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Database Administrator's Guide

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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 2.9.0.1.0 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 V2.9.0.1.0 Database	Lists the objects that are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 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 2.9.0.1.0.
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 V4.4.0.2.0 Database	Lists the objects that are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database.
Appendix E	Oracle Utilities Application Framework System Table Guide	Lists the system tables owned by Oracle Utilities Application Framework V4.4.0.2.0 and explains the standards and guidelines to be followed while updating the data in the system tables.
Appendix F	ORMB V2.9.0.1.0 Rollup Packs	Lists the rollup packs available for Oracle Revenue Management and Billing Version 2.9.0.1.0. 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.

Related Documents

You can refer to the following documents for more information:

Document	Description
Oracle Revenue Management and Billing Version 2.9.0.1.0 Release Notes	Provides a brief description about the new features, enhancements, UI and database level changes, supported platforms, framework upgrade, supported upgrades, and technology upgrade made in this release. It also highlights the discontinued features, bug fixes, and known issues in this release.
Oracle Revenue Management and Billing Installation Guide	Lists the application server pre-requisites, supported platforms, and software and hardware requirements for installing the Oracle Revenue Management and Billing application. It explains how to install the Oracle Revenue Management and Billing application.
Oracle Revenue Management and Billing Quick Installation Guide	Provides high-level information on how to install the Oracle Revenue Management and Billing (ORMB) application and selected additional software.

Document	Description
Oracle Revenue Management and Billing Server Administration Guide	Explains the Oracle Revenue Management and Billing (ORMB) architecture and technical know-how required for configuring and using the ORMB application. It explains how to configure and deploy web and business application servers. In addition, it explains how to monitor client machines, web and/or business application servers, and database connections.
Oracle Revenue Management and Billing Security Guide	Lists the security features available in the Oracle Revenue Management and Billing application. It explains how to configure security for the Oracle Revenue Management and Billing application using the default security features.

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.

Change Log

Revision	Last Update	Updated Section	Comments
18.1	16-Jan-2021	Section 5.1.9: Database Initialization Parameters	Updated Information
		Section 5.2.2: Increase INITRANS Values	Updated Information
18.2	05-Feb-2021	Section 2.3.1.6: Post Installation Tasks	Updated Information
		Appendix F: ORMB V2.9.0.1.0 Rollup Packs	Updated Information
		Appendix G: License and Copyright Notices	Updated Information
18.3	23-Apr-2021	Appendix G.1.12: Notice Concerning Usage of JfreeChart Library	Removed Section
		Appendix G.1.15: Notice Concerning Usage of JUnit	Removed Section
		Section 2.1: Installation Overview	Updated Information

Revision	Last Update	Updated Section	Comments
		Section 2.2: Creating the Database	Updated Information
		Section 2.3: Oracle Database Installation	Updated Information
		Section 2.3.2: Demo Install	Added Section
18.4	17-May-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
		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
18.5	18-Jan-2022	-	Added Bookmarks in PDF
18.6	14-Jul-2022	Section 5.2.3: Table Partitioning Strategy	Updated Information
18.7	25-Jul-2022	Section 5.2.3: Table Partitioning Strategy	Updated 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 18c (12.2.0.2) SP1+ Oracle Database Server 19c
Oracle Linux 7.x[2] (64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
Red Hat Enterprise Linux[3] 7.x[2] (64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
Oracle Solaris 11.3+[1] (SPARC 64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c
Windows Server 2012 R2 (64-bit)	Oracle Database Server 18c (12.2.0.2) SP1+ Oracle Database Server 19c

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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. 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.

> **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

Oracle Database Client 18c or 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 to install Oracle Revenue Management and Billing (ORMB) on 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. This version 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:
  - Columns in base tables must not be altered in anyway.
  - Columns in Indexes must not be altered or removed.
  - Tables must not be renamed or removed.
  - Base views must not be renamed or removed.
  - Base Triggers and Sequences must not be renamed or removed.
  - Base indexes must not be altered or removed.

2. Installing Oracle Revenue Management and Billing Version 2.9.0.0.0 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 where the install package is staged and run.

2.2 Creating the Database

For an initial install 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) (Doc 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 NOT IDENTIFIED;
CREATE ROLE CIS_READ NOT IDENTIFIED;
```

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 `FW\FW44020\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` 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 `OraDBI.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 2.9.0.1.0. It contains the following topics:

- [Initial Install, or Installing Version 2.9.0.1.0 for the First Time](#)
- [Demo Install](#)
- [Configuring Security](#)
- [Populating Language Data](#)
- [Installing Service Packs and Patches](#)

> **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 2.9.0.1.0 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 *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 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 V2.9.0.1.0 Oracle Database** package from the **Oracle Revenue Management and Billing V2.9.0.1.0** 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 18c (12.2.0.2) SP1+ and 19c installed on your machine in order 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) (Doc 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) (Doc 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 4.4.0.2.0 prior to Oracle Revenue Management and Billing Version 2.9.0.1.0. The files for Oracle Utilities Application Framework installation are located in the `FW\FW44020` 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 4.4.0.2.0
2. Rollup Pack for Oracle Utilities Application Framework Version 4.4.0.2.0

Installing Oracle Utilities Application Framework Version 4.4.0.2.0

To install the schema for Oracle Utilities Application Framework Version 4.4.0.2.0, you should have the following:

- Java Development Kit 8.0
- Oracle Database
- Schema such as CISADM should exist in the database

To install Oracle Utilities Application Framework (OUAF) Version 4.4.0.2.0:

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/FW44020/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 V2.9.0.1.0 Oracle Database** package.

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

   Windows:

   ```
   SET CLASS_PATH=TEMPDIR\FW\FW44020\jarfiles\*
   ```

   AIX, Linux:

   ```
   export CLASS_PATH=${JAR_PATH}/commons-cli-
   1.3.1.jar:${JAR_PATH}/commons-codec-1.9.jar:${JAR_PATH}/commons-
   collections-3.2.2.jar:${JAR_PATH}/jackson-annotations-
   2.8.5.jar:${JAR_PATH}/jackson-core-2.8.5.jar:${JAR_PATH}/jackson-
   databind-2.8.5.jar:${JAR_PATH}/log4j-api-
   2.11.0.jar:${JAR_PATH}/log4j-core-2.11.0.jar:${JAR_PATH}/ojdbc8-
   12.2.0.1.jar:${JAR_PATH}/oradbi.jar:${JAR_PATH}/spl-shared-
   4.4.0.2.0.jar
   ```

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

   Windows:

   ```
   cd TEMPDIR\FW\FW44020\Install-Upgrade
   ```

   AIX, Linux:

   ```
   cd TEMPDIR/FW/FW44020/Install-Upgrade
   ```

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

Windows:

```
java -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 -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.

> **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 4.4.0.2.0, 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	966
SEQUENCE	4
TABLE	638
TRIGGER	1
VIEW	9

> **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 4.4.0.2.0 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 4.4.0.2.0

You can install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.2.0 from a Windows machine or Linux Standalone server. To install the rollup pack for Oracle Utilities Application Framework Version 4.4.0.2.0:

1. Download the Oracle Utilities Application Framework V4.4.0.2.0 Single Fix Prerequisite Rollup for RMB V2.9.0.1.0 package from the Oracle Revenue Management and Billing V2.9.0.1.0 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-V29010-FW-PREREQ-MultiPlatform.jar` file.

3. Decompress the JAR file using the following command:
   ```
   cd TEMPDIR
   jar -xvf ORMB-V29010-FW-PREREQ-MultiPlatform.jar
   ```
   A sub-folder named `FW-V4.4.0.2.0-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-V4.4.0.2.0-Rollup\Database
   ```
   AIX, Linux:
   ```
   cd TEMPDIR/FW-V4.4.0.2.0-Rollup/Database
   ```

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

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

Note:

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

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

Parameter	Value

`Enter the target database type (O/M/D) [O]`	`O (if you have Oracle database)`
	 `OR`
	 `M (if you have MySQL database)`

`Enter the username that owns the schema`	`<DB_USER>` Example: `CISADM`
`Enter the password for the <DB_USER> user`	`<DB_USER_PASSWORD>`
`Enter the name of the Oracle Database Connection String`	`<DB_SERVER:DB_PORT:DB_SID>`

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 4.4.0.2.0. 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 4.4.0.2.0, 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	966
SEQUENCE	4
TABLE	638
TRIGGER	1
VIEW	9

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 2.9.0.1.0:

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 V2.9.0.1.0 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=${JAR_PATH}/commons-cli-
   1.3.1.jar:${JAR_PATH}/commons-codec-1.9.jar:${JAR_PATH}/commons-
   collections-3.2.2.jar:${JAR_PATH}/jackson-annotations-
   2.8.5.jar:${JAR_PATH}/jackson-core-2.8.5.jar:${JAR_PATH}/jackson-
   databind-2.8.5.jar:${JAR_PATH}/log4j-api-
   2.11.0.jar:${JAR_PATH}/log4j-core-2.11.0.jar:${JAR_PATH}/ojdbc8-
   12.2.0.1.jar:${JAR_PATH}/oradbi.jar:${JAR_PATH}/spl-shared-
   4.4.0.2.0.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 -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 -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.

On installing Oracle Revenue Management and Billing Version 2.9.0.1.0, 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	55
INDEX	3945
PACKAGE	4
PACKAGE BODY	4
PROCEDURE	2
SEQUENCE	41
TABLE	2457
TRIGGER	1
TYPE	12
TYPE BODY	1
VIEW	178

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 2.9.0.1.0 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 2.9.0.1.0 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 *ORMB V29010 Patch Guide (Doc ID: 2749067.1)* 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 V2.9.0.1.0 Rollup Packs.

Apply the ORMB Patches

Once you install Oracle Revenue Management and Billing Version 2.9.0.1.0, you need to apply all patches listed in *ORMB V29010 Patch Guide (Doc ID: 2749067.1)*. 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 `V2.9.0.1.0-<PATCH_NUMBER>_MultiPlatform` folder.
4. Change to the `V2.9.0.1.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

   AIX, Linux:

   `cd <DESTINATION_FOLDER_1>/V2.9.0.1.0-<PATCH_NUMBER>_MultiPlatform`

   Windows:

   `cd <DESTINATION_FOLDER_1>\V2.9.0.1.0-<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.V2.9.0.1.0-<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:

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 to 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 to 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 **V2.9.0.1.0 - DEMO DATA** patch (Patch Number: 32771602) from <u>My Oracle Support</u>. 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. There are two DMP files in the `Demo_dump` folder – `GTB29010_demodump.dmp` and `HC29010_demodump.dmp`.

2.3.2.2   Creating the Database

Note: You must have Oracle Database Server 18c (12.2.0.2) SP1+ and 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) (Doc ID: 1488770.1)* article on <u>My Oracle Support</u> 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 <u>Creating the Database</u> 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) (Doc ID: 1488770.1)* article on <u>My Oracle Support</u> 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 <u>Creating the Database</u> 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 GTB29010_demodump.dmp or HC29010_demodump.dmp file from the TEMPDIR\Demo_dump folder to the data_pump_dir folder.

Note: If you belong from the financial services industry, use the GTB29010_demodump.dmp file. And, if you belong from the insurance industry, use the HC29010_demodump.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 *ORMB V29010 Patch Guide (Doc ID: 2749067.1)* 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 V2.9.0.1.0 Rollup Packs.

Apply the ORMB Patches

Once you install Oracle Revenue Management and Billing Version 2.9.0.1.0, you need to apply all patches listed in *ORMB V29010 Patch Guide (Doc ID: 2749067.1)*. 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 `V2.9.0.1.0-<PATCH_NUMBER>_MultiPlatform` folder.
4. Change to the `V2.9.0.1.0-<PATCH_NUMBER>_MultiPlatform` folder using the following command:

   AIX, Linux:
   ```
   cd <DESTINATION_FOLDER_1>/V2.9.0.1.0-<PATCH_NUMBER>_MultiPlatform
   ```
   Windows:
   ```
   cd <DESTINATION_FOLDER_1>\V2.9.0.1.0-<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.V2.9.0.1.0-<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 to 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 to 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 Configuring Security

The security configuration utility and scripts are already available in the `TEMPDIR/FW/jarfiles` folder. It can be executed from a Linux or Windows machine.

> **Points to Note:**
>
> >> The `TEMPDIR` folder is the location where you have extracted the contents of the **Oracle Revenue Management and Billing V2.9.0.1.0 Oracle Database** package.
>
> >> Database Vault must be disabled before executing the security configuration utility.
>
> >> Interactive mode for this utility is currently not working.
>
> >> -f parameter is not working and will be deprecated soon.

This utility configures security for the application owner schema objects. `Oragensec`, by default, grants permissions to `CIS_USER` and `CIS_READ` roles. To use site-specific roles, execute `Oragensec` after providing the command line options and specifying the specific roles.

