT_FLG | F1IS | Contextual Insight |
| IWS_REST_VER_FLG | F110 | 1.0 |
| | F120 | 2.0 |
| LGCY_CAT_FLG | F1NS | No longer supported |
| | F1DT | Development Tools |
| | F1NY | Not yet supported |
| NODE_NAVIGATION_FLG | F1YS | Yes |

| Field | Field Value | Description |
|---|---|---|
|  | F1NO | No |
| SUBMIT_METH_FLG | F1SC | Scheduled |
|  | F1GE | Generated |
|  | F1TD | Timed |
|  | F1OT | Other |
|  | F1ON | Online |
| TREE_NODE_SEVT_FLG | F1PN | Populate Node |
|  | F1TO | Information Override |
| UNIFIED_SRCH_MODE_FLG | PREP | Prepare Search Details |
|  | EXEC | Perform Search |
| VISUAL_SETTING_TYPE_FLG | F1DF | Default |
|  | F1OS | Based on Algorithm Output Severity |
| VISUAL_STRUCTURE_FLG | F1II | Inline Insight |
|  | F1BD | Badge Insight |
|  | F1CI | Card Insight |
|  | F1LI | List Insight |
| ZONE_COL_SRC_FLG | FUNC | Function |
|  | SPEC | Specified |
|  | SS | Service Script |
|  | BS | Business Service |
|  | COL | Column |
|  | MSG | Message |
|  | FKRF | FK Reference |
|  | FORM | Formula |
|  | ICON | Icon |
|  | BO | Business Object |
| ZONE_PRM_TYPE_FLG | NBR | Number |
|  | TIME | Time |
|  | DATE | Date |
|  | STR | String |

| Field | Field Value | Description |
|---|---|---|
|  | DTTM | Date/time |
|  | MON | Money |

## D.2.12 Foreign Key References

The following foreign key references are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Foreign Key Reference | Description |
|---|---|
| F1-ACMTH | Action Method |
| F1-ANLYT | Analytics Table |
| F1AP-BO | BO Option - Action Processing BPA Script |
| F1-BPASR | BPA Script |
| F1-CLROP | Color Option |
| F1-CVENT | Conversion Entity |
| F1-DEXPC | Data Export Control |
| F1DI-BO | BO Option - Display Icon Reference |
| F1DI-MO | MO Option - Display Icon Reference |
| F1EC-MO | MO Option - Export Batch Control |
| F1-FILIT | File Integration Type |
| F1-FLREC | File Integration Record |
| F1-INSGR | Insight Group |
| F1-INSTY | Insight Type |
| F1-LKUP | Lookup |
| F1-PRGCM | Program Component |
| F1-TREE | Tree |
| F1-UNSMD | Unsupported Metadata |

## D.2.13 Batch Controls

The following batch controls are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Batch Control | Description |
|---|---|
| F1ACCTPX | Initial Data Export ACCT GROUP |
| F1ACTNDX | Initial Data Export F1-ACTNMETHD |

| Batch Control | Description |
|---|---|
| F1ALGOMX | Initial Data Export ALGORITHM |
| F1ALGTEX | Initial Data Export ALG TYPE |
| F1ANALSX | Initial Data Export F1-ANALYTICS |
| F1APPSEX | Initial Data Export APP SERVICE |
| F1BATCLX | Initial Data Export BATCH CNTL |
| F1BKTCGX | Initial Data Export F1-BKTCONFIG |
| F1-BTIDT | Upgrade Batch Thread Instance Date / Time |
| F1-BTMON | Batch Probe |
| F1BUSFGX | Initial Data Export F1-BUSFLG |
| F1BUSFPX | Initial Data Export F1-BUSFLGTYP |
| F1BUSOJX | Initial Data Export F1-BUS OBJ |
| F1BUSSCX | Initial Data Export F1-BUS SVC |
| F1CALENX | Initial Data Export F1-CALENDDMN |
| F1CHAREX | Initial Data Export CHAR TYPE |
| F1COLOTX | Initial Data Export F1-COLOROPT |
| F1CONTEX | Initial Data Export CONTENT ZONE |
| F1COUNYX | Initial Data Export COUNTRY |
| F1CUBEEX | Initial Data Export F1-CUBETYPE |
| F1CUBEWX | Initial Data Export F1-CUBEVIEW |
| F1CURREX | Initial Data Export CURR CODE |
| F1DATAAX | Initial Data Export F1-DATA AREA |
| F1DATASX | Initial Data Export DATA ACCESS |
| F1DEPL2X | Initial Data Export F1-DEPLOYPRT |
| F1DEPLPX | Initial Data Export F1-DEPLOYTYP |
| F1DISPFX | Initial Data Export DISP PROF |
| F1DISPNX | Initial Data Export DISP ICON |
| F1ETLMLX | Initial Data Export F1-ETLMPCTRL |
| F1EXTLPX | Initial Data Export F1-EXT LKUP |
| F1FAACTX | Initial Data Export F1-FACT |
| F1FIELDX | Initial Data Export FIELD |
| F1FILETX | Initial Data Export F1-FILEINT |

| Batch Control | Description |
|---------------|-------------|
| F1FKREFX | Initial Data Export FK REF |
| F1FLINCX | Initial Data Export F1-FLINREC |
| F1-GEEXO | Generalized Ongoing Export |
| F1GEOTEX | Initial Data Export GEO TYPE |
| F1-GEXPI | Generalized Initial Export Initiator |
| F1INSIPX | Initial Data Export F1-INSIGHGRP |
| F1INSTYX | Initial Data Export F1-INSIGHTYP |
| F1IWSANX | Initial Data Export F1-IWSANN |
| F1IWSAPX | Initial Data Export F1-IWSANNTYP |
| F1IWSSCX | Initial Data Export F1-IWSSVC |
| F1JMSCTX | Initial Data Export JMS CONNECT |
| F1LANGEX | Initial Data Export LANGUAGE |
| F1LOOKPX | Initial Data Export LOOKUP |
| F1MAINJX | Initial Data Export MAIN OBJ |
| F1MANCTX | Initial Data Export F1-MAN CONT |
| F1MDMDTX | Initial Data Export F1-MDT |
| F1MDTTEX | Initial Data Export F1-MDTTYPE |
| F1MEENUX | Initial Data Export MENU |
| F1MESS2X | Initial Data Export MESSAGE |
| F1MIGRNX | Initial Data Export F1-MIGRPLAN |
| F1MIGRQX | Initial Data Export F1-MIGRREQ |
| F1MKTCGX | Initial Data Export F1-MKTCFG |
| F1MKTMNX | Initial Data Export F1-MKTMSGIN |
| F1MKTMPX | Initial Data Export F1-MKTMSGTYP |
| F1MKTMTX | Initial Data Export F1-MKTMSGOUT |
| F1MKTPCX | Initial Data Export F1-MKTPROC |
| F1MKTPPX | Initial Data Export F1-MKTPRCTYP |
| F1MKTPTX | Initial Data Export F1-MKTPRCEVT |
| F1MOBCPX | Initial Data Export F1-MOBCOMP |
| F1MSTCGX | Initial Data Export F1-MSTCFG |
| F1NAVKYX | Initial Data Export NAV KEY |

| Batch Control | Description |
|---|---|
| F1NAVOTX | Initial Data Export NAV OPT |
| F1NTDWEX | Initial Data Export NT DWN TYPE |
| F1NTDWFX | Initial Data Export NT DWN PROF |
| F1NTUPEX | Initial Data Export NT UPL TYPE |
| F1NTXIDX | Initial Data Export NT XID |
| F1OUTMPX | Initial Data Export F1-OUTMSGTYP |
| F1PERFTX | Initial Data Export F1-PERFTGT |
| F1PERFYX | Initial Data Export F1-PERFTGTTY |
| F1PHONEX | Initial Data Export PHONE TYPE |
| F1PORTLX | Initial Data Export PORTAL |
| F1PROCNX | Initial Data Export F1-PROCDEFN |
| F1REPOTX | Initial Data Export REPORT |
| F1REQTEX | Initial Data Export F1-REQ-TYPE |
| F1REREQX | Initial Data Export F1-REQ |
| F1RPTONX | Initial Data Export RPT OPTION |
| F1SCHEAX | Initial Data Export F1-SCHEMA |
| F1SCRITX | Initial Data Export SCRIPT |
| F1SECTEX | Initial Data Export SEC TYPE |
| F1SERVEX | Initial Data Export SERVICE |
| F1STASEX | Initial Data Export F1-STASKTYPE |
| F1STATSX | Initial Data Export F1-STATS |
| F1STSRNX | Initial Data Export F1-STSREASON |
| F1STSSTX | Initial Data Export F1-STSSNPSHT |
| F1SVCTKX | Initial Data Export F1-SVCTASK |
| F1TABLEX | Initial Data Export TABLE |
| F1TIMEEX | Initial Data Export TIME ZONE |
| F1TIMENX | Initial Data Export F1-TIMEDMN |
| F1TODO4X | Initial Data Export TO DO TYPE |
| F1TODOEX | Initial Data Export TO DO ROLE |
| F1TODOYX | Initial Data Export TO DO ENTRY |
| F1TRREEX | Initial Data Export F1-TREE |

| Batch Control | Description |
|---|---|
| F1UIMAPX | Initial Data Export F1-UI MAP |
| F1UIZO2X | Initial Data Export UI ZONE |
| F1USERPX | Initial Data Export USER GROUP |
| F1USSERX | Initial Data Export USER |
| F1WEBSTX | Initial Data Export F1-WEBSVCCAT |
| F1WFEVEX | Initial Data Export WF EVT TYPE |
| F1WFMSMX | Initial Data Export WFM SYSTEM |
| F1WFPREX | Initial Data Export WF PROFILE |
| F1WFPRLX | Initial Data Export WF PROC TMPL |
| F1WORKLX | Initial Data Export WORK CAL |
| F1XAICSX | Initial Data Export XAI CLASS |
| F1XAIJCX | Initial Data Export XAI JMS TPC |
| F1XAIJQX | Initial Data Export XAI JMS Q |
| F1XAIJRX | Initial Data Export XAI JNDI SVR |
| F1XAIOSX | Initial Data Export XAI OPTIONS |
| F1XAISEX | Initial Data Export XAI SERVICE |
| F1XAISRX | Initial Data Export XAI SENDER |
| F1ZONELX | Initial Data Export ZONE HDL |