OraGenSec Java Usage

```
java OraGenSec [-a <arg>] [-d <arg>] [-f <arg>] [-h] [-l <arg>] [-o
<arg>] [-p <arg>] [-q] [-r <arg>] [-u <arg>]
```

The following table describes the above command line options:

Command Line Option	Description
-a <arg>	Generates security for all objects in the database.
-d <arg>	Enables to connect to the database.
-f <arg>	Generates security for specific objects listed in the input file.
-h	Provides information about the utility.
-l <arg>	Maintains logs in the specified file.
-o <arg>	Generates security for comma-separated list of objects.
-p <arg>	Executes the command in the silent mode.
-r <arg>	Enables you to specify the roles for which you want to grant permissions. For example, CIS_READ, CIS_USER, and so on.
-u <arg>	Enables you to specify a comma-separated list of Oracle users for which you want to create synonyms.

To execute the `OraGenSec` utility:

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 `PATH` environment variable using the following command:

    Windows:

    ```
    SET PATH=%JAVA_HOME%\bin:%PATH%
    ```

    AIX, Linux:

    ```
    export PATH=$JAVA_HOME/bin:$PATH
    ```

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

    Windows:

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

    AIX, Linux:

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

Note: The `TEMPDIR` folder is the location where you have extracted the contents of the **Oracle Revenue Management and Billing V2.9.0.1.0 Oracle Database** package.

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

    Windows:

    ```
    java -Xmx1500M com.oracle.ouaf.oem.install.OraGenSec -d
    <DB_USER>, <DB_PASSWORD>,
    jdbc:oracle:thin:@<DB_SERVER_Name>:<DB_PORT>/<DB_SID> -u
    <READWRITE_USER>, <READONLY_USER> -r <READWRITE_USER_ROLE>,
    <READONLY_USER_ROLE> -a A -p <READWRITE_USER_PASSWORD>,
    <READONLY_USER_PASSWORD> -l <LOG_FILE_NAME>
    ```

    AIX, Linux:

    ```
    java -Xmx1500M com.oracle.ouaf.oem.install.OraGenSec -d
    <DB_USER>, <DB_PASSWORD>,
    jdbc:oracle:thin:@<DB_SERVER_Name>:<DB_PORT>/<DB_SID> -u
    <READWRITE_USER>, <READONLY_USER> -r <READWRITE_USER_ROLE>,
    <READONLY_USER_ROLE> -a A -p <READWRITE_USER_PASSWORD>,
    <READONLY_USER_PASSWORD> -l <LOG_FILE_NAME>
    ```

2.3.4   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.

2.3.5   Installing Service Packs and Patches

Periodically, Oracle Utilities releases a service pack of single fixes for its products. A service pack is an update to an existing release that includes solutions to known problems and other product enhancements. A service pack is not a replacement for an installation, but a pack consisting of a collection of changes and additions for it. The service pack may include changes to be applied to the application server, the database, or both. The service pack includes all files necessary for installing the collection of changes, including installation instructions. Please note that from FW 410 SP1 onwards a Service pack consists of a complete database install.

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information on installing patches, refer to the *How To Install Patches On Oracle Utilities Application Framework Based Products (Doc ID: 974985.1)* article on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support.

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 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 to 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 to 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. Other examples are M1, C1, D1, D2, etc.
   - 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. Other examples are M1, C1, D1, D2, etc.
   - 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. Other examples are M1, C1, D1, D2, etc.

    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 released with the product 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.

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
- 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 to 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 to 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   Storage Recommendations

This section specifies recommended options for storing the database objects.

5.1.6.1   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.

- The Tablespace where you are creating the SecureFiles should be enabled with Automatic Segment Space Management (ASSM). In Oracle Database 11g onwards, 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. This feature is not available for the standard edition of Oracle Database.
>
> 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.

5.1.7   Database Configuration Recommendations

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

5.1.7.1   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 to 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.

5.1.8   Database Syntax

5.1.8.1   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);
```

5.1.9   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 **Note:** The value for this parameter should not be changed because it can drastically degrade the batch performance.	Yes
OPTIMIZER_INDEX_COST_ADJ	100 **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
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

Parameter	Recommended Value	Modifiable in Pluggable Database (PDB)
STATISTICS_LEVEL	TYPICAL or ALL **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 **Note:** By default, the value is set to TRUE. We recommend you to set the value to TRUE from 12.2 onwards.	Yes
OPTIMIZER_ADAPTIVE_STATISTICS	FALSE **Note:** By default, the value is set to FALSE. We recommend you to set the value to FALSE from 12.2 onwards.	Yes
PARALLEL_DEGREE_POLICY	Manual **Note:** By default, the value is set to **Manual**. We recommend you to use the default value. Otherwise, an error might occur while installing ORMB.	Yes
CURSOR_SHARING	EXACT **Note:** By default, the value is set to **EXACT**. We recommend you to use the default value. Otherwise, the system performance would be impacted.	Yes

For example, we recommend you to 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 to 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
```

In addition, we recommend you to set the following parameters in Oracle Database Server 19c:

Parameter	Recommended Value	Modifiable in Pluggable Database (PDB)
CPU_MIN_COUNT	Value should be specific to the server. Client DBA should decide the value. **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 **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 **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