## D.2.14 Application Services

The following application services are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Application Service | Description |
|---|---|
| F1ACGRPM | Access Group Portal |
| F1ACGRPQ | Access Group Query Portal |
| F1ACMTHD | Action Method Portal |
| F1-ACTIONMETHOD | Action Method MO |
| F1ALGQ | Algorithm Query Portal |
| F1ALGTQ | Algorithm Type Query Portal |
| F1ANALYT | Analytics Dimension Portal |
| F1-ANALYTICS | Analytics Table MO |
| F1ANFACT | Analytics Fact Portal |

| Application Service | Description |
|---|---|
| F1ANLYTS | Analytics Table Query Portal |
| F1APPSVM | Application Service Portal |
| F1APPSVQ | Application Service Query Portal |
| F1BOQ | Business Object Query Portal |
| F1BSVQ | Business Service Query Portal |
| F1BTCHQ | Batch Control Query Portal |
| F1-BTIDT | Upgrade Batch Thread Instance Date / Time |
| F1-CHARMAPBOAS | Characteristic Mapping BO |
| F1CHRMAP | Characteristic Mapping Query Portal |
| F1CHRTYP | Characteristic Type Portal |
| F1CHRTYQ | Characteristic Type Query Portal |
| F1COLENZN | Collect Entity Zone |
| F1COLOPT | Color Option Portal |
| F1COLOROPTION | Color Option MO |
| F1CVENTD | Conversion Entity Dashboard Portal |
| F1CVENTQ | Conversion Entity Query Portal |
| F1-DATAEXPORTCTRL | Data Export Control MO |
| F1DEXCNS | Data Export Control Query Portal |
| F1DEXCNT | Data Export Control Portal |
| F1DTARQ | Data Area Query Portal |
| F1-ETLMAPBOAS | ETL Mapping Control BO |
| F1FCFGQ | Feature Configuration Query Portal |
| F1FIELD | Field Portal |
| F1-FILEINT | File Integration Type MO |
| F1FKRFQ | Foreign Key Reference Query Portal |
| F1FLDQ | Field Query Portal |
| F1-FLINREC | File Integration Record MO |
| F1FLINTP | File Integration Type Portal |
| F1FLINTS | File Integration Type Query Portal |
| F1-GENEXBACN | Generalized Initial Export Batch Controls |
| F1GEXDAS | Generalized Export Dashboard Portal |

| Application Service | Description |
|---|---|
| F1INSIGHTGRP | Insight Group MO |
| F1INSIGHTTYP | Insight Type MO |
| F1INSTGP | Insight Group Portal |
| F1INSTYP | Insight Type Portal |
| F1LKUPQ | Lookup Query Portal |
| F1MANCQ | Managed Content Query Portal |
| F1MENUQ | Menu Query Portal |
| F1-MOCNVBTCR | Conversion Batch Controls Zone |
| F1-MOERSCNF | Object Erasure Configuration Zone |
| F1MOQ | Maintenance Object Query Portal |
| F1MSG | Message Portal |
| F1MSGC | Message Category Portal |
| F1MSGQ | Message Query Portal |
| F1NAVKQ | Navigation Key Query Portal |
| F1NAVOQ | Navigation Option Query Portal |
| F1PRTL | Portal |
| F1PRTLQ | Portal Query Portal |
| F1PRUSEM | Product Use Metrics Portal |
| F1-REDIRECT | Redirection Services |
| F1SCRQ | Script Query Portal |
| F1SYSMON | System Monitoring |
| F1TABLE | Table Portal |
| F1TABMD | Tab Metadata MO |
| F1TBLQ | Table Query Portal |
| F1TDDASH | To Do Dashboard Portal |
| F1TMZNM | Time Zone Portal |
| F1TODO | To Do Entry Portal |
| F1TODOEQ | To Do Entry Query Portal |
| F1TREE | Tree MO |
| F1TREEM | Tree Portal |
| F1TREEQ | Tree Query Portal |

| Application Service | Description |
|---|---|
| F1UIMPQ | UI Map Query Portal |
| F1UNSPMD | Unsupported Metadata Portal |
| F1UNSPMQ | Unsupported Metadata Query Portal |
| F1-UNSPRTD | Unsupported Metadata MO |
| F1WRKCAL | Work Calendar Portal |
| F1WRKCLQ | Work Calendar Query Portal |
| F1ZONE | Zone Portal |
| F1ZONEQ | Zone Query Portal |

# D.2.15 Characteristic Types

The following characteristic types are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Characteristic Type | Description |
|---|---|
| F1-FLD | Field |
| F1-HXCOL | Hex Color Code |
| F1-MIGPO | Migration Import Processing Order |
| F1-SCR | Script |
| F1-SEQ | Sequence |

# D.2.16 Scripts

The following scripts are newly added in the Oracle Utilities Application Framework V4.4.0.3.0 database:

| Script | Description |
|---|---|
| F1AccessGrpM | Access Group - Maintain |
| F1AccGrpDisp | Access Group - Retrieve Details for Display |
| F1AccGrpPre | Access Group - Pre-processing |
| F1ActnMthdMn | Action Method - Maintain |
| F1AddDebugLg | Add Log for Monitoring Probe |
| F1AnDmCh | Dimension Characteristic Mapping |
| F1AnDmCharV | Analytics Dimension Characteristic Zone Visibility |
| F1AnDmChSS | Dimension Characteristic Mapping |
| F1AnltfldInf | Analytics Field Information |
| F1AnlyFieldM | Maintain Analytics Field |

| Script | Description |
|---|---|
| F1AnlyTableM | Analytics Table - Maintain |
| F1AppSvcDisp | Application Service - Retrieve Details for Display |
| F1AppSvcM | Application Service - Maintain |
| F1AppSvcPre | Application Service - Pre-processing |
| F1BTMONPR | Batch Monitoring Process Record |
| F1CHARMAPINF | Characteristic Mapping Information |
| F1CHARMAPVAL | Validate Characteristic Mapping Configuration |
| F1CharsMaint | Maintain Characteristics |
| F1CharTyDisp | Characteristics Type - Retrieve Details for Display |
| F1CharTypM | Characteristic Type - Maintain |
| F1CharTypPre | Characteristic Type - Pre-Processing |
| F1CHRMAPP | Characteristic Mapping - Default Rules |
| F1CLROPTINFO | Color Option Information |
| F1CnclBatJob | Cancel Batch Job |
| F1ColleEnZnV | Collect Entity Dashboard Zone Visibility |
| F1COLORINFO | Color Information |
| F1ColorOptM | Color Option - Maintain |
| F1CondFilVal | Conditional Filter Validation |
| F1CopyEntity | Copy Entity |
| F1CtxReset | Reset portal context |
| F1DAEXCNAUD | Data Export Audit |
| F1DAEXCNVAL | Data Export Control Validation |
| F1DaExpCtrM | Data Export Control - Maintain |
| F1DataExpAud | Manage Data Export Audit Rule |
| F1DetUniSrch | Determine Unified Search For User |
| F1DEXCTRLINF | Data Export Control Information |
| F1DExUsrLgA | Data Export Control - Add User Log Entry |
| F1DtExpPost | Generalized Data Export Control - Post Processing |
| F1DupFileRec | Duplicate File Integration Records |
| F1ExpBtchDtl | Generalized Export Control  - Retrieve Details for Display |
| F1-FieldM | Field Maintenance |

| Script | Description |
|---|---|
| F1FILEXPR | File Integration Record Extraction |
| F1FIlInRcLay | Display File Integration Record Layout |
| F1FIlInRcMnt | File Integration Record - Maintain |
| F1FIlInTyMnt | File Integration Type - Maintain |
| F1FITypePost | Extract File Integration Type - Post Processing |
| F1FITypePre | Extract File Integration Type - Pre-processing |
| F1FldDisp | Field - Display |
| F1FldUIPre | Field - UI Pre-processing |
| F1HEXCOLOR | Validate Hex Color Code |
| F1InsGrTyp | Insight Group - Maintain Insight Types |
| F1InsGrTypSS | Insight Group - Maintain Insight Types |
| F1InsightGrM | Insight Group - Maintain |
| F1InsighTyM | Insight Type - Maintain |
| F1InsTypeDtl | Insight Type  - Retrieve Details for Display |
| F1InsTyUIPre | Insight Type  - UI Pre-processing |
| F1-IwsRPost | Inbound REST Web Service - Post Processing |
| F1-IwsSPost | Inbound SOAP Web Service - Post Processing |
| F1LKUPINF | Lookup Information |
| F1-MgIPOPost | Migration Import Processing Order - Post Processing |
| F1MGPRORDINF | Migration Import Processing Order Information |
| F1MgRqAdRmEn | Add or Remove an Entity from a Migration Request |
| F1MOBatchExp | Create MO Data Export Batch Controls |
| F1MOBExpBPA | Create MO Data Export Batch Controls |
| F1MOCnvBat | Create MO Conversion Batch Controls |
| F1MOCnvBatSS | Create MO Conversion Batch Controls |
| F1MsgCatDisp | Message Category - Display |
| F1MsgCatM | Message Category Maintenance |
| F1MsgCatUIPr | Message Category - UI Pre-processing |
| F1MSGCINFO | Message Category Information |
| F1MsgDisp | Message - Display |
| F1MsgM | Message Maintenance |

| Script | Description |
|---|---|
| F1MsgsM | Messages Maintenance |
| F1MsgsS | Messages Maintenance |
| F1MsgUIPre | Message - UI Pre-processing |
| F1NAVKINFO | Navigation Key Information |
| F1PopBtPrNt | Populate Batch Progress Note |
| F1PortalDisp | Portal - Display |
| F1-PortalM | Portal Maintenance |
| F1PORTALPST | Maintain Portal Artifacts |
| F1PortlTabM | Portal Tab Maintenance |
| F1PortlTabsM | Portal Tabs Maintenance |
| F1PortlUIPre | Portal - UI Pre-processing |
| F1PortlUIPst | Portal - UI Post-processing |
| F1PRFMDELAY | Perform Delay of Processing |
| F1PrtlOpt | Portal Options Maintenance |
| F1PrtlOptM | Portal Options Maintenance |
| F1RELTDINFO | Related To Do Count |
| F1RetActPrSc | Retrieve Action Processing BPA Script |
| F1SFHINTINFO | Search Filter Hint Information |
| F1SpeExBaDtl | Specialized Export Control  - Retrieve Details for Display |
| F1SubmitJob | Submit Batch Job |
| F1TableERD | Table ERD Information |
| F1TableM | Table Maintenance |
| F1TargetLink | Return a Hyperlink to the Redirect Servlet for a given Target |
| F1TblConst | Table Constraints Maintenance |
| F1TblDisp | Table - Display |
| F1TblFld | Table Field Maintenance |
| F1TblFldM | Table Field Maintenance |
| F1TblFlds | Table Fields Maintenance |
| F1TblUIPre | Table - UI Pre-processing |
| F1TimeZoneM | Time Zone - Maintain |
| F1TmZnDisp | Time Zone - Display |