5.1.10 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;
```

5.1.11   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

Topic	Reference URL
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 (Doc ID: 1594725.1)* - A patch is available for the 14772096 bug for some platforms.
- *Query rewrite not working as expected with SELECT DISTINCT (Doc 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 to 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 to 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_PRITM		RANGE (DATE INTERVAL)	CURR_SYS_PRCS_DT	-
	CI_ROLLBACK_TXN_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_LN		RANGE (DATE INTERVAL)	ILM_DT	-
	CI_TXN_CALC_LN_CHAR		RANGE (DATE INTERVAL)	ILM_DT	-
Billing	CI_BILL		RANGE (DATE INTERVAL)	ILM_DT	BILL_ID
		CI_BILL_CHAR	REFERENCE	BILL_ID	-
		CI_BILL_EXCP	REFERENCE	BILL_ID	-

Module Name	Table Name	Child Table Name	Partition Type	Partition Key	Sub-Partition Key
		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	-
		CI_ADJ_CALC_LN	REFERENCE	ADJ_ID	-
		CI_ADJ_CHAR	REFERENCE	ADJ_ID	-
		CI_ADJ_CL_CHAR	REFERENCE	ADJ_ID	-

Module Name	Table Name	Child Table Name	Partition Type	Partition Key	Sub-Partition Key
	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	-
		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	-

Module Name	Table Name	Child Table Name	Partition Type	Partition Key	Sub-Partition Key
		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	-

Module Name	Table Name	Child Table Name	Partition Type	Partition Key	Sub-Partition Key
		C1_AUDIT_EVENT_LOG	REFERENCE	AUDIT_EVENT_ID	-
		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:
    o Export data from the tables using the Oracle Export Data Pump functionality (i.e. expdp) with the **Data Only** option.
    o Drop the tables and recreate them with partition.
    o Import the data in the tables using the Oracle Import Data Pump functionality (i.e. impdp).

      o   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 (Doc 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 (Doc 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 to 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 to 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 to 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 to 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 to 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 amount of updates. As a result, there might be performance issues while executing queries on these tables. In such case, we recommend you to 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 to 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 to 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 V2.9.0.1.0 Database

This section lists the objects that are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 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 V2.9.0.1.0 database.

A.1.1   New Tables

The following tables are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Table	Description
C1_BENEFITS	Benefit
C1_BENEFITS_CHAR	Benefit Characteristics
C1_BENEFITS_K	Benefit Key
C1_BENEFITS_LOG	Benefit Logs
C1_BENEFITS_LOG_PARM	Benefit Log Parameters
C1_CHARGE_AGGR	Charge Aggregation Table
C1_DEAL_PRODUCT	Deal product table
C1_DEAL_TEMPLATE	Deal Template
C1_DEAL_TEMPLATE_DTL	Deal Template Details
C1_DEAL_TEMPLATE_L	Deal Template Language
C1_EXTRACT_TEMPLATE	Extract Template
C1_EXTRACT_TEMPLATE_FORMAT	Extract Template Format
C1_EXTRACT_TEMPLATE_L	Extract Template Language
C1_EXTRACT_TEMPLATE_LIST_DTL	Extract Template List Details
C1_EXTRACT_TEMPLATE_MAPPING	Extract Template Mapping
C1_EXTRACT_TEMPLATE_SERVICE	Extract Template Service
C1_FIELD_CAT_MAPPING	Field Category Mapping

Table	Description
C1_FIELD_MAP	Field Map
C1_FIELD_MAP_CONFIG	Field Mapping Config
C1_FIELD_MAP_DTL	Field Map Detail
C1_FIELD_MAP_L	Field Map Language
C1_GEO_RATING_AREA	Geographic Rating Area
C1_GEO_RATING_AREA_K	Geographic Rating Area Key
C1_GEO_RATING_AREA_REL_OBJ	Geographic Rating Area Related Object
C1_IWS_HIST	Web Service History
C1_MODEL_CHG_LINE	Model Charge Line table
C1_MODEL_RECM_PRICEASGN	Deal Model Recommended Price
C1_PRICEASGN_NEG_FLR_CL	Price Assignment Negotiability Ceil and Floor
C1_PRICEITEM_NEG_FLR_CL	Price Item Negotiability Ceil Floor
C1_PRICEITEM_TC_DTLS	Price Item TC Mapping Details
C1_PRICEITEM_TC_MAP	Price Item Terms And Condition Mapping
C1_PRICEITEM_TC_MAP_K	price item tc map key
C1_PRICELIST_SIM	Pricelist Simulation
C1_PRICELIST_SIM_DETAIL	Pricelist Simulation Detail
C1_PRICELIST_SIM_DETAIL_TEMP	Pricelist Simulation Detail Temporary
C1_PRICELIST_SIM_SUMMARY	Pricelist Simulation Summary
C1_QUESTION	Questions
C1_QUESTION_ANSWER	Question Answers
C1_QUESTION_APPLICABLE	Question Applicability
C1_QUESTION_L	Questions Language
C1_QUESTION_PREDF_SRC	Source Data Value
C1_QUESTION_PREDF_SRC_L	Source Data Value Language
C1_QUESTION_TMPLT	Question Template
C1_QUESTION_TMPLT_L	Question Template Language
C1_REL_STRUCTURE	Relation Structure
C1_REL_STRUCTURE_CRIT	Relation Criteria
C1_REL_STRUCTURE_L	Structure language
C1_REL_STRUCTURE_MAP	Relation Structure Mapping

Table	Description
C1_RM_ACCT_STATS	Rm WorkBench Account
C1_RM_PERSON_STATS	Rm WorkBench Customer
C1_RM_PRICING_STATS	RM Workbench Pricing
C1_RM_PRICING_USAGE_STATS	Rm WorkBench Pricing Usage
C1_RULE_TYPE_PARM	Rule Type Parameter
CI_POLICY_PLAN_PRO_RULE	Policy Plan Proration Rule
CI_STM_CNST_CHAR	Statement Construct Characteristic

A.1.2   Added Columns

The following columns are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Table	Column	Column Description	Required (Yes or No)
C1_ACCUM_MIN_PREM_AMT	MIN_PREM_ADJ_AMT	Minimum Premium Adjustment Amount	No
C1_CUST_REG	STM_CNST_DATA	Statement Construct Data Area	No
C1_DEAL	REVIEW_TODO_DATE	Deal TODO Review Date	No
	DEAL_TEMPLATE_CD	Deal Template Code	No
	SKIP_QUESN_SW	Skip question Switch	No
C1_DEAL_APPROVAL	PROD_ACT_SEQ_NUM	Product Action Seq Num	No
C1_DEAL_PRICEITEM_APPR	PRODUCT_CD	Product	No
C1_DEAL_PRICELIST	DEAL_MAP_ID	Deal Map Id	Yes
C1_DEAL_SIMULATION_DTL	LOCAL_AVERAGE_PRICE	Local Average Price	No
	LOCAL_COST	Local Cost	No
	LOCAL_CURRENCY_CD	Local Currency Code	No
	LOCAL_REVENUE	Local Revenue	No
C1_DEAL_SIMULATION_SMRY	LOCAL_COST	Local Cost	No
	LOCAL_CURRENCY_CD	Local Currency Code	No
	LOCAL_REVENUE	Local Revenue	No
C1_DEAL_TYPE	PROD_LVL_APPR_REQ_SW	Product Level Approval Required	Yes

Table	Column	Column Description	Required (Yes or No)
	QUESTION_TEMP_CD	Question Template Code	No
	TD_HIGH_PRIORITY_DAYS	To Do High Priority Days	No
	TODO_REMINDER_DAYS	To Do Reminder Days	No
C1_DEAL_TYPE_CST_AHCY	PRODUCT_CD	Product	No
C1_MODEL	RE_SIM_REQD_SW	Resimulation Require	Yes
C1_MODEL_FIN_SUMMARY	LOCAL_CURRENCY_CD	Local Currency Code	No
	LOCAL_ACTIVE_COST	Local Overall Cost	No
	LOCAL_ACTIVE_PROFITABILITY	Local Overall Profitability	No
	LOCAL_ACTIVE_REVENUE	Local Overall Revenue	No
	LOCAL_PROPOSED_COST	Local Proposed Cost	No
	LOCAL_PROPOSED_PROFITABILITY	Local Proposed Profitability	No
	LOCAL_PROPOSED_REVENUE	Local Proposed Revenue	No
	LOCAL_RECM_PROFITABILITY_AMT	Local Recommended Profitability Amount	No
	LOCAL_RECM_REVENUE	Local Recommended Revenue	No
	PRODUCT_CD	Product	No
	RECM_PROFITABILITY_AMT	Profit	No
	RECM_PROFITABILITY	Profitability (%)	No
	OVERALL_RECM_REVENUE	overall Recommended Revenue	No
C1_MODEL_SQI	AGG_SVC_QTY	AGG_SVC_QTY	No
C1_PRC_RULE	PRC_TYPE_FLG	Pricing Type Flag	No
	VERSION_NUM	Version Number	Yes
C1_PRC_RULE_CHAR	VERSION_NUM	Version Number	Yes
C1_PRC_RULE_ENTITY	VERSION_NUM	Version Number	Yes
C1_PRC_RULE_K	VERSION_NUM	Version Number	Yes
C1_PRC_RULE_LOG	VERSION_NUM	Version Number	Yes

Table	Column	Column Description	Required (Yes or No)
C1_PRC_RULE_LOG_PARM	VERSION_NUM	Version Number	Yes
C1_PRC_RULE_SEC	VERSION_NUM	Version Number	Yes
C1_PRODUCT_VER	MARKET_PROD_CD	Market Product Code	No
CI_ACCT_PER_VW	ACCT_ID	Account ID	Yes
	DIV	Division	No
	PER_ID	Person ID	Yes
CI_ACCUM_GRP	VERSION_NUM	Version Number	Yes
CI_DISAGG_BCHG_DETAIL	VERSION_NUM	Version Number	Yes
CI_DISAGG_TXN_PRITM_DETAIL	VERSION_NUM	Version Number	Yes
CI_DIV_PRICEITEM	NEGOTIABILITY_SW	Negotiability Switch	Yes
	ONLY_WITHIN_RANGE_SW	Only Within Range Switch	Yes
CI_MEMBERSHIP	MEMBERSHIP_TYPE_FLG	Membership Type	Yes
CI_MEMBERSHIP_PER	EXT_MEDICARE_BENF_ID	External Medicare Beneficiary Id	Yes
CI_PER_VW	DIV	Division	No
	NAME1	Name	Yes
	PER_ID	Person ID	Yes
	PBFLG	Person Type	Yes
	LSFLG	VIP Customer	Yes
CI_POLICY_PLAN	BENEFIT_TYPE_FLG	Benefit Type	Yes
CI_PRCE_CALC	COV_END_DT	Coverage End Date	No
	COV_START_DT	Coverage Start Date	No
	DIS_AMT	Distributed Amount	Yes
	PRIMARY_PRT_CD	Primary Pricing Rule Type	No
	VERSION_NUM	Version Number	Yes

Table	Column	Column Description	Required (Yes or No)
CI_PRCE_CALC_LN	BASE_AMT	Base Amount	No
	BENEFIT_ID	Benefit Id	No
	SM_DIST_AMT	Distributed Amount	Yes
	NO_OF_MONTH	No of Billing Period	Yes
	PRO_FACTOR	Proration Factor	No
	TOT_CALC_AMT	Total Amount for Contract Period	Yes
CI_PRICE_PARM	PARM_AVL_RT_SW	Rule Eligibility Criteria	No
CI_PRICEASGN_VW	ADV_PRC_SW	Advance Pricing	No
	SCHEDULE_CD	Aggregation Schedule	No
	DO_NOT_AGG_SW	Do not Aggregate Switch	Yes
	IGNORE_SW	Ignore Transaction	Yes
	OWNER_ID	Owner ID	No
	PA_USAGE_FLG	PA Usage Flag	Yes
	PRICE_ASGN_ID	Price Assignment ID	Yes
	PA_OWNER_TYPE_FLG	Price Assignment Owner Type Flag	No
	PA_TYPE_FLAG	Price Assignment Type	Yes
	PRICEITEM_CD	Price Item	No
	PRICE_CURRENCY_CD	Pricing Currency	No
	ELIGIBILITY_SW	Pricing Eligibility	No
	PRICING_RULE_TYPE_CD	Pricing Rule Type	No
	PRICE_STATUS_FLAG	Pricing Status	No
	PRINT_IF_ZERO_SW	Print Zero	No
	RS_CD	Rate Schedule	No
	TXN_RATING_CRITERIA	Transaction Rating Criteria	No
	TOU_CD	Variance Parameter	Yes
CI_REPRC_REQ_DTL	BENEFIT_ID	Benefit Id	No

Table	Column	Column Description	Required (Yes or No)
	COV_END_DT	Coverage End Date	No
	COV_START_DT	Coverage Start Date	No
	PRIMARY_PRT_CD	Primary Pricing Rule Type	No
	RECURRING_FLG	Recurring	No
	RECURRING_VAL	Recurring Value	No
	VERSION_NUM	Version Number	Yes
CI_RULE_TYPE	RULE_TYPE_CAT_FLG	Rule Type Category	No
CI_STM_CNST	STMT_CNST_IDFT	Statement Construct Identifier	No
CI_SUB_RULE	PRICE_PARM_CD	Parameter	Yes
	RHS_PRICE_PARM_CD	Parameter	Yes
	RHS_PRICE_PARM_TYPE_FLG	Parameter Value Type	Yes
	RHS_PARM_FLD_NAME	RHS Parameter Field	No
CI_TC	TC_MAPPING_LVL_FLG	Terms and Conditions Applicability	No
	TC_PURPOSE_FLG	Terms and Conditions Usage	No
CI_TXN_DTL_PRITM	VERSION_NUM	Version Number	Yes
CI_TXN_DTL_PRITM_STG	VERSION_NUM	Version Number	Yes

A.1.3   Dropped Tables

The following tables are removed from the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Table	Description
C1_BSEG_DEAL_K	Billing Key Table
C1_BSEG_DEAL_EXT	Billing Detail for Deal.
C1_DEAL_PRICELIST_L	Deal language Table
C1_DEAL_PRICELIST_K	Deal key table

A.1.4   Dropped Columns

The following columns are removed from the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Table	Column	Column Description