| Script | Description |
|--------|-------------|
| F1TmZnPre | Time Zone - Pre-processing |
| F1ToDoActs | To Do Entry - Extra Actions |
| F1ToDoActsSS | To Do Entry - Extra Actions |
| F1ToDoEnDisp | To Do Entry - Display |
| F1ToDoEnPre | To Do Entry - UI Pre-processing |
| F1ToDoEnPst | To Do Entry - UI Post-processing |
| F1ToDoEntryM | To Do Entry Maintenance |
| F1ToDoUsrLgA | To Do Entry - Add User Log Entry |
| F1-TreeM | Tree - Maintain |
| F1TreeNdDisp | Tree Node Display |
| F1TreeNode | Tree Node Maintenance |
| F1TreeNodeM | Tree Node Maintenance |
| F1TreeZone | Generic Tree |
| F1UIInds | Common Maintenance Indicators |
| F1UniSrchDtl | Unified Search - Details for Display |
| F1UniSrchHnd | Unified Search Handler |
| F1UnsDisp | Unsupported Metadata - Retrieve Details for Display |
| F1UnsMDMark | Mark / Check Record Unsupported |
| F1UNSMDVAL | Unsupported Metadata Validation |
| F1UnsMng | Unsupported Metadata - Add / Remove Objects |
| F1UnsMngSS | Unsupported Metadata - Add / Remove Objects |
| F1UnspMnt | Unsupported Metadata - Maintain |
| F1UnsPre | Unsupported Metadata - Pre-processing |
| F1UpdDExpCnt | Update Data Export Controls |
| F1UpdDExpCSS | Update Data Export Controls |
| F1UpdInhFld | Update Inheritance Key |
| F1UpdInhFldB | Update Inheritance Key |
| F1USRCHINF | Unified Search Information |
| F1VALINSGVS | Validate Insight Group Visual Structure |
| F1WCalHolMnt | Work Calendar Holiday Maintenance |
| F1WCalHolSS | Work Calendar Holiday Maintenance |

| Script | Description |
|---|---|
| F1WrkCalDsp | Work Calendar - Display |
| F1WrkCalM | Work Calendar - Maintain |
| F1WrkCalPr | Work Calendar - UI Pre-processing |
| F1-ZoneCol | Zone SQL Column Maintenance |
| F1-ZoneColM | Zone Parameter Maintenance |
| F1-ZoneDisp | Zone - Display |
| F1-ZoneGnPrm | Zone General Parameters Maintenance |
| F1-ZoneM | Zone - Maintain |
| F1-ZoneParm | Zone Parameter Maintenance |
| F1-ZoneSQL | Zone SQL Maintenance |
| F1-ZoneUIPre | Zone - UI Pre-processing |
| F1-ZoneUIPst | Zone - UI Post-processing |

# Appendix E :    Oracle       Utilities      Application Framework System Table Guide

This section lists the system tables owned by Oracle Utilities Application Framework V4.4.0.3.0 and explains the data standards of the system tables. The data standards are required for the installation of Oracle Utilities Application Framework, development within Oracle Utilities Application Framework, and for the configuration and customization of Oracle Utilities products. Adhering to the data standards is a prerequisite for seamless upgrade to future releases.

This section includes:

- About System Tables
- System Table Standards
- Guidelines for System Table Updates
- System Table List

## E.1    About System Tables

System tables are a subset of the tables that must be populated at the time the product is installed. They include metadata and configuration tables. The data stored in the system tables are the information that Oracle Utilities Application Framework product operations are based on.

As the product adds more functionality, the list of system tables can grow. The complete list of the system tables can be found in the System Table List section.

## E.2    System Table Standards

System table standards must be observed for the following reasons:

- The product installation and upgrade process and customer modification data extract processes depend on the data prefix and owner flag values to determine the system data owned by each product.
- The standards ensure that there will be no data conflict in the product being developed and the future Oracle Utilities Application Framework release.
- The standards ensure that there will be no data conflict between customer modifications and future Oracle Utilities product releases.
- The data prefix is used to prevent test data from being released to production.

**Developer's Note:** All test data added to the system data tables must be prefixed by ZZ (all upper case) in order for the installation and upgrade utility to recognize them as test data.

# E.3    Guidelines for System Table Updates

This section describes guidelines regarding the updating of the system table properties.

## E.3.1    Business Configuration Tables

The majority of data in the tables in this group belongs to the customer. But these tables are shipped with some initial data in order for the customer to login to the system and begin configuring the product. Unless specified otherwise, the initial data is maintained by Oracle Utilities Application Framework and subject to subsequent upgrade.

### E.3.1.1        Application Security and User Profile

These tables define the access rights of a User Group to Application Services and Application Users.

| Properties | Description |
| --- | --- |
| Tables | SC_ACCESS_CNTL,     SC     USER,     SC_USR_GRP_PROF,     SC_USR_GRP_USR, SC_USER_GROUP, SC_USER_GROUP_L |
| Initial Data | User Group ALL_SERVICES and default system user SYSUSER. Upon installation the system default User Group ALL_SERVICES is given unrestricted accesses to all services defined in Oracle Utilities Application Framework. |

**Developer's Note:** When a new service is added to the system, all actions defined for the service must be made available to the User Group ALL_SERVICES.

### E.3.1.2        Currency Code

The ISO 4217 three-letter codes are taken as the standard code for the representation of the currency.

| Properties | Description |
| --- | --- |
| Tables | CI_CURRENCY_CD, CI_CURRENCY_CD_L |
| Initial Data | United States Dollar (USD). |

### E.3.1.3        Display Profile

The Display Profile Code is referenced in the User (SC_USER) table.

| Properties | Description |
| --- | --- |
| Tables | CI_DISP_PROF, CI_DISP_PROF_L |
| Initial Data | North America (NORTHAM), HIJRI Format (HIJRI) and Europe (EURO). |

**Configuration Note:** In order to use HIJRI Format display profile, additional configuration is needed to define the mappings between Hijri and Gregorian dates. Refer to the Display Profile documentation for more information.

# E.3.1.4        Installation Options

Installation option has only one row that is shipped with the initial installation of Oracle Utilities Application Framework. The columns that can be updated in these tables have customer data and will not be overridden by the upgrade process unless a special script is written and included in the upgrade process.

| Properties | Description |
|---|---|
| Tables | F1_INSTALLATION,        CI_INSTALL_ALG,        CI_INSTALL_MSG,        CI_INSTALL_MSG_L, CI_INSTALL_PROD |
| Initial Data | Option 11111 |

**Developer's Note:** The system data owner of an environment is defined in the Installation Option. This Owner Flag value is stamped on all system data that is added to this environment. The installation default value is Customer Modification (CM). This value must be changed in the base product development environments.

# E.3.1.5        Language Code

Language code must be a valid code defined in ISO 639-2 Alpha-3. Adding a new language code to the table without translating all language dependent objects in the system can cause errors when a user chooses the language.

| Properties | Description |
|---|---|
| Tables | CI_LANGUAGE |
| Initial Data | English (ENG) |

# E.3.1.6        Time Zone

The installation options require a valid time zone. A value for UTC (Coordinated Universal Time) is provided. Implementations should define the appropriate time zone and update the installation option value accordingly.

| Properties | Description |
|---|---|
| Tables | CI_TIME_ZONE, CI_TIME_ZONE_L |
| Initial Data | UTC |

# E.3.1.7        To Do Priority and Role

New To Do Types released will be linked to the default To Do Role and set to the product assigned priority value initially. These initial settings can be overridden by the implementation.

| Properties | Description |
|---|---|
| Tables | CI_ROLE(L), CI_TD_VAL_ROLE |

| Properties | Description |
|---|---|
| Initial Data | F1_DFLT |

# E.3.2 Development and Implementation System Tables

This section defines the standards for the system tables that contain data for application development. The data in these tables implement business logic and UI functions shared by various products and product extensions in the same database.

## E.3.2.1 Standards

When adding new data, the owner flag value of the environment must prefix certain fields of these tables. For example, when a developer adds a new algorithm type to an Oracle Revenue Management and Billing environment, C1 should prefix the new Algorithm Type code. The fields that are subject to this rule are listed in Standard Data Fields property.

The data that is already in these tables cannot be modified if the data owner is different than the environment owner. This prevents the developers from accidentally modifying system data that belongs to Oracle Utilities Application Framework or the base products. However, some fields are exempt from this rule and can be modified by Customer Modification. These fields are listed in the Customer Modification Fields property.

Note that the system supports a system upgrade rule called Override Owner flag. If duplicate data rows (data row with same primary key values) are found at the time of upgrade, the owner flag values will get overridden. The lower level application system data will override the upper level system data. For example, F1 overrides C1, F1 and C1 override CM, and so on. This rule will be applied to the following tables: CI_CHAR_ENTITY, CI_MD_MO_ALG, C1_PORTAL_OPT, F1_BUS_OBJ_ALG, F1_BUS_OBJ_STATUS_ALG, CI_MD_MO_OPT, F1_BUS_OBJ_OPT, F1_BUS_OBJ_STATUS_OPT, F1_BUS_OBJ_STATUS, and F1_BUS_OBJ_STATUS_L.

## E.3.2.2 Algorithm Type

| Properties | Description |
|---|---|
| Tables | CI_ALG_TYPE, CI_ALG_TYPE_L, CI_ALG_TYPE_PRM, CI_ALG_TYPE_PRM_L |
| Standard Data Fields | Algorithm Type (ALG_TYPE_CD) |
| Customer Modification | None |

## E.3.2.3 Algorithm

| Properties | Description |
|---|---|
| Tables | CI_ALG, CI_ALG_L, CI_ALG_PARM, CI_ALG_VER |
| Standard Data Fields | Algorithm (ALG_CD) |
| Customer Modification | None |

## E.3.2.4    Application Security

| Properties | Description |
| --- | --- |
| Tables | SC_APP_SERVICE, SC_APP_SERVICE_L, CI_APP_SVC_ACC |
| Standard Data Fields | Application Service ID (APP_SVC_ID) |
| Customer Modification | None |

## E.3.2.5    Batch Control

| Properties | Description |
| --- | --- |
| Tables | CI_BATCH_CTRL, CI_BATCH_CTRL_L, CI_BATCH_CTRL_P, CI_BATCH_CTRL_P_L |
| Standard Data Fields | Batch Process (BATCH_CD), Program Name (PROGRAM_NAME) |
| Customer Modification | Next Batch Number (NEXT_BATCH_NBR), Last Update Instance (LAST_UPDATE_INST), Last Update Date time (LAST_UPDATE_DTTM) and the batch process update these columns. Time Interval (TIMER_INTERVAL), Thread Count (BATCH_THREAD_CNT), Maximum Commit Records (MAX_COMMIT_RECS), User (USER_ID), Language (LANGUAGE_CD), Email Address (EMAILID), Start program debug tracing (TRC_PGM_STRT_SW), End Program Debug trace (TRC_PGM_END_SW), SQL debug tracing (TRC_SQL_SW) and Standard debug tracing (TRC_STD_SW) on CI_BATCH_CTRL Table. Batch Parameter Value (BATCH_PARM_VAL) and Security flag (TEXT_SECURITY_FLG) on Batch Control Parameters Table (CI_BATCH_CTRL_P) |

## E.3.2.6    Business Object

| Properties | Description |
| --- | --- |
| Tables | F1_BUS_OBJ, F1_BUS_OBJ_L, F1_BUS_OBJ_ALG, F1_BUS_OBJ_OPT, F1_BUS_OBJ_STATUS, F1_BUS_OBJ_STATUS_L, F1_BUS_OBJ_STATUS_ALG, F1_BUS_OBJ_STATUS_OPT, F1_BUS_OBJ_STATUS_RSN, F1_BUS_OBJ_STATUS_RSN_L, F1_BUS_OBJ_STATUS_RSN_CHAR, F1_BUS_OBJ_TR_RULE, F1_BUS_OBJ_TR_RULE_L |
| Standard Data Fields | Business Object (BUS_OBJ_CD), Status Reason (BO_STATUS_REASON_CD) |

| Properties | Description |
|---|---|
| Customer Modification | Batch Control (BATCH_CD), Alert (BO_ALERT_FLG), Sequence (SORT_SEQ5), Status Reason (STATUS_REASON_FLG) fields on Business Object Status Table (F1_BUS_OBJ_STATUS). Instance Control (INSTANCE_CTRL_FLG), Application Service (APP_SVC_ID) on Business Object Table (F1_BUS_OBJ). Status Reason Selection (STATUS_REASON_SELECT_FLG) on Status Reason Table (F1_BUS_OBJ_STATUS_RSN). |