C1_BSEG_DEAL	BILL_CYC_CD	Bill Cycle
	BILL_SCNR_ID	Bill Scenario ID
	BSEG_ID	Bill Segment ID
	BSEG_STAT_FLG	Bill Segment Status
	CAN_BSEG_ID	Cancel Bill Segment ID
	CAN_RSN_CD	Cancel Reason
	CLOSING_BSEG_SW	Closing Bill Segment
	DEAL_ID	Deal ID
	EST_SW	Estimate
	ITEM_OVERRIDE_SW	Item Override
	MASTER_BSEG_ID	Master Bill Segment Id
	MODEL_CD	Model
	MODEL_ID	Model Id
	PREM_ID	Premise ID
	QUOTE_DTL_ID	Quote Detail ID
	REBILL_SEG_ID	Rebill Segment ID
	SA_ID	Contract ID
	SQ_OVERRIDE_SW	SQ Override
	WIN_START_DT	Window Start Date
C1_BSEG_DEAL_CALC	BILLABLE_CHG_ID	Billable Charge ID
	BSEG_ID	Bill Segment ID
	CALC_AMT	Calculated Amount
	DESCR_ON_BILL	Description on Bill
	HEADER_SEQ	Header Sequence
	RS_CD	Rate Schedule
C1_BSEG_DEAL_CL_CHAR	BSEG_ID	Bill Segment ID
	HEADER_SEQ	Header Sequence
C1_BSEG_DEAL_EXCP	BSEG_EXCP_FLG	Bill Segment Exception Type

Table	Column	Column Description
	BSEG_ID	Bill Segment ID
C1_BSEG_DEAL_EXT	BSEG_ID	Bill Segment ID
	BSEG_TYPE_FLG	Bill Segment Type
	CONSTRUCT_ID	Construct ID
	PRICEITEM_CD	Price Item
	PRICEITEM_PARM_GRP_ID	Price Item Parameters
	PRICE_ASGN_ID	Price Assignment ID
	PRIORITY_NUM	Priority
	SETTLEMENT_ACCT_ID	Settlement Account ID
	SETTLEMENT_ID_NBR	Settlement ID
	SET_CONSTRUCT_ID	Settlement Construct ID
	SET_VERSION_NUM	Settlement Version Number
	TEMPLATE_PURPOSE_FLG	Template Purpose Flag
	TOU_CD	Variance Parameter
	USAGE_ACCT_ID	Usage Account ID
	VERSION_NUM	Version Number
C1_BSEG_DEAL_ITEM	BSEG_ID	Bill Segment ID
	ITEM_CNT	Item Count
	ITEM_ID	Item ID
	ITEM_TYPE_CD	Item Type
	SVC_QTY	Daily Service Quantity
	UOM_CD	Unit of Measure
C1_BSEG_DEAL_K	BSEG_ID	Bill Segment ID
C1_BSEG_DEAL_MSG	BILL_MSG_CD	Bill Message
	BSEG_ID	Bill Segment ID
C1_BSEG_DEAL_READ	BSEG_ID	Bill Segment ID
	END_READ_DTTM	End Read Date/Time
	END_REG_READING	End Register Reading
	END_REG_READ_ID	End Reg Read ID
	FINAL_REG_QTY	Quantity
	FINAL_SQI_CD	Final Service Quantity ID

Table	Column	Column Description
	FINAL_TOU_CD	Final Sub-UOM
	FINAL_UOM_CD	Final Unit of Measure
	HOW_TO_USE_FLG	How To Use
	MSR_PEAK_QTY_SW	Measures Peak Qty
	MSR_QTY	Measured Quantity
	REG_CONST	Register Constant
	SP_ID	Service Point ID
	SQI_CD	SQI
	START_READ_DTTM	Start Read Date/Time
	START_REG_READING	Start Register Reading
	START_REG_READ_ID	Start Reg Read ID
	TOU_CD	Variance Parameter
	UOM_CD	Unit of Measure
	USAGE_FLG	How To Use (SP)
	USE_PCT	Use Percent
C1_BSEG_DEAL_SQ	BILL_SQ	C1_BSEG_DEAL_SQ
	BSEG_ID	C1_BSEG_DEAL_SQ
	INIT_SQ	C1_BSEG_DEAL_SQ
	SQI_CD	C1_BSEG_DEAL_SQ
	TOU_CD	C1_BSEG_DEAL_SQ
	UOM_CD	C1_BSEG_DEAL_SQ
C1_DEAL_PRICELIST	CIS_DIVISION	Division
	CUST_SEG_FLG	Customer Segment
	CUST_TIER_FLG	Customer Tier
	PRICELIST_MAP_ID	PRICELIST_MAP_ID
C1_DEAL_PRICELIST_K	PRICELIST_MAP_ID	C1_DEAL_PRICELIST_K
C1_DEAL_PRICELIST_L	PRICELIST_MAP_ID	C1_DEAL_PRICELIST_L

A.1.5   Added Views

The following views are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

View	Description
CI_ACCT_PER_VW	Account Person View
CI_PER_VW	Person View
CI_PRICEASGN_VW	Priceitem Assignment View

A.1.6   Column Format Change

The format of the following columns is changed in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Table	Column	From	To
C1_AUDIT_EVENT_TYPE_ELEMENTS	AUDIT_ELEMENT_NAME	VARCHAR2(100)	VARCHAR2(254)
C1_PRC_RULE_TYPE_AUDIT_EVENT	ELEMENT_NAME	VARCHAR2(100)	VARCHAR2(254)
C1_UPLOAD_REQ_DTLS	ENTITY_ID	CHAR(14)	CHAR(20)
CI_TC_L	TC_TYPE_TXT	VARCHAR2(2000)	VARCHAR2(4000)

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 V2.9.0.1.0 database.

A.2.1   Algorithm Types

The following algorithm types are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Algorithm Type	Description
C1_FOPPAY	This Algorithm is created for FOP payment details report
C1_GET_STDPL	Fetch list of standard pricelist for deal price floor ceil check.
C1_MEDIPREM	Medicare Premium Calculation
C1_STACKDEAL	Stacking Commitments for Deal
C1-AGEPRFC	Calculate proration Factor for Age based pricing rule
C1-APFCDTEX	AP Request Data Extract for Financial Cloud

Algorithm Type	Description
C1-APFCSEL	Select AP Request Data Records for Financial Cloud
C1-APPTXNSSL	Approval Workflow for SSL
C1-BENFTINFO	Benefit Information
C1-BENVAL	Benefit Validation
C1-BILLPDRV	Bill Period Derivation
C1-BILLRPCR	Bill Period time line creation
C1-BLEXTTMPL	Bill Extract Template Algorithm Type
C1-CAPFEEPOS	Capitation Fee - Pricing Information Creation
C1-CAPFEEVAL	Capitation Fee - Validation
C1-COPYINAC	Create a New Pricing Rule and Inactivate the Original Pricing Rule
C1-CUDLREF	Customer/Deal References Using Questionnaire
C1-CUDLRF	Deal Person Reference Algorithm
C1-DEALPSTPR	Deal Post Processing
C1-DELTDPRIO	Deal To Do Priority Algorithm
C1-DERIVEBLC	Derive Bill Cycle for the Account
C1-DERSUBTR	Create Subscription Tier
C1-DISAUP	Disaggregation Post processing for Audit Event
C1-DLCMPRRPT	Deal Compare
C1-DLPRTEXLR	Deal Profitability Export Excel
C1-DLTMLTVAL	Deal Template fields Validation
C1-EXTSVCPP	Extract Service Post-processing algorithm type
C1-FICBRTVAL	Rate value for Capitation
C1-FIELDMPVA	Bill Cycle Rule BO Validation
C1-GEORAVALD	Geo Rating Area BO Validation
C1-GLFCDTEX	GL Data Extract for Financial Cloud
C1-GLFCSEL	Select GL Data Records for Financial Cloud
C1-IWSHIST	Web service history Request
C1-MEMRLSUBT	Member Role and Subscription Tier Derivation
C1-MPCONCREA	Contract creation for Member Person's Account
C1-MPPACPREP	Minimum Premium Program Accumulation Pre-Processing
C1-PITCINFO	Price Item TC Mapping Information

Algorithm Type	Description
C1-PLASGNAU	Price List Assignment Audit Algorithm
C1-PLAUALG	Price List Audit Algorithm
C1-PPRAMCOV	Get benefit coverage for the given date
C1-PRCASGNAU	Price Assignment Audit Algorithm
C1-PRVERSION	Pricing Rule Versioning
C1-QUEINFO	Question Template Information
C1-RCUPDSTA	Update Reconciliation Status
C1-RELSRUCT	Relation Structure Validations
C1-RTAREAADD	Geographic Rating Area Derivation on Adding Membership
C1-RTAREAMEM	Geographic Rating Area Derivation on Adding Membership
C1-SKPMNTHPC	Skip Month Premium Calculation
C1-SUPPBILLS	Suppress bills for extraction
C1-TIERPRFC	Calculate proration Factor for Tier based pricing rule
C1-TPACONCRE	Contract creation for TPA Person's Account
C1-UPDAUDEVE	Update Audit Event

A.2.2   Algorithms

The following algorithms are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Algorithm	Description
C1_FOPPAY	This Algorithm is created for FOP payment details report
C1_GEORA_ALG	Determine BO for Geo Rating Area
C1_GET_STDPL	Fetch list of standard pricelist for deal price floor ceil check.
C1_MEDIPREM	Medicare Premium Calculation
C1_STACKDEAL	Stacking Commitments for Deal
C1-AGEPRFC	Calculate proration Factor for Age based pricing rule
C1-APFCDTEX	AP Request Data Extract for Financial Cloud
C1-APFCSEL	Select AP Request Data Records for Financial Cloud
C1-APPTXNSSL	Approval Workflow for SSL
C1-BENFTINFO	Benefit Information
C1-BENVAL	Benefit Validation

Algorithm	Description
C1-BILLPDRV	Bill Period Derivation
C1-BILLRPCR	Bill Period time line creation
C1-BLEXTTMPL	Bill Extract Template
C1-CAPFEEPOS	Capitation Fee - Pricing Information Creation
C1-CAPFEEVAL	Capitation Fee - Validation
C1-COPYINAC	Create a New Pricing Rule and Inactivate the Original Pricing Rule
C1-CUDLREF	Customer/Deal References Using Questionnaire
C1-CUDLRF	Deal Person Reference Algorithm
C1-DEALPSTPR	Deal Post Processing
C1-DELTDPRIO	Deal To Do Priority Calculation Algorithm
C1-DERIVEBLC	Bill Cycle for the Account
C1-DERSUBTR	Create Subscription Tier
C1-DISAUP	Disaggregation Post processing Algorithm for Audit Event
C1-DLCMPRRPT	Deal Compare Extract Report
C1-DLPRTEXLR	Deal Profitability Export To Excel
C1-DLTMLTVAL	Deal Template Fields Validation
C1-EXTSVCPP	Sample Extract Service Post-processing algorithm
C1-FICBRTVAL	Rate Value for Capitation
C1-FIELDMPVA	Bill Cycle Rule BO Validation
C1-GEORAVALD	Geo Rating Area BO Validation
C1-GLFCDTEX	GL Data Extract for Financial Cloud
C1-GLFCSEL	Select GL Data Records for Financial Cloud
C1-IWSHIST	Web service history Request
C1-MEMRLSUBT	Member Role and Subscription Tier Derivation
C1-MPCONCREA	Contract creation for Member Person's Account
C1-MPPACPREP	Minimum Premium Program Accumulation Pre-Processing
C1-PDOV-BLAD	Match By Bill ID, Pay Trgt Bill and create Adj if required
C1-PITCINFO	Price Item TC Mapping Information
C1-PLASGNAU	Price List Assignment Audit Algorithm
C1-PLAUALG	Price List Audit Algorithm
C1-PPRAMCOV	Get benefit coverage for the given date

Algorithm	Description
C1-PRCASGNAU	Price Assignment Audit Algorithm
C1-PRCLT-SIM	Pricelist Simulation Determine BO
C1-PRVERSION	Pricing Rule Versioning
C1-QUEINFO	Question Template Information
C1-QUESANSBO	Determine Question Answer BO
C1-QUESBODET	Determine Question BO
C1-RCUPDSTA	Update Reconciliation Status
C1-RELSTRUCT	Relation Structure Algorithm
C1-RTAREAADD	Geographic Rating Area Derivation on Address Change
C1-RTAREAMEM	Geographic Rating Area Derivation on Adding Membership
C1-SKPMNTHPC	Skip Month Premium Calculation
C1-SUPPBILLS	Suppress bills for extraction
C1-TIERPRFC	Calculate proration Factor for Tier based pricing rule
C1-TPACONCRE	Contract creation for TPA Person's Account
C1-UPDAUDEVE	Update Audit Event

A.2.3   Business Services

The following business services are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Business Service	Description
C1- ViewAutoPayService	Account Auto Pay View service
C1_BSEG_LIST	Bill Segment - Get Bill Segment Info
C1_DealAddToComp	Deal add to compare
C1_DLPTHCHARGES	Pass Through charges BS
C1_DUP_TERMCO	Fetch Duplicates for Terms And Condition
C1_FETCHDLS	Fetch Deal in FROC AND PFRV State
C1_GETMODELFROMDEAL	BS for getting models from Deal
C1_PLSMExtractWFMInfo	Deal -Extract Feature Configuration
C1_READAUTOPAYIWS	To view auto pay inbound web service
C1_TC_VALIDATE	Validate Terms And Condition if used

Business Service	Description
C1_VIEWAUTOIWS	Read auto pay service
C1-AccountFinInfo	Fetch Account Information
C1-AccumCategorySearch1	Off-Process Accumulation Category Search
C1-AddQuesn	Add Questionnaire
C1-AddUpdateAutoPayService	Auto Pay maintenance for account
C1-AddUserBenfLog	Benefit - Add User Log
C1-AGEBASEPRICEDISP	Age base price rule display
C1-BenefitButton	Get button list for benefit
C1-BENEPBP	Benefit - Plan Benefit Package Id
C1-BENETYP	Benefit Type
C1-CancelAdjustment	Cancel Adjustment
C1-CancelPaymentService	Cancel payments
C1-CAPFEEPRICINGDISP	Capitation Fee price rule display
C1-ChkPrcRulePendingDisagReq	Check if PR has pending Disaggregation Initiated entry
C1-ChkPrcRuleUsedExistsInTxn	Check if pricing rule is used for pricing
C1-CreateAdjustment	Create Adjustment
C1-CreatePaymentService	Create payments
C1-CUSTCLDIV	Customer Class based on division
C1-DealChartMetrics	Deal Chart Metrics
C1-DEALCMPRPT	deal compare extract
C1DEALCOMP	Deal Comparison BS
C1-DealMetricsPieChart	Deal Metrics Pie Chart
C1-DealMetricsSearchFC	Fetch month from FC
C1-DealMetricsService	Deal Metrics
C1-DealReview	Deal Review
C1-DeleteAutoPayService	Delete Autopay from an account
C1-DeleteQuesn	Delete questionnaire Service
C1-DLPROFEXEXCEL	Deal Profitability Export To Excel
C1-EDITQUESTIONBS	Edit Question Details
C1-EnrolledProductPriorityD	Enrolled Product Priority Deal

Business Service	Description
C1-ENTITYVAL	Get Value of Entity
C1-ExtractTemplate	Extract Template Display Service
C1-ExtTempFieldGeneration	Extract Template Field Mapping Generation
C1-FetchAdjBCDesc	Fetch Adjacent/Billable Charge Description
C1-FetchDealTemplateDataTypes	Fetch Deal Template Fields Datatype
C1-FetchDealTemplateFields	Fetch Deal Template Fields
C1-FetchDefaultSwTC	Fetch Default Switch for TAC
C1-FetchEligPLSimulation	Search Pricelist
C1-FETCHQUESTION	Fetch Question Details
C1-FetchSaTypDesc	Fetch SA Type Code Description
C1-FieldCatList	Get Field Category List
C1-FieldMapConfig	Get Field Mapping Config
C1-FieldMappingConfig	Get Field Mapping Config
C1-GeoRatingAreaButton	Get button list for Geographic Rating Area
C1-GetAdjustmentHistory	View Account Adjustments
C1-GETANS	C1-GETANS
C1-GETANSWER	Get Question Answers
C1-GETDLFC	Get Deal Feature Configuration Value
C1-GETENRLPROD	Get Enrolled product
C1-GetFieldMapValue	get field map value
C1-GetFIPricingRules	Get Fully Insured Pricing Rules
C1-GETPRCID	Fetch Pricing Rule ID and Version Number
C1-GetPricingRuleVersion	Get Template Pricing Rule
C1-GETPROPOSEDPRD	Get Proposed product
C1-GETQUESNANS	Get Question Answers
C1-GetQuesnTR	Get Questionnaire Train Step
C1-GETRATINGID	Get Rating ID
C1-GETRECMPROD	Get System Recommended Products for Deal
C1-GETREFCUST	Get Reference Customer
C1-GETREFDEAL	Get Reference Deal

Business Service	Description
C1-GetRuleParameterLabelBS	Get Business Labels for Parameter
C1-GetSkipMonths	get skip months description
C1-GetSkipMonthValue	get skip month value
C1-GETUSAGEFACTOR	Get usage Factor
C1-HIGHESTREVCUST	Highest Revenue Customer for RM
C1-NegotiabilityFlagRetriever	Negotiability Flag Retriever
C1-PINSSTATSRECBS	Retrieve Pay Instruction Statistic Record
C1-PLProposalSimulationAdd	Proposed Pricelist Simulation Add
C1-PLProposalSimulationSrch	Proposal Simulation Search
C1-PRCITMFLG	Get Price Item Flag value
C1-PRCITMSLST	Get Price Item List
C1-PriceAssignTypeFlgRetriever	Price Assignment Type Flag Retriever
C1-PriceitemTcMap	list of price item terms and condition mapping
C1-PricelistSimSmryExt	Pricelist Simulation Summary Extract Excel
C1-PricelistSimulationApproval	Pricelist Simulation Approval
C1-PriceListSimulationDetail	Extract Simulation Detail
C1-PriceListSimulationSmry	Extract Simulation Summary
C1-PricelistViewSimulation	View Pricelist Simulation
C1-ProdFinSummary	Deal Product Financial Summary
C1-QUETEMPSERVICE	Questionnaire Template Service
C1-READDEALTMPDATA	Read Deal Template Data
C1-READQESTION	Questionnaire Template Service Read
C1-ReadQuesn	Read Questionnaire
C1RETAMTS	Retrieve RM Revenue Amounts
C1-RETRMUSR	Retrieve RM Users
C1-RETUSRFLG	Retrieve Supervisor User Flag
C1RMCUSTCNT	Retrieve Rm Customer Count
C1-RMCustomerCompare	RM Customer Compare UI
C1-RMCustomerHierarchy	RM Customer Hierarchy
C1-RMCustomerHierarchyAcctFtlr	RM Customer Hierarchy Account Filters

Business Service	Description
C1RMDEALS	Retrieve RM Deal Details
C1RMPIUSTR	PriceItem usage Trends
C1-RMProductsByRevenue	Top 10 Products by Revenue
C1RMPRTMDR	Top Ten PriceItems
C1RMREVAMOUNT	Receivable Amounts for RM
C1-RMRevenueTrends	RM Revenue Trends
C1-SkipQuestionnaire	Skip Questionnaire
C1-SRCHPRM-RULETYPE	Search Parameters for Rule Type
C1-TermsAndCondition	Terms And Condition
C1-TermsAttachmentView	Attachment View for Terms And Cond
C1-TransferPaymentService	Transfer frozen payments
C1-VALDPRIOT	Validate Priority For Prospect Product
C1-ViewPaymentService	View payments

A.2.4   Portals

The following portals are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Portal	Description
C1BENFTP	Benefit
C1BENFTS	Benefit
C1BENLOG	Benefit Log
C1BENLTB	Benefit Log
C1DEAL1	Deal Dashboard
C1DLPRT	Deal Profitability
C1DLTMPT	Deal Template
C1EXTTMP	Extract Template
C1FLDMAP	Field Mapping
C1GEORTA	Geographic Rating Area
C1IACUDT	Inactive Customer Details
C1PLSM	Price List Simulation

Portal	Description
C1PLSMPL	Price List Simulation - Proposal
C1PLSMVW	Price List Simulation Results
C1QUESRH	Question Template
C1QUEVEW	View Question Template
C1RECOPINS	Reconciliation Pay Instruction
C1RELSTR	Member Relationship/Subscription Tier Structure
C1RMWRKB	RM Work Bench
C1RVTRND	Revenue Trends
C1STPDL	Deal Standard Mappings
C1TCMAP	Terms And Conditions Mapping
C1TNCSRH	Terms and Conditions
C1UNPINV	Unpaid Invoices Page
C1_QUESN	Deal Information
CANCPAYM	Cancelled Payments Report
CUSDREN	Customer Direct Entry Details Report
TRADING	Trading Bank Accounts Report

A.2.5 Batch Controls

The following batch controls are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Batch Control	Description
C1-APERP	AP Request Data Extract
C1-APFCX	AP Request Data Extract
C1-DISTA	Disaggregation Request Creation from Audit
C1-DTEXT	Data Extract batch
C1-GLERP	GL data extract for Financial Cloud
C1-GLFCX	GL data extract for Financial Cloud
C1-RCPM	Pay Instruction Processing Batch
C1-REPC3	Distribute the Total Amount in non-skip coverage period
C1RMACCT	RM Workbench Account Aggregate batch

Batch Control	Description
C1RMPERS	RM Workbench Person Aggregate batch
C1RMPRCS	RM Workbench Pricing Details Aggregate
C1_DLMTR	Deal Monitor Batch
C1_DPUD	DBMS Scheduler Update Business Date
GL1	Assign GL Account to Financial Transaction

A.2.6   Foreign Key References

The following foreign key references are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Foreign Key Reference	Description
C1-BENFT	Benefit
C1-DLTMT	Deal Template
C1-FDMAP	Field Mapping
C1-PCITM	Price Item
C1-PRTCM	Price Item Terms and Condition Mapping
C1-STPDL	Deal Standard Mappings
C1-TCMAP	terms and condition description
C1-TRCN	Terms and Conditions
C1_DLINF	User Id
C1_PITCM	Price Item TC Mapping Info
C1_QUTMP	Question Template Information
DEAL	Deal Version Info String

A.2.7   Scripts

The following scripts are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Script	Description
C1-ADJtypVa1	Validate ADJUSTMENT Search filter
C1-AddBenLog	Benefit - Add User Log Entry
C1-AddToComp	Deal add to compare
C1-BENEFIT1	Benefits - Validate filter

Script	Description
C1-BENEFIT2	Benefits - Validate filter
C1-BENEFIT3	Benefits - Validate filter
C1-BenftMain	Benefit Maintain
C1-CAPFDISP	Capitation Fee Pricing Rule
C1-ChComDISP	Retrieve Characteristic details for display
C1-ChDispCom	Retrieve Characteristic details for display
C1-CompDeal	Deal Compare Script
C1-DLCMPRPT	deal comparison report
C1-DLDashRfr	Dash Board Refresh
C1-DLFKNAVB2	deal info script
C1-DLIPRFT	Return icon with label
C1-DLSTRDPRC	Deal Standard Pricing
C1-DLTODOVAL	Zone User Filters - Validation Deal Zone
C1-DealPrVal	Validate Fields for Deal Pricing Characteristics
C1-DealTmplt	Deal Template
C1-DlMtrxFc	Deal Metrics search FC
C1-DlPieFc	Deal Metrics search FC
C1-EDITQUE	Edit Question BPA
C1-EXTEMPESS	Extract Template Service Script for Edit and Duplicate
C1-EXTTMPLSS	Extract Template Transform Update
C1-EdtDelt	Return button with label
C1-EnrPrProD	Enrollment Product Priority Deal
C1-ExExcelDL	Deal profitability export to excel
C1-ExtTmpDel	Extract Template - Delete
C1-ExtTmpMnt	Extract Template - Maintenance
C1-FISql	Decide which sql to execute on the basis of Pricing Level
C1-FLDMAPF	Zone User Filters - Validation Field Mapping
C1-FieldMap	Field Mapping - Maintain
C1-GeoRatAr	Geographic Rating Area Maintenance Script
C1-GetPmView	Get rule Parameter label for view

Script	Description
C1-MDSRZN	Zone User Filters - Validation for model search
C1-MEMBENFT	Show/Hide benefit column on membership search screen
C1-Mem3Sql1	Search by Person Details - Check SQL condition
C1-PLSMEXT	Pricelist Simulation Summary Extract
C1-POLPERSRC	Person Search On Filter Criteria
C1-PRICTCMP	Price Item Terms And Condition Mapping
C1-PRITCMAP	Price Item Terms And Conditions
C1-PRITLVL	Zone User Filters - Validation Customer Zone
C1-PRITLVLL	Zone User Filters - Validation -360 degree View- Policy Zone
C1-PopRlTyPm	Pre-populate Rule Input parameters
C1-PrevSkip	Skip Questionnaire
C1-PricLevel	To validate Pricing Level Filter
C1-ProVal	Zone User Filters - Validation
C1-QUEACTION	Questionnaire Action Script
C1-QueMain	Question Maintenance
C1-RMCustCmp	RM Customer Compare
C1-RMENTVAL	RM Revenue Trends Entity Type
C1-RMNavPer	RM Navigate to Person
C1-RelStru	Field Mapping - Maintain
C1-RelStruct	Relation Structure
C1-STPDLADD	Standard Pricing For Deal
C1-ShdShwStP	Zone Visibility - Display Zone in Portal
C1-ShowFIPR	Zone Visibility -Fully Insured Pricing Rule on 360
C1-ShwALPRZn	Zone Visibility - Display All Profitability Zones
C1-SkipQuesn	Skip Questionnaire
C1-TermAttch	Display Terms And Condn Attachment via uiHints
C1-TermCMain	Terms And Conditions Maintenance
C1-TermPost	Attachment post-processing: restore data element for Terms And Condn
C1-TermPre	Attachment pre-processing: clear data element for Terms And Condn
C1-TermsAtch	Launch Attachment for Terms And Condn

Script	Description
C1-TermsNCon	Terms And Condition
C1-UNPZNEVI	Unpaid Revenue Visibility
C1-sqlCond	Zone Visibility - Display Zone in Portal
C1-sqlCondn	Zone Visibility - Display Zone in Portal
C1PLSMPrcAgn	price assignment view
C1PLSimMaint	Price List simulation Edit
C1STPDL	Standard Deal Pricing
C1_ADJOFSR1	Off-Process adjustment
C1_ADJOFVALD	Off-Process adjustment
C1_BLLEXTRCT	Groovy script for Bill extract
C1_DLPRTBLTY	Deal Profitability
C1_DealRevw	Deal Review
C1_Prev	Deal questionnaire handle previous button click
C1_QUESTSCR	Add Question
Z1-AddToComp	Zone Visibility - Display Zone in Portal

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 V2.9.0.1.0 database:

Portal	Zone	Zone Description
C1_ALRPT	C1_CUSBILPRD	Customer Billed Price Details Report
	C1_CUSTHRCHY	C1_CUSTHRCHY
C1CUSTRG	C1-STMTCNST	Statement Construct
C1DLAPDB	C1-DLTDOQRY	C1-DLTDOQRY
	C1-DLTILAPP	Deal Metrics
C1H360PITB	C1-FIPRCRL	Fully Insured Pricing Rules
C1PI	C1-DIVNEGO	Division-Specific Negotiability for Price Item
C1PRLCLM	C1-PRLCAPF	Capitation Fee Pricing Rule
C1STATE	C1-STPRLIST	Pricing Rules list

A.2.9   Zones

The following zones are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Zone	Description
C1-BCLTADJ1	Adjustment Type/Billable Charge Line Type Search1
C1-BCLTADJ2	Adjustment Type/Billable Charge Line Type Search
C1-BENECHAR	Benefit Characteristics
C1-BENEF	Benefits
C1-BENEFIT	Search Benefits
C1-BENEFIT1	Benefit Details
C1-BENEFIT2	Policy Details
C1-BENEFIT3	Person Details
C1-BENEPBP	Benefit - Plan Benefit Package Id