## E.3.2.7        Business Service

| Properties | Description |
|---|---|
| Tables | F1_BUS_SVC, F1_BUS_SVC_L |
| Standard Data Fields | Business Service (BUS_SVC_CD) |
| Customer Modification | Application Service (APP_SVC_ID) |

## E.3.2.8        Characteristics

| Properties | Description |
|---|---|
| Tables | CI_CHAR_TYPE, CI_CHAR_TYPE_L, CI_CHAR_ENTITY, CI_CHAR_VAL, CI_CHAR_VAL_L |
| Standard Data Fields | Characteristic Type (CHAR_TYPE_CD), Characteristic Value (CHAR_VAL) on CI_CHAR_VAL <br><br> **Note:** If the characteristic type is customizable, the customer can insert a new characteristic value. CM must be prefixed when the implementation team introduces a new characteristic value. |
| Customer Modification | Adhoc Characteristic Value Validation Rule (ADHOC_VAL_ALG_CD), Allow Search by Characteristic Value (SEARCH_FLG) |

## E.3.2.9        Configuration Migration Assistant

| Properties | Description |
|---|---|
| Tables | F1_MIGR_PLAN, F1_MIGR_PLAN_L, F1_MIGR_PLAN_INSTR, F1_MIGR_PLAN_INSTR_L, F1_MIGR_PLAN_INSTR_ALG, F1_MIGR_REQ, F1_MIGR_REQ_L, F1_MIGR_REQ_INSTR, F1_MIGR_REQ_INST R_L, F1_MIGR_REQ_INSTR_ENTITY, F1_MIGR_REQ_INCL_REQ |
| Standard Data Fields | Migration Plan Code (MIGR_PLAN_CD), Migration Request Code (MIGR_REQ_CD) |
| Customer Modification | None |

## E.3.2.10    Data Area

| Properties | Description |
|---|---|
| Tables | F1_DATA_AREA, F1_DATA_AREA_L |
| Standard Data Fields | Data Area Code (DATA_AREA_CD) |
| Customer Modification | None |

## E.3.2.11    Deployment Part

| Properties | Description |
|---|---|
| Tables | F1_DEPLOYMENT_PART,                    F1_DEPLOYMENT_PART_L, F1_DEPLOYMENT_ITEM |
| Standard Data Fields | Deployment ID (F1_DEPLOYMENT_ID) |
| Customer Modification | None |

## E.3.2.12    Display Icon

| Properties | Description |
|---|---|
| Tables | CI_DISP_ICON, CI_DISP_ICON_L |
| Standard Data Fields | Display Icon Code (DISP_ICON_CD) |
| Customer Modification | None |

## E.3.2.13    Extendable Lookup

| Properties | Description |
|---|---|
| Tables | F1_EXT_LOOKUP_VAL,F1_EXT_LOOKUP_VAL_L, F1_EXT_LOOKUP_VAL_CHAR |
| Standard Data Fields | Business Object (BUS_OBJ_CD), Extendable Lookup Value (F1_EXT_LOOKUP_VALUE) |
| Customer Modification | Business Object Data Area (BO_DATA_AREA) Override Description (DESCR_OVRD) on Extendable Lookup Field Value Language Table (F1_EXT_LOOKUP_VAL_L) **Note:** When the product releases base owned records in Extendable Lookup, if there are additional elements the business object will map the element to the BO_DATA_AREA if the value is allowed to be modified by the implementation team. |

## E.3.2.14        Foreign Key Reference

| Properties | Description |
|---|---|
| Tables | CI_FK_REF, CI_FK_REF_L |
| Standard Data Fields | FK reference code (FK_REF_CD) |
| Customer Modification | Info Program Name (INFO_PRG), Zone (ZONE_CD) |

## E.3.2.15        Inbound Web Service

| Properties | Description |
|---|---|
| Tables | F1_IWS_SVC_L, F1_IWS_SVC, F1_IWS_SVC_OPER_L, F1_IWS_SVC_OPER, F1_IWS_ANN_L, F1_IWS_ANN_PARM, F1_IWS_ANN, F1_IWS_ANN_TYPE_L, F1_IWS_ANN_TYPE, F1_IWS_ANN_TYPE_PARM, F1_IWS_ANN_TYPE_PARM_L |
| Standard Data Fields | Webservice Name (IN_SVC_NAME), Annotation (ANN_CD), Annotation Type (ANN_TYPE_CD) |
| Customer Modification | Debug (DEBUG_SW), Active (ACTIVE_SW), Trace (TRACE_SW), Request XSL (REQUEST_XSL), Response XSL (RESPONSE_XSL) |

## E.3.2.16        Unsupported Objects

| Properties | Description |
|---|---|
| Tables | F1_LGCY_OBJ |
| Standard Data Fields | Legacy Object ID (LGCY_OBJ_ID) |
| Customer Modification | None |

### E.3.2.17        Lookup

| Properties | Description |
|---|---|
| Tables | CI_LOOKUP_FIELD, CI_LOOKUP_VAL, CI_LOOKUP_VAL_L |
| Standard Data Fields | Field Name (FIELD_NAME)<br><br>A lookup field name must have corresponding field metadata. The name of the lookup field column must be assigned to avoid conflicts among different products. If you follow the standards for database field names, a Customer Modification lookup field name will be automatically Customer Modification prefixed.<br><br>Field Value (FIELD_VALUE)<br><br>If a lookup field is customizable, Customer Modification can insert new lookup values. X or Y must prefix when implementers introduce a new lookup value.<br><br>Product development may add lookup values to Oracle Utilities Application Framework owned lookup field's value. When extended new value is added, the Owner Flag is used to prefix the value. For example, when the Oracle Revenue Management and Billing product adds a new value to the algorithm entity flag (ALG_ENTITY_FLG), it is prefixed with C1. |
| Customer Modification | Override Description (DESCR_OVRD) on Lookup Field Value Language Table (CI_LOOKUP_VAL_L) |

### E.3.2.18        Map

| Properties | Description |
|---|---|
| Tables | F1_MAP, F1_MAP_L |
| Standard Data Fields | UI Map (MAP_CD) |
| Customer Modification | None |

### E.3.2.19        Managed Content

| Properties | Description |
|---|---|
| Tables | F1_MANAG_CONTENT,<br>F1_MANAG_CONTENT_L |
| Standard Data Fields | Managed Content (MANAG_CONTENT_CD) |
| Customer Modification | None |

# E.3.2.20        Messages

| Properties | Description |
|---|---|
| Tables | CI_MSG_CATEGORY, CI_MSG_CATEGORY_L, <br><br> CI_MSG, CI_MSG_L |
| Standard Data Fields | Message Category (MESSAGE_CAT_NBR) <br><br> • Messages are grouped in categories and each category has message numbers between 1 and 99999. A range of message categories is assigned to a product. An implementation may only use categories assigned for customization use. <br><br> • Implementer Message Categories are 80000 and 90000 <br><br> • Reserved for Tests – 99999 <br><br> Message Number (MESSAGE_NBR) for message categories <br><br> • Message numbers below 1000 are reserved for common messages. Implementers must not use message numbers below 1000. <br><br> Message Number (MESSAGE_NBR) for Java message categories <br><br> • Subsystem Standard Messages - 00001 thru 02000 <br><br> • Reserved - 02001 thru 09999 <br><br> • Published Messages - 10001 thru 11000 <br><br> • Package Messages - 10001 thru 90000 <br><br> • Reserved - 90001 thru 99999 <br><br> • Each package is allocated 100 message numbers, each starting from 101. <br><br> • Published Messages are messages that are special-interest messages that implementations need to know about and are therefore published in the user docs. Examples of these include messages that are highly likely to be changed for an implementation or messages that are embedded into other texts/messages and therefore the message number is never shown. <br><br> • Reserved message number ranges are for future use and therefore must not be used by all products. |
| Customer Modification | Override Description (DESCRLONG_OVRD), Message Text Override (MESSAGE_TEXT_OVRD) |

## E.3.2.21    Metadata - Table and Field

| Properties | Description |
|---|---|
| Tables | CI_MD_TBL, CI_MD_TBL_FLD, <br> CI_MD_TBL_L, CI_MD_TBL_FLD_L, <br> CI_MD_FLD, CI_MD_FLD_L, <br> F1_DB_OBJECTS_REPO |
| Standard Data Fields | Table Name (TBL_NAME) <br><br> Table names must match with the physical table name or view name in the database. <br><br> Field Name (FLD_NAME) Field name must match with the physical column name in the database unless the field is a work field. Field name does not have to follow the prefixing standard unless the field is a work field or customer modification field. <br><br> F1_DB_OBJECTS_REPO Table stores information about Indexes, Sequences, Triggers and other database objects excluding Tables and Fields (as they are already stored in the other Metadata tables) |
| Customer Modification | Audit Switches (AUDIT_INSERT_SW, AUDIT_UPDATE_SW, AUDIT_DELETE_SW), Override label (OVRD_LABEL) on MD Table Field Table (CI_MD_TBL_FLD). Audit Program Name (AUDIT_PGM_NAME), Audit Table Name (AUDIT_TBL_NAME), Audit Program Type (AUDIT_PGM_TYPE_FLG), Key Validation (KEY_VALIDATION_FLG) and Caching strategy (CACHE_FLG) on MD Table (CI_MD_TBL). Override Label (OVRD_LABEL) and Customer Specific Description (DESCRLONG_OVRD) on Field Table. |

## E.3.2.22    Metadata – Constraints

| Properties | Description |
|---|---|
| Tables | CI_MD_CONST, CI_MD_CONST_FLD |
| Standard Data Fields | Constraint Id (CONST_ID) <br> Index Name for Primary Constraints <br> <Index Name>Rnn for Foreign Key Constraints Where <br> nn: integer, 01 through 99 |
| Customer Modification | None |

## E.3.2.23        Metadata - Menu

Menus can be extended to support multiple products by adding a new menu line to an existing menu. The sequence number on the menu line language table (CI_MD_MENU_LINE_L) determines the order the menu lines appear. Within the same sequence, alphabetic sorting is used.

| Properties | Description |
|---|---|
| Tables | CI_MD_MENU, CI_MD_MENU_L, CI_MD_MENU_ITEM, CI_MD_MENU_ITEM_L, CI_MD_MENU_LINE, CI_MD_MENU_LINE_L |
| Standard Data Fields | Menu Name (MENU_NAME), Menu Item Id (MENU_ITEM_ID), Menu Line Id (MENU_LINE_ID) |
| Customer Modification | Override Label (OVRD_LABEL) on Menu Line Language Table (CI_MD_MENU_LINE_L) |

## E.3.2.24        Metadata - Program, Location and Services

| Properties | Description |
|---|---|
| Tables | CI_MD_PRG_COM, CI_MD_PRG_LOC, CI_MD_SVC, CI_MD_SVC_L, CI_MD_SVC_PRG, CI_MD_PRG_ MOD, CI_MD_PRG_EL_AT, CI_MD_PRG_ELEM, CI_MD_PRG_SEC, CI_MD_PRG_SQL, CI_MD_PRG_VAR, CI_MD_PRG_TAB |
| Standard Data Fields | Program Component Id (PROG_COM_ID), Location Id (LOC_ID), Program Component Name (PROG_COM_NAME), Service Name (SVC_NAME), Navigation Key (NAVIGATION_KEY) |
| Customer Modification | User Exit Program Name (USER_EXIT_PGM_NAME) on Program Components Table (CI_MD_PRG_COM), |

## E.3.2.25        Metadata - Maintenance Object

| Properties | Description |
|---|---|
| Tables | CI_MD_MO, CI_MD_MO_L, CI_MD_MO_TBL, CI_MD_MO_OPT, CI_MD_MO_ALG |
| Standard Data Fields | Maintenance Object (MAINT_OBJ_CD) |
| Customer Modification | None |

## E.3.2.26        Metadata - Work Tables

| Properties | Description |
|---|---|
| Tables | CI_MD_WRK_TBL, CI_MD_WRK_TBL_L, CI_MD_WRK_TBLFLD, CI_MD_MO_WRK |
| Standard Data Fields | Work Table Name (WRK_TBL_NAME) |
| Customer Modification | None |

## E.3.2.27        Metadata - Search Object

| Properties | Description |
|---|---|
| Tables | CI_MD_SO, CI_MD_SO_L, CI_MD_SO_RSFLD, CI_MD_SO_RSFLDAT, CI_MD_SOCG, CI_MD_SOCG_FLD, CI_MD_SOCG_FLDAT, CI_MD_SOCG_L, CI_MD_SOCG_SORT |
| Standard Data Fields | Search Object (SO_CD) |
| Customer Modification | None |

## E.3.2.28        Mobile Component

| Properties | Description |
|---|---|
| Tables | F1_MOBILE_COMPONENT,                              F1_MOBILE_COMPONENT_L, F1_MOB_COMP_CNT, F1_MOBILE_COMP_CHAR |
| Standard Data Fields | Mobile Component Code (F1_MOB_COMP_TYPE_CD) |
| Customer Modification | Expiration Days (F1_EXPIRATION_TIME_DUR) |

## E.3.2.29        Navigation Option

| Properties | Description |
|---|---|
| Tables | CI_NAV_OPT, CI_NAV_OPT_L, CI_NAV_OPT_CTXT, CI_NAV_OPT_USG, CI_MD_NAV |
| Standard Data Fields | Navigation Option Code (NAV_OPT_CD), Navigation Key (NAVIGATION_KEY) |
| Customer Modification | None |

## E.3.2.30    Outbound Message Type

| Properties | Description |
|---|---|
| Tables | F1_OUTMSG_TYPE, F1_OUTMSG_TYPE_L |
| Standard Data Fields | Outbound Message Type Code (OUTMSG_TYPE_CD) |
| Customer Modification | **Priority** (OUTMSG_PRIOR_FLG) |

## E.3.2.31    Portal and Zone

| Properties | Description |
|---|---|
| Tables | CI_PORTAL, CI_PORTAL_L, <br> CI_PORTAL_ZONE, C1_PORTAL_OPT, CI_ZONE, <br> CI_ZONE_L, CI_ZONE_PRM, <br> CI_ZONE_HDL, CI_ZONE_HDL_L, <br> CI_ZONE_HDL_PRM, CI_ZONE_HDL_PRM_L, CI_UI_ZONE, CI_PORTAL_OPT |
| Standard Data Fields | Portal Code (PORTAL_CD), Zone Code (ZONE_CD), Zone Type Code (ZONE_HDL_CD) <br><br> • A new Zone can be added to the Product owned Portal Pages. <br> • The existing Zones cannot be removed from the Product owned Portal Pages. |
| Customer Modification | Sort Sequence (SORT_SEQ) on Context Sensitive Zone Table (CI_UI_ZONE). Show on Portal Preferences (USER_CONFIG_FLG) on Portal Table (CI_PORTAL). Override Sequence (SORT_SEQ_OVRD) on Portal Zone Table (CI_PORTAL_ZONE). Customer Specific Description (DESCRLONG_OVRD) on Zone Language Table (CI_ZONE_L). Override Parameter Value (ZONE_HDL_PARM_OVRD) on Zone Type Parameters Table (CI_ZONE_HDL_PRM). Override Parameter Value (ZONE_PARM_VAL_OVRD) on Zone Parameters Table (CI_ZONE_PRM). |

## E.3.2.32    Process Flow Type

| Properties | Description |
|---|---|
| Tables | F1_PROC_DEFN, F1_PROC_DEFN_L, F1_PROC_NEXT_PANEL, F1_PROC_PANEL |
| Standard Data Fields | Process Flow Type (PROCESS_CD) |
| Customer Modification | None |

## E.3.2.33        Sequence

| Properties | Description |
|---|---|
| Tables | CI_SEQ |
| Standard Data Fields | Sequence Name (SEQ_NAME) |
| Customer Modification | Sequence Number (SEQ_NBR) <br> This field is updated by the application process and must be set to 1 initially. |

## E.3.2.34        Schema

| Properties | Description |
|---|---|
| Tables | F1_SCHEMA |
| Standard Data Fields | Schema Name (SCHEMA_NAME) |
| Customer Modification | None |

## E.3.2.35        Script

| Properties | Description |
|---|---|
| Tables | CI_SCR, CI_SCR_L,  CI_SCR_CRT, <br> CI_SCR_CRT_GRP, CI_SCR_CRT_GRP_L, <br> CI_SCR_DA, CI_SCR_FLD_MAP, <br> CI_SCR_PRMPT, CI_SCR_PRMPT_L, <br> CI_SCR_STEP, CI_SCR_STEP_L |
| Standard Data Fields | Script (SCR_CD) |
| Customer Modification | None |

## E.3.2.36        To Do Type

| Properties | Description |
|---|---|
| Tables | CI_TD_TYPE, CI_TD_TYPE_L, <br> CI_TD_SRTKEY_TY, CI_TD_DRLKEY_TY, <br> CI_TD_SRTKEY_TY_L |
| Standard Data Fields | **To Do Type** (TD_TYPE_CD) |
| Customer Modification | Creation Batch Code (CRE_BATCH_CD), <br> Route Batch Code (RTE_BATCH_CD), <br> Priority Flag (TD_PRIORITY_FLG) on To Do Type Table (CI_TD_TYPE) |

## E.3.2.37       Web Service Category

| Properties | Description |
|---|---|
| Tables | F1_WEB_CAT, F1_WEB_CAT_L, F1_WEB_CAT_INCL_SVC |
| Standard Data Fields | Web Service Category code (WEB_SVC_CAT_CD) |
| Customer Modification | None |

## E.3.2.38       XAI Configuration

| Properties | Description |
|---|---|
| Tables | CI_XAI_ADAPTER, CI_XAI_ADAPTER_L, <br> CI_XAI_CLASS, CI_XAI_CLASS_L, <br> CI_XAI_ENV_HNDL, <br> CI_XAI_ENV_HNDL_L, CI_XAI_FORMAT, <br> CI_XAI_FORMAT_L, CI_XAI_RCVR, <br> CI_XAI_RCVR_L, CI_XAI_RCVR_CTX, <br> CI_XAI_RCVR_RSP, CI_XAI_RCVR_RGRP, <br> CI_XAI_SENDER, CI_XAI_SERNDER_L, <br> CI_XAI_SNDR_CTX, CI_XAI_OPTION |
| Standard Data Fields | Adapter Id (XAI_ADAPTER_ID), Class Id (XAI_CLASS_ID), Envelope Handler Id (XAI_ENV_HNDL_ID), XAI Format Id (XAI_FORMAT_ID), Receiver Id (XAI_RCVR_ID), Sender Id (XAI_SENDER_ID) |
| Customer Modification | Option Value (OPTION_VALUE) on Message Option Table (CI_XAI_OPTION) |

## E.3.2.39       XAI Services

| Properties | Description |
|---|---|
| Tables | CI_XAI_IN_SVC, CI_XAI_IN_SVC_L, <br> CI_XAI_SVC_PARM |
| Standard Data Fields | XAI Inbound Service Id (XAI_IN_SVC_ID), XAI Inbound Service Name (XAI_IN_SVC_NAME) |
| Customer Modification | XAI Version (XAI_VERSION_ID), Trace (TRACE_SW), Debug (DEBUG_SW), Request XSL (INPUT_XSL), Response XSL (RESPONSE_XSL), Record XSL (RECORD_XSL and Post Error (POST_ERROR_SW) on XAI Inbound Service Table (CI_XAI_IN_SVC) |

## E.3.2.40        Inbound Web Service Operations Parameter

| Properties | Description |
|---|---|
| Tables | F1_IWS_SVC_OPER_PARM |
| Standard Data Fields | Inbound Service Name (IN_SVC_NAME) |
| Customer Modification | None |

## E.3.2.41        Market Configuration

| Properties | Description |
|---|---|
| Tables | F1_MKTCFG |
| Standard Data Fields | Market Configuration Code (MKTCFG_CD) |
| Customer Modification | None |

## E.3.2.42        File Integration

| Properties | Description |
|---|---|
| Tables | F1_FILE_INT_REC, F1_FILE_INT_REC_L, F1_FILE_INT_REC_ALG, F1_FILE_INT_TYPE, F1_FILE_INT_TYPE_L |
| Standard Data Fields | File Integration Record (FILE_INT_REC_CD), File Integration Type (FILE_INT_TYPE_CD) |
| Customer Modification | None |

## E.3.2.43        Meta Data - BI

| Properties | Description |
|---|---|
| Tables | F1_MD_BI_TBL, F1_MD_BI_TBL_L, F1_MD_BI_TBL_FLD |
| Standard Data Fields | Table Name (BI_TBL_NAME) |
| Customer Modification | None |

## E.3.2.44        Data Export Control

| Properties | Description |
|---|---|
| Tables | F1_DATA_EXPORT_CTRL, F1_DATA_EXPORT_CTRL_LOG, F1_DATA_EXPORT_CTRL_LOG_PARM |
| Standard Data Fields | F1_DATA_EXPORT_CTRL (DATA_EXPORT_CD) |
| Customer Modification | None |

# E.4     System Table List

This section contains the names of system tables, upgrade actions, and a brief description of the tables. The upgrade actions are explained below.

**Keep (KP):** The data in the table in the customer's database is kept untouched. No insert or delete is performed to this table by the upgrade process. The initial installation will add necessary data for the system.

**Merge (MG):** The non-base product data in the table in the database is kept untouched. If the data belongs to the base product, any changes pertaining to the new version of the software are performed.

**Refresh (RF):** The existing data in the table is replaced with the data from the base product table. The product does not support customer specific data in these tables.