C1-BENETYP	Benefit Type
C1-BENLOG	Benefit Log
C1-BSEGLIST	Retrieve Bill Segment List
C1-CUSTCLDIV	Customer Class based on division
C1-CUSTMAT	Customer Metrics
C1-DEALLEVEL	Deal Level Profitability
C1-DEALSRH	Deal Id Search
C1-DISPQUE	Template Questions
C1-DIVLEVEL	Division Level Profitability
C1-DIVLVLR	Div Level Profitability Report
C1-DIVNEGO	Division-Specific Negotiability for Price Item
C1-DLCHRT	Deal Metrics
C1-DLCOMP	Deal Comparison
C1-DLPPM	Deal Prof Mul
C1-DLSERP	Search Deal
C1-DLSR	Deal Id Search
C1-DLSRH	Product Search
C1-DLTDOQRY	Deal To Do
C1-DLTILAPP	Deal Metrics

Zone	Description
C1-DLTMLTADD	Deal Template
C1-DLTMLTLST	Deal Template List
C1-ELGPLID	Fetch Eligible Pricelist for Prospect
C1-ENPDPRPOD	Enrollment Product Priority Populate
C1-ENTITYVAL	Get the value of entity type product and pricelist
C1-ENTYSERCH	Search Entity
C1-EXTRTTEMP	Extract Template List
C1-EXTTEMPDI	Extract Template
C1-FETADJBC	Adjustment Type/Billable Charge Line Type Fetch Desc
C1-FETDFSW	Fetch Terms and Conditions
C1-FETSADESC	Fetch SA Type Description
C1-FIELDMAP	Field Mapping List
C1-FIPRCRL	Fully Insured Pricing Rules
C1-FLDCONFIG	Retrieve Field Mapping Config
C1-FLDMAPADD	Field Mapping
C1-FLDMAPS	Field Mapping List
C1-FLDMCONFI	Retrieve Field Mapping Config
C1-FLDSTAT	Retrieve Field Mapping Category
C1-GEORAPOL	Policy or Plan Details
C1-GEORATAR	Geographic Rating Area Details
C1-GEORTDISP	Geo Rating Area
C1-GEORTZONE	Search Geographic Rating Area
C1-GETANS	Get accounts allocated to person for Deal
C1-GETANSWER	Get Question Answers
C1-GETDLFC	Get Deal Feature Configuration Value
C1-GETENRLPR	Get Enrolled Products for Deal
C1-GETFCVAL	Get Feature Config Value
C1-GETLKPFLD	Get lookup values
C1-GETLKPVAL	Get lookup values
C1-GETLTYCAT	Retrieve Rule Type Category

Zone	Description
C1-GETPRDPRO	Get Proposed Products for Deal
C1-GETPRVERS	Get Pricing Rule Version
C1-GETRATING	Fetch Rating ID
C1-GETRECMP	Get System Recommended Products for Deal
C1-GETSTATUS	Get Deal Status
C1-GETTBLRDS	Get lookup values
C1-GETUSAGEF	get Usage Factor
C1-GTREFDEAL	Reference Deals
C1-GTREFVB	Reference Customers
C1-MODELSRH	Model Id Search
C1-NEGOFLG	Negotiability Flag Retriever
C1-NEXTQUESN	Get Next Question code.
C1-PARMPRC	Parameter Search
C1-PCITMLIST	Price item list
C1-PIECHRT	Deal Statics
C1-PITCADD	Price Item TC Add
C1-PLSIMPRPD	Enter Proposed Pricing and Volumes
C1-PLSIMSRCH	Search Pricelist
C1-PLSIMVIEW	Price List Simulation View
C1-POLICYNBR	Get Policy Number from Policy Id
C1-PRCDISAGP	Check Pricing Rule is used for Pricing
C1-PRCITMFLG	Get the value of Price Item Flag
C1-PRCITMLST	Get list of Price Items
C1-PRCITMLVL	Price Item Level Profitability
C1-PRCITM_TC	Price item TC mappings zone
C1-PRITLVL	Price item level profitability report
C1-PRITLVLR	Price Item Level Profitability Report
C1-PRLCAPF	Capitation Fee Pricing Rule
C1-PROALLVL	All
C1-PRODETAIL	Deal Profitability Report

Zone	Description
C1-PRODIVLVL	Division Level Profitability Report
C1-PRODLLVLL	Deal Level Profitability Report
C1-PROSUMMAR	Profitability summary report
C1-PRTXNEX	Check whether Pricing Rule is linked to a transaction
C1-PRVNXTQUE	Get Next Question Code
C1-QUEINFO	Question Details
C1-QUEPRMSER	Question Search Parameter
C1-QUESERCH	Search Question.
C1-QUEVALRUL	Search Validation Rule
C1-QUTEMTSER	Search Question Template
C1-RELSTR	Member Relationship/Subscription Tier Structure List
C1-RELSTRADD	Member Relationship/Subscription Tier Structure
C1-RETRMUSR	Retrieve RM Users
C1-RETUSRFLG	Retrieve Supervisor User Flag
C1-REVMAT	Revenue Metrics
C1-REVPIUST	Price Item Revenue Vs Usage Trend
C1-RMINACAD	Inactive Customers Account's Details
C1-RMINACU	Inactive Customer Details
C1-RMRECAMT	Receivables by Age Chart
C1-RMREVTRN	RM Trends Input
C1-RMTRND	Revenue Trends
C1-RMWRKBN	RM Work Bench
C1-SERCHRULE	Search Rule Type
C1-SERENTCOL	Search Entity Column
C1-SRCHPMRUL	Search Rule Type Parameter
C1-SRCHPRMRL	Search Rule Type Parameter
C1-SRHPRMRL	Search Rule Type Parameter
C1-SRHPRMRUL	Search Rule Type Parameter
C1-STMTCNST	Statement Construct
C1-STPDLADD	Deal Standard Mappings

Zone	Description
C1-STPDLSER	Standard Pricing For Deal
C1-STPDLSERH	Deal Standard Mappings
C1-STPRLIST	Pricing Rules list
C1-TCMAPADD	Terms And Conditions Mapping Details
C1-TCMAPLIST	Terms And Conditions Mapping List
C1-TERMNCOAD	Terms and Conditions
C1-TERMNCOSR	Terms and Conditions List
C1-TOPRVCUST	Top 10 Customers by Revenue
C1-UNPDACTDT	Customer's Unpaid Bills Information
C1-UNPDDTLS	Unpaid Revenue Customer's Details
C1-VALDPRIOT	Validate Priority For Product Enrollment
C1-VREF	Select Reference
C1DEALSNAP	Deal Snapshot
C1RETAMTS	Retrieve RM Revenue Amounts
C1RMCUSTHRY	Customer Hierarchy
C1RMPRDBYREV	Top 10 Product By Revenue
C1RMTODO	To Do
C1RMTPPRITM	Top 10 Price Items by Revenue
C1RMWBTODO	RM Work Bench To Do
C1_DEAL_QUES	Questionnaire
C1_DLMTRXFC	Fetch start and end Date from FC
C1_DUP_TERMS	Check duplicate Terms And Condition
C1_FETCHDLS	Fetch Deal in FROC AND PFRV State
C1_GETMODEL	zone for getting model from Deal
C1_PITC_MAP	Price Item TC Mapping Search
C1_PLEXTWFM	Pricelist Extract for Feature config
C1_PPITM_GRP	Parent Price Item Group
C1_PRITM_GRP	Price Item Group Entity Search
C1_QUEDISPL	Questionnaire Template Display
C1_QUEPRMSRH	Question Search Parameter

Zone	Description
C1_QUESRH	Search Question Template
C1_SRPLDLMP	Price List Search
C1_TC_VALDT	Validate Terms And Condition if used

A.2.10 UI Maps

The following UI maps are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

UI Map	Description
C1-AcctSkipMonthsDispFrag	Account Skip Months details
C1-AddUserBenfLog	Benefit - Add User Log Entry
C1-AgeBasedAddDataDispScript	Age Based Specific Additional Data Display Script
C1-AgeBasedAddDataScripting	Age Based Specific Additional Data Scripting
C1-AgeSpecificDataMaintFrag	Capitation Fee PRT Age Specific Data - input
C1-AttachmentTermsAndCond	Terms and Conditions Attachment Upload
C1-AttrCharMappingDispFrag	Capitation Fee Attribute Char Mapping - Display UI
C1-AttrCharMappingMaintFrag	Capitation Fee Attribute Char Mapping - Input UI
C1-BENEFIT1	Benefit - Search By Benefit
C1-BENEFIT2	Policy - Search By Policy
C1-BENEFIT3	Person - Search By Person
C1-BenefitBoActionJScriptFrag	Benefit-Show/Hide BO Status Action
C1-BenefitEdit	Benefit
C1-BenefitMaintUIDisplay	Benefit Update UI
C1-BenefitsCharsMaintFrag	Benefits Characteristics - Input UI
C1-Benefits_AmountDisplay	Benefits Amount Display
C1-Benefits_Script	Benefit Scripting
C1-Benefits_Scripting	Benefits Amount Scripting
C1-Benefits_Scripting1	Plan Benefits Package Id Scripting
C1-Benefits_Scripting11	Plan Benefits Package Id Display
C1-BillSegmentSummarySrch	Search Bill Segment Summary
C1-CapFeeSubCatDispFrag	Capitation Fee PRT Sub Category - Display UI

UI Map	Description
C1-CapFeeSubCatMaintFrag	Capitation Fee PRT Sub Category - Input UI
C1-CharacteristicTypeInfoProsp	Characteristic Type Information - Prospect
C1-CofirmCleanUp	Confirm CleanUp Job
C1-ConfirmCleanUpCancel	Confirm Cancel Job
C1-DEALSNAPSHOT	Deal Snapshot
C1-DLSRH	Deal Id Search
C1-DealConfirmWindow	Confirm Window Message
C1-DealMetricsUI	Deal Metrics Fragment
C1-DealPieChartMap	Deal Pie Chart
C1-DealProfMessafe	Deal Profitability Export to excel Message
C1-DealProfitabilityExcel	Deal profitability export to excel
C1-DealProfitablilityDetails	Deal profitability details
C1-DealStpdlCharsDispFrag	Deal Type Characteristics - Display Map
C1-DealTDoQueryFilter	Deal To Do Filter
C1-DealTemplateDisplayFrag	Deal Template
C1-DealTemplateInputFrag	Deal Template
C1-DealTemplateSearch	Deal Template Search
C1-DealTemptDisplayMainFrag	Deal Template
C1-DisplayDisaggregationError	Display Disaggregation Error
C1-DisplayErrorOnDelete	Display Error on Delete
C1-DwnldCmpRpt	Download Compare Report
C1-EDITQUESTION	Update Question
C1-EXTRCTTEMPFILTER	Extract Template Filter UI
C1-EditDuplicateActions	Edit, delete, duplicate and actions
C1-ExtTmplFieldMappingUIMap	Extract Template Field Mapping UI
C1-ExtTmplFormatsUIMap	Extract Template Formats UI
C1-ExtTmplServiceUIMap	Extract Template Service UI
C1-ExtractTemplateDisplayMap	Extract Template - Display
C1-ExtractTemplateUIMap	Extract Template
C1-ExtractUIMap	Extract Template

UI Map	Description
C1-FIPricingRulesFilter	Fully Insured Pricing Rules Filter
C1-FieldMapFilter	Filter area UI map
C1-FieldMappingEntityDispFrag	Field Mapping - Display UI
C1-FieldMappingEntityMainFrag	Field Mapping - Input UI
C1-GeoRatArPolicyPlanDispFrag	Geo Rating Area Policy Plan Display
C1-GeoRatBOJScriptFrag	Invoice Request-Show/Hide BO Status Action
C1-GeoRatingArBOJScriptFrag	Geo Rating Area-Show/Hide BO Status Action
C1-GeoRatingAreaMaintUI	Used in Geo Rating Area update UI
C1-GeoRatingFilter	Geographic Rating Area Search Filter
C1-GeoRatingFilterSrchbyPolicy	Geographic Rating Area Search Filter
C1-HIGHESTREVCUSTMAP	top 10 Customers for Highest Revenue
C1-InvoiceReqAccLists	Invoice Request Account List Filters
C1-InvoiceReqAcctList	Invoice Request Account List Filters
C1-InvoiceReqExcludeAcc	Invoice Request Account List Filters
C1-LinkedAccount	Account Search
C1-MDLSRH	Model Id Search
C1-OffProReqTypeAdjBCDisp	Off Process Request Type - Display UI
C1-PITCMappingDisplayFrag	Price Item TC Mapping - Display UI
C1-PITCMappingInputFrag	Price Item TC Mapping - Input UI
C1-PITCMappingsearchFrag	Price Item TC Mapping Dropdown
C1-PITCMappingsrchDisplayFrag	Price Item Mapping - Display UI
C1-PLSimPriceAsgnView	Rate Component Tree
C1-PRITLVL	Customer 360 Search By Policy
C1-PROALLVL	Deal dashboard deal search filters
C1-PRODIVLVL	Deal dashboard deal search filters
C1-PRODLLVL	Deal dashboard deal search filters
C1-PROITLVL	Deal dashboard deal search filters
C1-PayInsStatsData	Pay Instruction Statistic Data Display
C1-PrcItmTCMaint	Price Item Terms and Condition Mapping
C1-PriceListSim	Perform Pricelist Simulation

UI Map	Description
C1-PriceListSimSrch	Search Criteria
C1-PriceListSimView	Pricelist Simulation
C1-PricingRuleCapFeeDisp	Display UI Map for Capitation Fee Pricing Rule
C1-QUESRCH	Question Template Search
C1-QUETEMPSRCH	Search Question Template
C1-QuestionDisplayFrag	Question Template - Display UI Fragment
C1-QuestionEditAction	Edit Question Record Information
C1-QuestionTempEditAction	Edit Question
C1-RLPARMSRCH	Parameter Search
C1-RMCustomerCompare	RM Customer Compare UI
C1-RMCustomerHierarchyUI	RM Customer Hierarchy UI
C1-RMProductByRevenueUI	Top 10 Product by Revenue
C1-RMRevenueTrendsUI	RM Revenue Trend UI
C1-RMToDoFilter	RM To Do Filter
C1-RMUIHomePage	RM UI Home Page
C1-RelStructureFilter	Filter UI map for Relation Structure
C1-RuleSearch	Rule type search
C1-SRCHGETDEAL	Search Current Price List Assignments
C1-STDPLCharsMaintFrag	Deal Standard Mapping
C1-STPDLSRCH	Search Prospect
C1-SkipQuesnMessage	Skip Questionnaire Message
C1-TCMapSrch	Terms and Condition Mapping Search
C1-TPTENPRITMS	top ten price items
C1-TermsAndConSrch	Terms And Condition Search
C1-TermsAndConditionsMaint	Terms And Condition Maintenance
C1-TermsAndConmMapSrch	Terms And Condition Mapping Search
C1-TermsNCondAction	Edit, Delete, View Actions for TNC
C1-UITrendPage	RM Trend Page
C1-relationStructureMapDisplay	Relation Structure Map Display
C1-relationStructureMapInputMa	Relation Structure Map Input

UI Map	Description
C1CustMetricsUI	Customer Metrics
C1RMRECEIVABLEAMOUNTS	Receivables by Age Chart
C1_AVG_COMP	Deal Compare Revenue
C1_Add_To_Compare	Deal Comparison
C1_CompareDealModel	Deal Compare
C1_DEAL_QUESN	Questionnaire
C1_DEAL_RVW_CNFM	Deal Review
C1_DealCharsDispFrag	View Price Item Characteristics
C1_PIREVVSUSAGETR	Price Item Revenue Vs Usage Trend
C1_PreviewQuestionTemplate	Preview Question Template
C1_QUETEMPLACTION	Questionnaire Template
C1_QUEVIEW	View Questions
C1_QueParmFilter	Price Parameter Search Screen
C1_QuestionnaireTemplate	Questionnaire Template
C1_REVENUEMATRICSUI	Revenue Matrics
C1_REVE_COMP	Deal Compare Revenue
C1_SRH_PRSLST	Search Eligible PriceList for Prospect
C1_relationCriteriaDisplayUi	Display Fragment-relationCriteria
C1_relationCriteriaInputUi	Relation Criteria Input
c1_OraSRHPLID	Price List Search

A.2.11 Lookups

The following lookups are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Field	Field Value	Description
ADDRESS_SRC_FLG	MNSB	Main Subscriber
	PHLD	Policy Holder
ANS_DISPLAY_FLG	DATE	Date
	TEXT	Text Area
	MCDD	Multi Choice from Drop down List

Field	Field Value	Description
	MSCB	Multi-select check box
	PERC	Percentage
	ROBL	Radio Button List
	DECM	Decimal Value
	SCDD	Single Choice from Drop down List
	NUME	Numeric Value
APPLICABLE_FOR_FLG	OTHE	Other
	CSDL	Customer/Deal Reference
	PKPR	Package/Product Reference
BENEFIT_SRC_FLG	ST	State
	CMS	Centre of Medicare & Medicaid Services
BENEFIT_SUB_TYPE_FLG	D	Part D-Medicare Prescription Drug Coverage
	LEP	Late Enrollment Penalty
	B	Part B-Outpatient Medical Coverage
	A	Part A-Inpatient Hospital Coverage
	LIS	Low Income Subsidy
BENEFIT_TYPE_FLG	MA	Medicare Affiliated
	COMM	Commercial
BILLING_ARRANGEMENT_FLG	GRP	Group
	TPA	TPA
	DRCT	Direct
C1_SOURVALREF_FLG	R	Reference Data
	P	Predefine List
C1LR_OPT_TYP_FLG	C1WS	Set Limit for IWS Retrieving Records
CURRENCY_FLAG	DEAL	Deal Currency
	DIVI	Division Currency
CUST_STATUS_FLG	NONE	None of the criteria satisfied
	OTCM	One or more Criteria not satisfied
	ALCM	All commitments met
DEAL_COMAPRE_HRCHY_FILTER	PI	Price Item

Field	Field Value	Description
	PG	Price Item Group
	PPI	Parent Price Item
	PROD	Product
DEAL_COMP_BASED_ON	AVGE	Average Price
	REVN	Revenue
DEAL_COMP_TYPE	DTL	Detailed
	SUMM	Summary
DEAL_METRICS_CD	DPAC	Deals Pending Acceptance
	DLPA	Deals Pending Approval
	DLRJ	Deals Rejected
	DLCR	Deals Created
	DLAC	Deals Accepted
	DLRF	Deals Ready For Finalization
DEAL_METRICS_FLG	CHRT	Chart
	TILE	Tiles
DEAL_QUE_DISP_FLG	RULE	Rule Based
	SEQE	Sequence Based
EXTRACT_TEMPLATE_FILE_FORMAT	JSON	JavaScript Object Notation
	XML	Extensible Markup Language
	PSV	Pipe Separated Values
	PRN	Fixed Position
	CSV	Comma Separated Values
	TILD	Tilde Separated Values
EXTRACT_TEMPLATE_SERVICE_TYPE	F1BO	Business Object
	F1BS	Business Service
EXTRACT_TEMPLATE_STATUS_FLG	INAC	Inactive
	ACTV	Active
FIELD_CAT_FLG	PLBP	Medicare Plan Benefit Preferences
	PRIC	Geographic Rating Area Preferences

Field	Field Value	Description
	MRST	Member Relationship and Subscription Tier Preferences
	STCT	Statement Construct Preferences
	BLRL	Billing Preferences
	RECN	Member Reconciliation Preferences
FIELD_NAME_FLG	MAGL	Max Age Limit for Max Dependent Count Characteristic Type
	STMR	Default Statement Route Type
	REOP	Reconciliation Open Status
	BTRA	Billed Transfer Recon Adjustment Type
	DRTA	Default Geographic Rating Area
	ODBC	Recon Adj Type for Offsetting Debits using Billed Credits
	STMC	Default Statement Cycle
	STPO	Default Statement Print Order
	DADS	Default Address Source
	MDOP	Max Number of Dependents Order Priority Characteristic Type
	NGDA	New Born Gift Days Applicability Characteristic Type
	PIMC	Pay Instruction Match Level Characteristic Type
	SMCV	Subscriber Match Level Char Value
	STMF	Default Statement Format
	UPDT	Use Plan Details
	MRLS	Member Relationship Structure Characteristic Type
	PIOP	Pay Instruction Open Status
	SKPM	Skip Months
	YALA	Young Adult Max Age Limit Applicability Characteristic Type
	MEMR	Member Relationship Characteristic Type

Field	Field Value	Description
	MNOD	Maximum Number of Dependents Characteristic Type
	PIRA	Payment Instruction Recon Adjustment Type
	SUBT	Subscription Tier Characteristic Type
	ACDB	Age Calculation Date Basis Characteristic Type
	ASCT	Address Source Characteristic Type
	ASRC	Default Statement Address Source
	BLPR	Bill Period
	MRDB	Member Relationship Derivation Date Characteristic Type
	RACT	Geographic Rating Area Characteristic Type
	ATCT	Address Type Characteristic Type
	EFST	Default Statement Status
	NBGD	New Born Gift Days Characteristic Type
	PICO	Pay Instruction Complete Status
	STNC	Default Statement Number of Copies
	YAAL	Young Adult Max Age Limit Characteristic Type
	BLCY	Bill Cycle
	DADT	Default Address Type
	PECT	Payment Event Characteristic Type
	RECT	Reconciliation Char Type
	STSC	Subscription Tier Structure Characteristic Type
FIELD_SRC_FLG	ZONE	Zone
	LUKP	Lookup
	ADHC	Adhoc
	TBLE	Table
FIELD_STATUS_FLG	FLIN	Inactive
	FLAC	Active
FLD_NAME_FLG	DLFQ	Deal Frequency
	RWFQ	Review Frequency
	VDSC	Version Description

Field	Field Value	Description
	CURR	Currency
	SPRF	Skip References
	DLTY	Deal Type
	DLSD	Deal Start Date
	PRSD	Price Selection Date
	UGPD	Usage Period
INCD_OPT_TYP_FLG	NDIA	No of days for Inactive flag
MAP_ENTITY_FLG	BLCH	Billable Charge
	ACCT	Account
MEMBERSHIP_TYPE_FLG	COBR	COBRA
	MDCR	Medicare
MPP_FUND_TYP_FLG	MPAD	MPP Adjustment
PL_SIM_CHAR_OPT_FLG	<=	<=
	>	>
	<	<
	<>	<>
	=	=
	>=	>=
PL_SIM_ENTITY_FLG	ACCT	Account
	PERS	Person
PL_SIM_PERIOD_FLG	12	12 Months
	3	3 Months
	6	6 Months
	1	1 Month
	36	36 Months
PLSM_OPT_TYP_FLG	PRXL	Report Code Excel
PPMR_OPT_TYP_FLG	4002	4002
	4003	4003
	5002	5002
	4001	4001

Field	Field Value	Description
	4004	4004
PRC_RULE_TYPE_SUB_FLG	PMPM	Per Member
	PSPM	Per Subscriber
PRC_TYPE_FLG	FLAT	Flat
	PCNT	Percent
PRICING_LEVEL	PLCY	Policy
	STAT	State
	PLAN	Plan
	PER	Parent Customer
PRORATION_EVT_TYPE_FLG	TERM	Termination
	NWBR	New Born
	SMET	Same Month Enrollment and Termination
	ENRL	Enrollment
PRORATION_TYPE_FLG	MDMT	Mid-Month
	COVD	Coverage Days
	TERM	Termination
	FLMT	Full Month
	WAVR	Waiver
	ENRL	Enrollment
	DALY	Daily
RELATION_FLG_LOOKUP	10	Main Subscriber
	30	Children
	20	Spouse
RELATION_MAP_FLG	S	Self
	SP	Spouse
	D	Dependent
RELATION_TYPE_FLG	C	Child
	S	Spouse
	M	Member
	0	Owner

Field	Field Value	Description
REPORT_TYPE	PSUM	Deal Profitability Summary Report
	PDTL	Deal Profitability Detail Report
RM_ENT_TYPE_FLG	C1PD	Product
	C1PL	Price List
	C1PI	Price Item Group
	C1PT	Price Item
RM_MNTH_REPRT_FLG	06	Last 06 Month
	01	Last 01 Month
	10	Last 10 Month
	03	Last 03 Month
	04	Last 04 Month
	08	Last 08 Month
	12	Last 12 Month
	07	Last 07 Month
	02	Last 02 Month
	05	Last 05 Month
	11	Last 11 Month
	09	Last 09 Month
RMB_ENTITY_TYPE_FLG	MEMB	Membership
	ACCT	Account
	CONT	Contract
	ADJ	Adjustment
	CNTY	Contract Type
	PAY	Payment
	BIIL	Bill
RULE_TYPE_CAT_FLG	FILD	Field based
	PARM	Parameter based
SOURCE_PARM_FLG	PRD	Product
	ACCT	Account
	PERS	Person

Field	Field Value	Description
TC_MAP_ENTITY_TYPE_FLG	PPTM	Hierarchy group
	PRTM	Price Item
	PRTG	Root Level Hierarchy Group
TC_MAPPING_LVL_FLG	PRTG	Price Item Group
	PRTM	Price Item
	DLVL	Deal Level
	PPTM	Parent Price Item
TC_PURPOSE_FLG	INVC	Invoice
	BOTH	Invoice and Deal
	QUOT	Deal

A.2.12 Characteristic Types

The following characteristic types are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Characteristic Type	Description
BUSUNIT	Business Unit
C1-ADSRC	Address Source
C1-ADTYP	Address Type
C1-AGREC	Age Recalculation Date Basis
C1-GEORT	Geographic Rating Area
C1-MEMRL	Member Role
C1-MRDDB	Member Role-Derivation Date Basis
C1-MRLST	Member Role Structure
C1-STRST	Subscription Tier Structure
C1-SUBST	Subscription Tier
C1CALAM	Calculated Amount
C1CRACDT	Credit Note Accounting Date
C1CRBIDT	Credit Note Bill Date
C1SUPFLG	Supervisor Role Flag
C1USRACC	User Access

Characteristic Type	Description
C1USRCUR	User Currency
CMINTRTP	CMINTRTP Interest Rate Type
CMPRCAPP	CMPRCAPP Price on Application Char
DEALINFO	Deal Information
EBSORGID	Organization ID
VG_STATE	VIRGIN STATE

A.2.13 Feature Configurations

The following feature configurations are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Feature Configuration	Description
C1-RECLMT	Set Fetch Record Limit
EXT_MSG_CFG	External Message Options
ZZCBMASK	Mask SSN

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 V2.9.0.1.0 database:

Business Object	Description
C1-BenefitPackage	Medicare Plan Benefit Package
C1-Benefits	Benefit
C1-DEALMAPPING	Deal Mapping Business Object
C1-DLTMPLT	Deal Template
C1-EXTRTEMPLATE	Extract Template BO
C1-ExtractTemplate	Extract Template
C1-FieldMapping	Field Mapping
C1-GeoRatingArea	Geographic Rating Area
C1-MembRoleSubTier	Member Role and Subscription Tier

Business Object	Description
C1-PL-SIM	Pricelist Simulation BO
C1-PRCITM_TC_BO	BO for price item terms and condition
C1-PrcRuleTypeBenefit	Fully insured Benefit Pricing Rule Type
C1-PrcRuleTypeCapitationFee	Fully Insured Capitation Fee Pricing Rule Type
C1-PricingRuleBenefit	Benefit Pricing Rule
C1-PricingRuleCapitationFee	Capitation Fee Pricing Rule
C1-QUESTANS	Question Answers BO
C1-QUESTION	Questionnaire BO
C1-StatementConstruct	Statement Construct
C1-WebServiceHistory	Web Service History
C1_QUEDISPYBO	Display Question BO

A.2.16 Maintenance Objects

The following maintenance objects are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Maintenance Object	Description
C1-BENEFITS	Benefit
C1-DLTMPLT	Deal Template
C1-EXTCTTEMP	Extract Template
C1-FIELDMAP	Field Mapping
C1-QUESTION	Questionnaire
C1-TERMNCON	Terms And Condition
C1_DLMAPPING	Deal Mapping
C1_GEO_RT_AR	Geographic Rating Area
C1_MEMRL_SUB	pricing membership mp
C1_PL_SIM	Pricelist Simulation
C1_PRTC_MAP	Price Item TC Mapping
C1_QUESTANS	Question Answer

A.2.17 To Do Types

The following to do types are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

To Do Type	Description
C1-DLREM	Deal Reminder
C1-PSMAP	Pricelist Simulation Approval ToDo
PAW1	Product - Approval Work Flow Checker To Do 1

A.2.18 Application Services

The following application services are newly added in the Oracle Revenue Management and Billing V2.9.0.1.0 database:

Application Service	Description
C1-BENEFITS	Benefit Application Service
C1-BENFITPKG	Medicare Plan Benefit Package
C1-DEALRVW	Deal Review
C1-EXTCTTEMP	Extract Template Application Service