**Note:** New product data is also inserted into tables marked as 'Merge'. If implementers add rows for a customer specific enhancement, it can cause duplication when the system data gets upgraded to the next version. We strongly recommend following the guidelines on how to use designated range of values or prefixes to segregate the implementation data from the base product data.

| Table Name | Upgrade Action | Description |
|---|---|---|
| CI_ALG | MG | Algorithm |
| CI_ALG_L | MG | Algorithm Language |
| CI_ALG_PARM | MG | Algorithm Parameters |
| CI_ALG_TYPE | MG | Algorithm Type |
| CI_ALG_TYPE_L | MG | Algorithm Type Language |
| CI_ALG_TYPE_PRM | MG | Algorithm Type Parameter |
| CI_ALG_TYPE_PRM_L | MG | Algorithm Type Parameter Language |
| CI_ALG_VER | MG | Algorithm Version |
| CI_APP_SVC_ACC | MG | Application Service Access Mode |
| CI_BATCH_CTRL | MG | Batch Control |
| CI_BATCH_CTRL_ALG | MG | Batch Control Algorithm |
| CI_BATCH_CTRL_L | MG | Batch Control Language |
| CI_BATCH_CTRL_P | MG | Batch Control Parameters |
| CI_BATCH_CTRL_P_L | MG | Batch Control Parameters Language |
| CI_CHAR_ENTITY | MG | Characteristic Type Entity |
| CI_CHAR_TYPE | MG | Characteristic Type |
| CI_CHAR_TYPE_L | MG | Characteristic Type Language |
| CI_CHAR_VAL | MG | Characteristic Type Value |
| CI_CHAR_VAL_L | MG | Characteristic Type Value Language |

| Table Name | Upgrade Action | Description |
| --- | --- | --- |
| CI_DISP_ICON | MG | Display Icon |
| CI_DISP_ICON_L | MG | Display Icon Language |
| CI_FK_REF | MG | Foreign Key Reference |
| CI_FK_REF_L | MG | Foreign Key Reference Language |
| CI_LANGUAGE | MG | Language Code |
| CI_LOOKUP_FIELD | MG | Lookup Field |
| CI_LOOKUP_VAL | MG | Lookup Field Value |
| CI_LOOKUP_VAL_L | MG | Lookup Field Value Language |
| CI_MD_CONST | MG | Constraints |
| CI_MD_CONST_FLD | MG | Constraint Fields |
| CI_MD_FLD | MG | Field |
| CI_MD_FLD_L | MG | Field Language |
| CI_MD_MENU | MG | Menu Information |
| CI_MD_MENU_IMOD | MG | Menu Item Module Main |
| CI_MD_MENU_ITEM | MG | Menu Item |
| CI_MD_MENU_ITEM_L | MG | Menu Item Language |
| CI_MD_MENU_L | MG | Menu Language |
| CI_MD_MENU_LINE | MG | Menu Line |
| CI_MD_MENU_LINE_L | MG | Menu Line Language |
| CI_MD_MENU_MOD | MG | Menu Product Components |
| CI_MD_MO | MG | Maintenance Object |
| CI_MD_MO_ALG | MG | Maintenance Object Algorithm |
| CI_MD_MO_L | MG | Maintenance Object Language |
| CI_MD_MO_OPT | MG | Maintenance Object Option |
| CI_MD_MO_TBL | MG | Maintenance Object Table |
| CI_MD_MO_WRK | MG | Maintenance Object Work Tables |
| CI_MD_NAV | MG | Navigation Key |
| CI_MD_PRG_COM | MG | Program Components |
| CI_MD_PRG_ELEM | MG | UI Page Elements |
| CI_MD_PRG_EL_AT | MG | UI Page Element Attributes |
| CI_MD_PRG_LOC | MG | Program Location |

| Table Name | Upgrade Action | Description |
|---|---|---|
| CI_MD_PRG_MOD | MG | Program Module |
| CI_MD_PRG_SEC | MG | UI Page Sections |
| CI_MD_PRG_SQL | MG | MD SQL Meta Data |
| CI_MD_PRG_TAB | MG | UI Tab Meta Data |
| CI_MD_PRG_VAR | MG | Program Variable |
| CI_MD_SO | MG | Search Object |
| CI_MD_SOCG | MG | Search Object Criteria Group |
| CI_MD_SOCG_FLD | MG | Search Object Criteria Group Field |
| CI_MD_SOCG_FLDAT | MG | Search Criteria Group Field Attribute |
| CI_MD_SOCG_L | MG | Search Object Criteria Group Language |
| CI_MD_SOCG_SORT | MG | Search Criteria Group Result Sort Order |
| CI_MD_SO_L | MG | Search Object Language |
| CI_MD_SO_RSFLD | MG | Search Object Result Field |
| CI_MD_SO_RSFLDAT | MG | Search Object Result Field Attribute |
| CI_MD_SVC | MG | MD Service |
| CI_MD_SVC_L | MG | MD Service Language |
| CI_MD_SVC_PRG | MG | MD Service Program |
| CI_MD_TAB_MOD | MG | UI Tab Module |
| CI_MD_TBL | MG | MD Table |
| CI_MD_TBL_FLD | MG | MD Table Field |
| CI_MD_TBL_FLD_L | MG | MD Table Field Language |
| CI_MD_TBL_L | MG | MD Table Language |
| CI_MD_WRK_TBL | MG | Work Table |
| CI_MD_WRK_TBLFLD | MG | Work Table Field |
| CI_MD_WRK_TBL_L | MG | Work Table Language |
| CI_MSG | MG | Message |
| CI_MSG_CATEGORY | MG | Message Category |
| CI_MSG_CATEGORY_L | MG | Message Category Language |
| CI_MSG_L | MG | Message Language |
| CI_NAV_OPT | MG | Navigation Option |
| CI_NAV_OPT_CTXT | MG | Navigation Option Context |

        

| Table Name | Upgrade Action | Description |
|---|---|---|
| CI_NAV_OPT_L | MG | Navigation Option Language |
| CI_NAV_OPT_USG | MG | Navigation Option Usage |
| CI_PORTAL | MG | Portal |
| CI_PORTAL_L | MG | Portal Language |
| CI_PORTAL_OPT | MG | Portal Option |
| CI_PORTAL_ZONE | MG | Portal Zone |
| CI_SCR | MG | Script |
| CI_SCR_CRT | MG | Script Criteria |
| CI_SCR_CRT_GRP | MG | Script Criteria Group |
| CI_SCR_CRT_GRP_L | MG | Script Criteria Group Language |
| CI_SCR_DA | MG | Script Data Area |
| CI_SCR_FLD_MAP | MG | Script Field Mapping |
| CI_SCR_L | MG | Script Language |
| CI_SCR_PRMPT | MG | Script Prompt |
| CI_SCR_PRMPT_L | MG | Script Prompt Language |
| CI_SCR_STEP | MG | Script Step |
| CI_SCR_STEP_L | MG | Script Step Language |
| CI_SEQ | MG | Sequence |
| CI_TD_DRLKEY_TY | MG | To Do Type Drill Key |
| CI_TD_SRTKEY_TY | MG | To Do Type Sort Key |
| CI_TD_SRTKEY_TY_L | MG | To Do Type Sort Key Language |
| CI_TD_TYPE | MG | To Do Type |
| CI_TD_TYPE_L | MG | To Do Type Language |
| CI_UI_ZONE | MG | Context Sensitive Zone |
| CI_USR_NAV_LINK | MG | User Favorite Links |
| CI_XAI_ADAPTER | MG | XAI Adapter |
| CI_XAI_ADAPTER_L | MG | XAI Adapter Lang |
| CI_XAI_CLASS | MG | Message Class |
| CI_XAI_CLASS_L | MG | Message Class Language |
| CI_XAI_ENV_HNDL | MG | XAI Envelope Handler |
| CI_XAI_ENV_HNDL_L | MG | XAI Envelope Handler Language |

| Table Name | Upgrade Action | Description |
| --- | --- | --- |
| CI_XAI_IN_SVC | MG | XAI Inbound Service |
| CI_XAI_IN_SVC_L | MG | XAI Inbound Service Language |
| CI_XAI_SVC_PARM | MG | XAI Inbound Service Parameters |
| CI_ZONE | MG | Zone |
| CI_ZONE_HDL | MG | Zone Type |
| CI_ZONE_HDL_L | MG | Zone Type Language |
| CI_ZONE_HDL_PRM | MG | Zone Type Parameters |
| CI_ZONE_HDL_PRM_L | MG | Zone Type Parameters Language |
| CI_ZONE_L | MG | Zone Language |
| CI_ZONE_PRM | MG | Zone Parameters |
| F1_BUS_OBJ | MG | Business Object |
| F1_BUS_OBJ_ALG | MG | Business Object Algorithm |
| F1_BUS_OBJ_L | MG | Business Object Language |
| F1_BUS_OBJ_OPT | MG | Business Object Option |
| F1_BUS_OBJ_STATUS | MG | Business Object Status |
| F1_BUS_OBJ_STATUS_ALG | MG | Business Object Status Algorithm |
| F1_BUS_OBJ_STATUS_L | MG | Business Object Status Language |
| F1_BUS_OBJ_STATUS_OPT | MG | Business Object Status Option |
| F1_BUS_OBJ_STATUS_RSN | MG | Status Reason |
| F1_BUS_OBJ_STATUS_RSN_L | MG | Status Reason Language |
| F1_BUS_OBJ_TR_RULE | MG | Business Object Transition Rule |
| F1_BUS_OBJ_TR_RULE_L | MG | Business Object Transition Rule Language |
| F1_BUS_SVC | MG | Business Service |
| F1_BUS_SVC_L | MG | Business Service Language |
| F1_DATA_AREA | MG | Data Area |
| F1_DATA_AREA_L | MG | Data Area Language |
| F1_DB_OBJECTS_REPO | MG | Database Objects Repository |
| F1_DEPLOYMENT_ITEM | MG | Deployment Part Item |
| F1_DEPLOYMENT_PART | MG | Deployment Part |
| F1_DEPLOYMENT_PART_L | MG | Deployment Part Language |
| F1_EXT_LOOKUP_VAL | MG | Extendable Lookup |

| Table Name | Upgrade Action | Description |
|---|---|---|
| F1_EXT_LOOKUP_VAL_L | MG | Extendable Lookup Language |
| F1_EXT_LOOKUP_VAL_CHAR | MG | Extendable Lookup Characteristics |
| F1_IWS_ANN | MG | Web Service Annotation |
| F1_IWS_ANN_L | MG | Web Service Annotation Language |
| F1_IWS_ANN_PARM | MG | Web Service Annotation Parameter |
| F1_IWS_ANN_TYPE | MG | Web Service Annotation Type |
| F1_IWS_ANN_TYPE_L | MG | Web Service Annotation Type Language |
| F1_IWS_ANN_TYPE_PARM | MG | Web Service Annotation Type Parm |
| F1_IWS_ANN_TYPE_PARM_L | MG | Web Service Annotation Type Parameter Language |
| F1_IWS_SVC | MG | Inbound Web Service |
| F1_IWS_SVC_L | MG | Inbound Web Service Language |
| F1_IWS_SVC_OPER | MG | Inbound Web Service Operations |
| F1_IWS_SVC_OPER_PARM | MG | Inbound Web Service Operations Parameter |
| F1_MKTCFG | MG | Market Configuration |
| F1_MANAG_CONTENT | MG | Managed Content |
| F1_MANAG_CONTENT_L | MG | Managed Content Language |
| F1_MAP | MG | UI Map |
| F1_MAP_L | MG | UI Map Language |
| F1_MIGR_PLAN | MG | Migration Plan |
| F1_MIGR_PLAN_INSTR | MG | Migration Plan Instruction |
| F1_MIGR_PLAN_INSTR_ALG | MG | Migration Plan Instruction Algorithm |
| F1_MIGR_PLAN_INSTR_L | MG | Migration Plan Instruction Language |
| F1_MIGR_PLAN_L | MG | Migration Plan Language |
| F1_MIGR_REQ | MG | Migration Request |
| F1_MIGR_REQ_INCL_REQ | MG | Migration Request Grouping |
| F1_MIGR_REQ_INSTR | MG | Migration Request Instruction |
| F1_MIGR_REQ_INSTR_ENTITY | MG | Migration Request Instruction Entity |
| F1_MIGR_REQ_INSTR_L | MG | Migration Request Instruction Language |
| F1_MIGR_REQ_L | MG | Migration Request Language |

| Table Name | Upgrade Action | Description |
|---|---|---|
| F1_MOBILE_COMPONENT | MG | Mobile Component |
| F1_MOBILE_COMPONENT_L | MG | Mobile Component Language |
| F1_MOB_COMP_CHAR | MG | Mobile Component Characteristics |
| F1_MOB_COMP_CNT | MG | Mobile Component Content |
| F1_OUTMSG_TYPE | MG | Outbound Message Type |
| F1_OUTMSG_TYPE_L | MG | Outbound Message Type Language |
| F1_PROC_DEFN | MG | Process Flow Type |
| F1_PROC_DEFN_L | MG | Process Flow Type Language |
| F1_PROC_NEXT_PANEL | MG | Next Panel |
| F1_PROC_PANEL | MG | Process Panels |
| F1_SCHEMA | MG | Schema |
| F1_WEB_CAT | MG | Web Service Category |
| F1_WEB_CAT_L | MG | Web Service Category Language |
| F1_WEB_CAT_INCL_SVC | MG | Web Service Category Included Services |
| F1_FILE_INT_REC | MG | File Integration Record Table |
| F1_FILE_INT_REC_L | MG | File Integration Record Language Table |
| F1_FILE_INT_REC_ALG | MG | File Integration Record Algorithm Table |
| F1_FILE_INT_TYPE | MG | File Integration Type |
| F1_FILE_INT_TYPE_L | MG | File Integration Language Table |
| F1_MD_BI_TBL | MG | MD Table for BI |
| F1_MD_BI_TBL_L | MG | MD Language Table for BI |
| F1_MD_BI_TBL_FLD | MG | MD Field Table for BI |
| SC_ACCESS_CNTL | MG | User Group Access Control |
| SC_APP_SERVICE | MG | Application Service |
| SC_APP_SERVICE_L | MG | Application Service Language |
| SC_USR_GRP_PROF | MG | User Group Profile |
| CI_ACC_GRP | KP | Access Group |
| CI_ACC_GRP_DAR | KP | Access Group / Data Access Group |
| CI_ACC_GRP_L | KP | Access Group Language |
| CI_APP_SVC_SCTY | KP | Security Type Application Service |
| CI_CAL_HOL | KP | Work Calendar Holidays |

| Table Name | Upgrade Action | Description |
|---|---|---|
| CI_CAL_HOL_L | KP | Work Calendar Holidays Language |
| CI_CAL_WORK | KP | Work Calendar |
| CI_CAL_WORK_L | KP | Work Calendar Language |
| CI_CHTY_TDTY | KP | To Do Type Template Characteristics |
| CI_COUNTRY | KP | Country |
| CI_COUNTRY_L | KP | Country Language |
| CI_CURRENCY_CD | KP | Currency Code |
| CI_CURRENCY_CD_L | KP | Currency Code Language |
| CI_DAR | KP | Data Access Role |
| CI_DAR_L | KP | Data Access Language |
| CI_DAR_USR | KP | Data Access User |
| CI_DISP_PROF | KP | Display Profile |
| CI_DISP_PROF_L | KP | Display Profile Language |
| CI_FUNC | KP | Function |
| CI_FUNC_FLD | KP | Function Field |
| CI_FUNC_FLD_L | KP | Function Field Language |
| CI_FUNC_L | KP | Function Language |
| CI_GEO_TYPE | KP | Geographic Type |
| CI_GEO_TYPE_L | KP | Geographic Type Language |
| CI_INSTALL_ALG | KP | Installation Algorithm |
| CI_INSTALL_MSG | KP | Installation Message |
| CI_INSTALL_MSG_L | KP | Installation Message Language |
| CI_INSTALL_PROD | KP | Installation Product |
| CI_MD_RPT | KP | Report Definition |
| CI_MD_RPT_L | KP | Report Language |
| CI_MD_RPT_LBL | KP | Report Labels |
| CI_MD_RPT_PARM | KP | Report Parameters |
| CI_MD_RPT_PARM_L | KP | Report Parameters Language |
| CI_MD_TOOLREP_XML | KP | MD Tool Reference XML |
| CI_MD_TOOL_REP | KP | MD Tool Reference |
| CI_NT_DNTY_CTXT | KP | Notification Download Type Context |

| Table Name | Upgrade Action | Description |
| --- | --- | --- |
| CI_NT_DWN_FORM | KP | Notification Download Format |
| CI_NT_DWN_FORM_L | KP | Notification Download Format Language |
| CI_NT_DWN_PROF | KP | Notification Download Profile |
| CI_NT_DWN_PROF_L | KP | Notification Download Profile Language |
| CI_NT_DWN_TYPE | KP | Notification Download Type |
| CI_NT_DWN_TYPE_L | KP | Notification Download Type Language |
| CI_NT_UP_XTYPE | KP | Notification Upload Type |
| CI_NT_UP_XTYPE_L | KP | Notification Upload Type Language |
| CI_NT_XID | KP | External System |
| CI_NT_XID_L | KP | External System Language |
| CI_PHONE_TYPE | KP | Phone Type |
| CI_PHONE_TYPE_L | KP | Phone Type Language |
| CI_ROLE | KP | Role |
| CI_ROLE_L | KP | Role Language |
| CI_ROLE_USER | KP | Role User |
| CI_RPT_OPTION | KP | Report Options |
| CI_SC_AUTH_LVL | KP | Security Type Auth Level |
| CI_SC_AUTH_LVL_L | KP | Security Type Auth Level Language |
| CI_SC_TYPE | KP | Security Type |
| CI_SC_TYPE_L | KP | Security Type Language |
| CI_SEAS_SHIFT | KP | Seasonal Time Shift Schedule |
| CI_SEAS_TM_SHIFT | KP | Seasonal Time Shift |
| CI_SEAS_TM_SHIFT_L | KP | Seasonal Shift Language |
| CI_STATE | KP | State |
| CI_STATE_L | KP | State Language |
| CI_TD_EX_LIST | KP | To Do Type Message Overrides |
| CI_TD_TYPE_ALG | KP | To Do Type Algorithms |
| CI_TD_TYPE_CHAR | KP | To Do Type Characteristic |
| CI_TD_VAL_ROLE | KP | To Do Type Role |
| CI_TIME_ZONE | KP | Time Zone |
| CI_TIME_ZONE_L | KP | Time Zone Language |

| Table Name | Upgrade Action | Description |
|---|---|---|
| CI_USR_GRP_SC | KP | User Group Security Type |
| CI_USR_BOOKMARK | KP | User Bookmarks |
| CI_USR_PORTAL | KP | User Portal |
| CI_USR_SCR | KP | User Scripts |
| CI_USR_ZONE | KP | User Zone |
| CI_USR_ZONE_SAVE | KP | User Zone Save |
| CI_WFM | KP | Feature Configuration |
| CI_WFM_L | KP | Feature Configuration Language |
| CI_WFM_MSG | KP | Feature Configuration Message |
| CI_WFM_OPT | KP | Feature Configuration Options |
| CI_WF_EVT_TYPE | KP | WF Event Type |
| CI_WF_EVT_TYPE_L | KP | WF Event Type Language |
| CI_WF_PP | KP | WF Process Profile |
| CI_WF_PP_L | KP | WF Process Profile Language |
| CI_WF_PP_NT | KP | WF Process Notification |
| CI_WF_PP_NT_CRT | KP | WF Process Notification Criteria |
| CI_WF_PROC_SCHED | KP | WF Process Creation Schedule |
| CI_WF_PROC_SCHED_K | KP | WF Process Creation Schedule Key |
| CI_WF_PROC_TMPL | KP | WF Process Template |
| CI_WF_PROC_TMPL_L | KP | WF Process Template Language |
| CI_WF_RESP | KP | WF Response |
| CI_WF_RESP_DEP | KP | WF Response Dependency |
| CI_XAI_JDBC_CON | KP | XAI JDBC Connection |
| CI_XAI_JDBC_CON_L | KP | XAI JDBC Connection Language |
| CI_XAI_JMS_CON | KP | XAI JMS Connection |
| CI_XAI_JMS_CON_L | KP | XAI JMS Connection Language |
| CI_XAI_JMS_Q | KP | XAI JMS Queue |
| CI_XAI_JMS_Q_L | KP | XAI JMS Queue Language |
| CI_XAI_JMS_TPC | KP | XAI JMS Topic |
| CI_XAI_JMS_TPC_L | KP | XAI JMS Topic Language |
| CI_XAI_JNDI_SVR | KP | XAI JNDI Server |

| Table Name | Upgrade Action | Description |
|---|---|---|
| CI_XAI_JNDI_SVR_L | KP | XAI JNDI Server Language |
| CI_XAI_OPTION | KP | Message Option |
| CI_XAI_RCVR | KP | XAI Receiver |
| CI_XAI_RCVR_CTX | KP | XAI Receiver Context |
| CI_XAI_RCVR_L | KP | XAI Receiver Language |
| CI_XAI_RCVR_RGRP | KP | XAI Receiver Rule Group |
| CI_XAI_RCVR_RSP | KP | XAI Receiver Response |
| CI_XAI_RGRP | KP | XAI Rule Group |
| CI_XAI_RGRP_ATT | KP | XAI Rule Group Attachment |
| CI_XAI_RGRP_L | KP | XAI Rule Group Language |
| CI_XAI_ROUTING | KP | XAI Routing |
| CI_XAI_RT_TYPE | KP | XAI Route Type |
| CI_XAI_RT_TYPE_L | KP | XAI Route Type Language |
| CI_XAI_RULE | KP | XAI Rule |
| CI_XAI_SENDER | KP | Message Sender |
| CI_XAI_SENDER_L | KP | Message Sender Language |
| CI_XAI_SNDR_CTX | KP | Message Sender Context |
| F1_BKT_CONFIG | KP | Bucket Configuration |
| F1_BKT_CONFIG_L | KP | Bucket Configuration Language |
| F1_BKT_CONFIG_REL_OBJ | KP | Bucket Configuration Related Object |
| F1_BKT_CONFIG_VAL | KP | Bucket Configuration Value |
| F1_BKT_CONFIG_VAL_L | KP | Bucket Configuration Value Language |
| F1_BUS_OBJ_STATUS_RSN_CHAR | KP | Status Reason Characteristic |
| F1_EXTSYS_OUTMSG_PROF | KP | External System Outbound Message Type |
| F1_INSTALLATION | KP | Installation Option - Framework |
| F1_IWS_SVC_ANN | KP | Inbound Web Service Link to Annotation |
| F1_IWS_SVC_CHAR | KP | Inbound Web Service Characteristics |
| F1_IWS_SVC_LOG | KP | Inbound Web Service Log |
| F1_IWS_SVC_LOG_PARM | KP | Inbound Web Service Log Parameter |
| F1_MAP_OVRD | KP | UI Map Override |
| F1_MD_DB_OBJ | KP | MD Database Object |

| Table Name | Upgrade Action | Description |
|---|---|---|
| F1_MST_CONFIG | KP | Master Configuration |
| F1_OUTMSG_TYPE | KP | Outbound Message Type |
| F1_OUTMSG_TYPE_L | KP | Outbound Message Type Language |
| F1_REQ_TYPE | KP | Request Type |
| F1_REQ_TYPE_L | KP | Request Type Language |
| F1_REQ_TYPE_LOG | KP | Request Type Log |
| F1_REQ_TYPE_LOG_PARM | KP | Request Type Log Parameters |
| F1_SVC_TASK_TYPE | KP | Service Task Type |
| F1_SVC_TASK_TYPE_CHAR | KP | Service Task Type Characteristics |
| F1_SVC_TASK_TYPE_L | KP | Service Task Type Language |
| F1_WEB_SVC | KP | Web Service Adapter |
| F1_WEB_SVC_CHAR | KP | Web Service Adapter Characteristics |
| F1_WEB_SVC_L | KP | Web Service Adapter Language |
| F1_WEB_SVC_LOG | KP | Web Service Adapter Log |
| F1_WEB_SVC_LOG_PARM | KP | Web Service Adapter Log Parameter |
| F1_WEB_SVC_OPERATIONS | KP | Web Service Adapter Operations |
| SC_USER | KP | User |
| SC_USER_CHAR | KP | User Characteristic |
| SC_USER_GROUP | KP | User Group |
| SC_USER_GROUP_L | KP | User Group Language |
| SC_USR_GRP_USR | KP | User Group User |
| CI_MD_ATT_TY | RF | MD Element Attribute Type |
| CI_MD_AT_DTL | RF | MD Element Attribute Type Detail |
| CI_MD_AT_DTL_L | RF | MD Element Attribute Type Detail Language |
| CI_MD_CTL | RF | Generator Control |
| CI_MD_CTL_L | RF | Generator Control Language |
| CI_MD_CTL_TMPL | RF | Generator Control Template |
| CI_MD_ELTY | RF | MD Element Type |
| CI_MD_ELTY_AT | RF | Element Type Attributes |
| CI_MD_ELTY_L | RF | Element Type Language |

| Table Name | Upgrade Action | Description |
| --- | --- | --- |
| CI_MD_LOOKUP_F | RF | MD Lookup Field |
| CI_MD_MSG | RF | MD Message |
| CI_MD_MSG_L | RF | MD Message Language |
| CI_MD_PDF | RF | Predefined Fields |
| CI_MD_PDF_VAL | RF | Predefined Values |
| CI_MD_SRC_TYPE | RF | Source Type |
| CI_MD_SRC_TYPE_L | RF | Source Type Language |
| CI_MD_TMPL | RF | Template |
| CI_MD_TMPL_ELTY | RF | Template Element Types |
| CI_MD_TMPL_L | RF | Template Language |
| CI_MD_TMPL_VAR | RF | Template Variable |
| CI_MD_TMPL_VAR_L | RF | Template Variable Language |
| CI_MD_VAR | RF | Variable |
| CI_MD_VAR_DTL | RF | Variable Detail |
| CI_MD_VAR_DTL_L | RF | Variable Detail Language |
| CI_XAI_EXECUTER | RF | XAI Executer |
| CI_XAI_EXECUTER_L | RF | XAI Executer Language |
| CI_XAI_FORMAT | RF | XAI Format |
| CI_XAI_FORMAT_L | RF | XAI Format Language |
| F1_LGCY_OBJ | RF | Unsupported Metadata |

# Appendix F :  ORMB V3.1.0.0.0 Rollup Packs

Instead of individually applying the patches, you can download and apply the release-specific rollup packs. To view the list of rollup packs that you need to apply on the database, refer to the *ORMB V3.1.0.0.0 Patch Guide (Document ID: 2815177.1)* on [My Oracle Support](#).

## F.1     Applying a Rollup Pack

Once you install Oracle Revenue Management and Billing Version 3.1.0.0.0, you need to apply the rollup packs listed in the *ORMB V3.1.0.0.0 Patch Guide (Document ID: 2815177.1)*. You can apply a rollup pack from a Windows machine and UNIX Standalone server. To apply a rollup pack:

1. Download the rollup pack from [My Oracle Support](#). A zip file is downloaded.
2. Unzip the downloaded file in your local folder. The contents include the `README.txt` file and three folders named `RMB_V3.1.0.0.0_App_Rollup`, `RMB_V3.1.0.0.0_DB_Rollup`, and `RMB_V3.1.0.0.0_PFDs`.
3. Change to the `RMB_V3.1.0.0.0_DB_Rollup` folder using the following command:

   **AIX, Linux:**

   `cd <DESTINATION_FOLDER_1>/RMB_V3.1.0.0.0_DB_Rollup`

   **Windows:**

   `cd <DESTINATION_FOLDER_1>\RMB_V3.1.0.0.0_DB_Rollup`

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

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

   **Windows:**

   `ouafDatabasePatch.cmd`

   **AIX, Linux:**

   `ouafDatabasePatch.sh`

> **Note:** On the AIX and Linux platforms, ensure that you grant the execute permission for the `ouafDatabasePatch.sh` utility using the following command:
>
> `chmod 755 ouafDatabasePatch.sh`

# Appendix G : License and Copyright Notices

This section provides license and copyright information for the associated products. It includes the following notices:

- [Notice Concerning Usage of ANTLR](#)
- [Notice Concerning Usage of Apache Software](#)
- [Notice Concerning Usage of ASM](#)
- [Notice Concerning Usage of Bouncy Castle Crypto API](#)
- [Notice Concerning Usage of CodeMirror](#)
- [Notice Concerning Usage of Concurrent](#)
- [Notice Concerning Usage of Cordova Plugin Pin Check](#)
- [Notice Concerning Usage of Cordova Plugin Fingerprint aio](#)
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- [Notice Concerning Usage of DOM4J](#)
- [Notice Concerning Usage of FullCalendar](#)
- [Notice Concerning Usage of Graph Builder](#)
- [Notice Concerning Usage of International Components for Unicode (ICU4J)](#)
- [Notice Concerning Usage of Jaxen](#)
- [Notice Concerning Usage of JQuery (3.5.1)](#)
- [Notice Concerning Usage of JQueryMobile](#)
- [Notice Concerning Usage of JQuery UI](#)
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- [Notice Concerning Usage of Staxmate](#)
- [Notice Concerning Usage of Swagger-UI](#)
- [Notice Concerning Usage of XMLPULL](#)
- [Notice Concerning Usage of XStream](#)

# G.1    Third-Party Products

The following sections provide notices and information about the third party products indicated.

## G.1.1   Notice Concerning Usage of ANTLR

The following files are covered under this license:

- antlr-2.7.7.jar
- antlr4-runtime-4.7.2.jar

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The following JAR files and components are covered under this license:

- accessors-smart-1.3.jar
- ant-1.10.9.jar
- Apache Cordova 7.0.0
- apache-xmlbeans-3.1.0.jar
- batik-all-1.14.jar
- Castor 1.4.1
- cglib-3.3.0.jar

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- commons-beanutils-1.9.4.jar
- commons-cli-1.4-c12260c.jar
- commons-codec-1.14.jar
- commons-codec-1.15.jar
- commons-collections-3.2.2.jar
- commons-collections4-4.4.jar
- commons-compress-1.19.jar
- commons-fileupload-1.4.jar
- commons-io-2.7.jar
- commons-io-2.8.0.jar
- commons-lang3-3.9.jar
- commons-logging-1.2.jar
- commons-logging-1.2-9f99a00.jar
- commons-math3-3.6.1.jar
- commons-text-1.9.jar
- Cordova Android 6.4.0
- Cordova App-Event Plugin 1.2.1
- Cordova Camera Plugin 4.0.3
- Cordova Command Line Interface 8.0.0
- Cordova Device Plugin 2.0.2
- Cordova File Plugin 6.0.1
- Cordova File Transfer Plugin 1.7.1
- Cordova Geolocation Plugin 4.0.1
- Cordova inappbrowser plugin 3.0.0
- Cordova iOS 4.4.0
- Cordova Local Notification Plugin 0.8.5
- Cordova Network Information Plugin 2.0.1
- Cordova SQLite storage adapter 2.3.3
- Cordova WebSQL PlugIn 0.0.10
- Cordova Whitelist Plugin 1.0.0
- cordova-plugin-compat  1.1.0
- ehcache-core-2.5.2.jar
- fontbox-2.0.22.jar
- fop-2.6.jar
- groovy-3.0.7.jar
- groovy-xml-3.0.7.jar
- httpclient-4.5.13.jar
- httpclient-cache-4.1.2.jar

- httpcore-4.4.13.jar
- httpmime-4.1.2.jar
- jackson-annotations-2.10.3.jar
- jackson-core-2.10.3.jar
- jackson-databind-2.10.3.jar
- jboss-logging-3.4.1.Final.jar
- jcl-over-slf4j-1.7.30.jar
- jettison-1.4.1.jar
- joda-time-2.9.6.jar
- json-smart-2.4.jar
- log4j-1.2-api-2.14.0.jar
- log4j-api-2.13.3.jar
- log4j-core-2.13.3.jar
- nimbus-jose-jwt-8.19.jar
- poi-4.1.2.jar
- poi-ooxml-4.1.2.jar
- poi-ooxml-schemas-4.1.2.jar
- serializer-2.7.2.jar
- SparseBitSet-1.2.jar
- velocity-engine-core-2.1.jar
- xalan-2.7.2.jar
- xercesImpl-2.12.1.jar
- xml-apis-1.4.01.jar
- xml-apis-ext-1.3.04.jar
- xmlbeans-3.1.0.jar
- xmlgraphics-commons-2.6.jar
- xmlschema-core-2.2.4.jar
- xpp3-1.1.4c.jar

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**jQuery BBQ: Back Button & Query Library - v1.2.1 - 2/17/2010** http://benalman.com/projects/jquery-bbq-plugin/

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By Jeremy Dorn - https://github.com/jdorn/json-editor/

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