C1-EXTRACTTEMPLATE	Extract Template maintenance Service
C1-FIELDMAP	Field Mapping
C1-FIELDMAP_SERV	Field Mapping
C1-GEORATINGAREA	Geographic Rating Area
C1-GETFIPRCRULE	Get Fully Insured Pricing Rules
C1-TNC	Terms And Conditions
C1BENFTP	Benefit
C1BENFTS	Benefit
C1DEAL1	Deal Dashboard
C1DLPRT	Deal Profitability
C1DLTMPT	Deal Template
C1EXTCTTEMP	Extract Template Application Service
C1EXTTMP	Extract Template
C1FLDMAP	Field Mapping
C1GEORTA	Geographic Rating Area

Application Service	Description
C1GEORTAR	Geographic Rating Area
C1IACUDT	Inactive Customer Details
C1PLSIM	Pricelist Simulation Service
C1PLSM	Price List Simulation
C1PLSMPL	Price List Simulation - Proposal
C1PLSMVW	Price List Simulation Results
C1PRICELISTSIM	Pricelist Simulation Service
C1QUESRH	Question Template
C1QUESTION	Questionnaire Service
C1QUEVEW	View Question Template
C1RELSTR	Member Relationship/Subscription Tier Structure
C1RMACCSTAT	Rm Account Stats
C1RMACCTSTAT	RM Account Stats
C1RMPERSTAT	Rm Person Stats
C1RMWRKB	RM Work Bench
C1RVTRND	Revenue Trends
C1STPDL	Deal Standard Mappings
C1STPDLSERH	Standard Pricing For Deal
C1TCMAP	Terms And Conditions Mapping
C1TERCO	Attachment for Terms And Condition
C1TERMNCO	Terms And Condition for Maintenance
C1TNCSRH	Terms and Conditions
C1TNMPSH	Terms And Conditions Mapping
C1UNPINV	Unpaid Invoices Page
C1_DEAL_MAPPINGS	Deal Mapping Application
C1_DEAL_PRICELIST	Deal Price List Application
C1_DEAL_TEMPLATE	Deal Template
C1_MEMRL_SUBT	C1_MEMRL_SUBT
C1_QUESN	Deal Information
CANCPAYM	Cancelled Payments Report

Application Service	Description
CUSDREN	Customer Direct Entry Details Report
PRICEITEM_SERV	Priceitem Application Service
TRADING	Trading Bank Accounts Report

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 2.9.0.1.0.

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	C1-DLTODOLST	TSTPRICE
C1GETELIGPRO	C1HIERARCHY	C1HRCHYENTITY
C1HRYENT	C1INREQ	C1INRETY
C1INVRED	C1PATCH	C1PISL
GETDEALTYPE	C1PROSPO	C1PRSEAR
C1PRSSASP	C1REFPRI	C1SERDSC
C1SFTPUS	C1SLFSER	C1TPSTRT
C1TRBLHC	C1TMCND	C1_PROSPECT
C1-DEALAPPRWF	C1GETELIGPLPRO	C1AWRSNP
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	-

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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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	F1-PDBEX	F1-SYNRQ
F1-FLUSH	F1-PDBG	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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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	-	-

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

Application Service	Application Service	Application Service
C1-APAYEXPCRTYPEBOAS	C1-PINVFPOST	C1APPCHN
C1-APPRSN	C1-POINFRDET	C1APPCRT
C1-APPTXN	C1-POLICYINVOICEFREQ	C1APPRESP
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

Application Service	Application Service	Application Service
C1PERRL	C1_ADDPL	C1_DISPBUND
C1PLCYPL	C1_ADDPROD	C1_DRRSR
C1PLCYPN	C1_ADD_RTCMP	C1_DSPLY_RT
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

Application Service	Application Service	Application Service
C1_F_CPYPL	C1_F_PRODVAL	C1_PLCASSIGN
C1_F_CPYPLVL	C1_F_PRODVL1	C1_PLEDIT
C1_F_CUSSRCH	C1_F_RSCDVAL	C1_PLISTSRCH
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

Application Service	Application Service	Application Service
C1_PROD	CHGTYPECD	CILCCCZP
C1_PRODPL	CIACNBTY	CILCCIZP
C1_PROD_ADD	CIAPAYSTGUPL	CILCCNSP
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

Application Service	Application Service	Application Service
CILFBLCP	CILPRLIST	CILTARTP
CILFBPHP	CILPRLISTDIV	CILTASGP
CILFDRR	CILPRLISTL	CILTATCP
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

Application Service	Application Service	Application Service
CILTCUSP	CILTOPTP	CILTSWLP
CILTDARP	CILTORAP	CILTTACP
CILTDASP	CILTPCRP	CILTTAXP
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

Application Service	Application Service	Application Service
CILVVLEP	CILYDPIP	F1-GENPROC
CILVVLSP	CILYENRP	F1-MIGROBJIMP
CILWDWNP	CILYROBP	F1-STASKTYPE
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

Application Service	Application Service	Application Service
F1MIGROBJ	FWLTOMTP	F1STRDIS
F1MIGRPLAN	FWLTSCHP	F1STREAS
F1MIGRREQ	FWLTUIMP	PERTREE
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

Application Service	Application Service	Application Service
F1-BUNPR	F1-NDPUR	F1-SUBRQ
F1-DTDOM	F1-ORCRL	F1-SYNEF
F1-FCTRN	F1-OUCRL	F1-SYNIL
F1-FKVBP	F1-PDBEX	F1-SYNRQ
F1-FLUSH	F1-PDBG	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

Application Service	Application Service	Application Service
C1OFPREQ	C1_PRICE	C1_TXNAR
CILTXNSOURCE	CIPRICEPARM	F1APPLYBNDL
F1BNDLEM	F1BNDLES	F1BNDLIM
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	-

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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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	CILXNDNP	CIPOLPERROLE
CILTWETP	CILXOPTP	CIPOLREINSTRSN
CILTWPTP	CILXRCVP	CIPRICEACCOUNT
CILTWSCP	CILXRTTP	CIREC
CILTWSDP	CILXSENP	CIRECCUSTSUB
CILTXNDETAIL	CILXSVXP	CIRECON
CILTXNSRC	CILXTPCP	CIRECONDTL
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

Application Service	Application Service	Application Service
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
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

Application Service	Application Service	Application Service
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	F1-PDBEX	F1-SYNRQ
F1-FLUSH	F1-PDBG	F1-SYSRQ
F1-ILMIN	F1-REQTY	F1-TDCRL
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

Application Service	Application Service	Application Service
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	-

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 4.4.0.2.0:

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 V4.4.0.2.0 Database

This section lists the objects that are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 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 V4.4.0.2.0 database.

D.1.1   New Tables

The following tables are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Table	Description
F1_CALENDAR_D	Calendar Dimension
F1_IWS_SVC_OPER_PARM	Inbound Web Service Operations Parameter
F1_MKTCFG	Market Configuration
F1_MKTCFG_CHAR	Market Configuration Characteristics
F1_MKTCFG_L	Market Configuration Language
F1_MKTMSG_IN	Inbound Market Message
F1_MKTMSG_IN_CHAR	Inbound Market Message Characteristic
F1_MKTMSG_IN_DATA	Inbound Market Message Data
F1_MKTMSG_IN_EXT_REF	Inbound Market Message External Reference
F1_MKTMSG_IN_ID	Inbound Market Message Identifier
F1_MKTMSG_IN_K	Inbound Market Message Key
F1_MKTMSG_IN_LOG	Inbound Market Message Log
F1_MKTMSG_IN_LOG_PARM	Inbound Market Message Log Parameter
F1_MKTMSG_IN_REL_OBJ	Inbound Market Message Related Object
F1_MKTMSG_OUT	Outbound Market Message
F1_MKTMSG_OUT_CHAR	Outbound Market Message Characteristics
F1_MKTMSG_OUT_DATA	Outbound Market Message Data

Table	Description
F1_MKTMSG_OUT_EXT_REF	Outbound Market Message External Reference
F1_MKTMSG_OUT_ID	Outbound Market Message Identifier
F1_MKTMSG_OUT_K	Outbound Market Message Key
F1_MKTMSG_OUT_LOG	Outbound Market Message Log
F1_MKTMSG_OUT_LOG_PARM	Outbound Market Message Log Parameter
F1_MKTMSG_OUT_REL_OBJ	Outbound Market Message Related Object
F1_MKTMSG_TYPE	Market Message Type
F1_MKTMSG_TYPE_CHAR	Market Message Type Characteristic
F1_MKTMSG_TYPE_L	Market Message Type Language
F1_MKTPROC	Market Process
F1_MKTPROC_CHAR	Market Process Characteristic
F1_MKTPROC_EVT	Market Process Event
F1_MKTPROC_EVT_CHAR	Market Process Event Characteristic
F1_MKTPROC_EVT_K	Market Process Event Key
F1_MKTPROC_EVT_LOG	Market Process Event Log
F1_MKTPROC_EVT_LOG_PARM	Market Process Event Log Parameter
F1_MKTPROC_EVT_REL_OBJ	Market Process Event Related Object
F1_MKTPROC_ID	Market Process Identifier
F1_MKTPROC_K	Market Process Key
F1_MKTPROC_LOG	Market Process Log
F1_MKTPROC_LOG_PARM	Market Process Log Parameter
F1_MKTPROC_REL_OBJ	Market Process Related Object
F1_MKTPROC_REL_PROC	Related Market Process
F1_MKTPROC_TYPE	Market Process Type
F1_MKTPROC_TYPE_CHAR	Market Process Type Characteristic
F1_MKTPROC_TYPE_EVT	Market Process Type Event
F1_MKTPROC_TYPE_L	Market Process Type Language
F1_TIME_D	Time Dimension

D.1.2   Added Views

None

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 V4.4.0.2.0 database:

Table	Column	Column Description	Required (Yes or No)
C1_DEAL_PRICELIST	PRIORITY	Priority	Yes
C1_DEAL_TYPE	TD_TYPE_CD	To Do Type	No
C1_PRODUCT_VER	END_DT	End Date	No
	START_DT	Start Date	No
CI_ACCT_PER_VW	EFFDT	Effective Date	No
CI_BATCH_THD	THD_RETRY_CNT	Thread Retries Count	No
CI_INSTALL_PROD	PROD_STATUS_FLG	Product Status	Yes
CI_PER_VW	CITY	City	Yes
	COUNTRY	Country	Yes
	COUNTY	County	Yes
	EFFDT	Effective Date	No
	POSTAL	Postal	Yes
CI_PRCE_CALC_LN	DESCR254	Long Description	No
CI_PRICEASGN_VW	BUS_OBJ_CD	Business Object	No
	BO_DATA_AREA	Business Object Data Area	No
	DESCR	Description	No
	END_DT	End Date	No
	START_DT	Start Date	No
	VERSION	Version	Yes
CI_STM_CNST	BUS_OBJ_CD	Business Object	No

Table	Column	Column Description	Required (Yes or No)
	BO_DATA_AREA	Business Object Data Area	No
	CRE_DTTM	Create Date/Time	No
	ILM_ARCH_SW	ILM Archive Switch	No
	ILM_DT	ILM Date	No
	BO_STATUS_CD	Status	No
	STATUS_UPD_DTTM	Status Date/Time	No
	BO_STATUS_REASON_CD	Status Reason	No
CI_TC	ATTACHMENT_DATA	Attachment Data	No
	ATTACHMENT_FILE_NAME	Attachment File Name	No
	BUS_OBJ_CD	Business Object	Yes
	BO_DATA_AREA	Business Object Data Area	No
	BO_STATUS_CD	Status	Yes
F1_IWS_SVC	URI_COMPONENT	URI Component	No

D.1.6   Dropped Columns

The following columns are removed from the Oracle Utilities Application Framework V4.4.0.2.0 database:

Table	Column	Column Description
C1_BSEG_DEAL	CRE_DTTM	Create Date/Time
	END_DT	End Date
	ILM_ARCH_SW	ILM Archive Switch
	ILM_DT	ILM Date
	START_DT	Start Date
	STAT_CHG_DTTM	Status Change Date/Time
	VERSION	Version
C1_BSEG_DEAL_CALC	CURRENCY_CD	Currency Code
	EFFDT	Effective Date
	END_DT	End Date
	START_DT	Start Date
	VERSION	Version

Table	Column	Column Description
C1_BSEG_DEAL_CALC_LN	CHAR_TYPE_CD	Characteristic Type
	CHAR_VAL	Characteristic Value
	CURRENCY_CD	Currency Code
	SEQNO	Sequence
	VERSION	Version
C1_BSEG_DEAL_CL_CHAR	ADHOC_CHAR_VAL	Adhoc Characteristic Value
	CHAR_TYPE_CD	Characteristic Type
	CHAR_VAL	Characteristic Value
	CHAR_VAL_FK1	Characteristic Value FK 1
	CHAR_VAL_FK2	Characteristic Value FK 2
	CHAR_VAL_FK3	Characteristic Value FK 3
	CHAR_VAL_FK4	Characteristic Value FK 4
	CHAR_VAL_FK5	Characteristic Value FK 5
	SEQNO	Sequence
	VERSION	Version
C1_BSEG_DEAL_EXCP	CALL_SEQ	Calling Program Sequence
	COMMENTS	Comments
	CRE_DTTM	Create Date/Time
	EXP_MSG	Message
	MESSAGE_CAT_NBR	Message Category
	MESSAGE_NBR	Message Number
	MESSAGE_PARM1	Parameter 1
	MESSAGE_PARM2	Parameter 2
	MESSAGE_PARM3	Parameter 3
	MESSAGE_PARM4	Parameter 4
	MESSAGE_PARM5	Parameter 5
	MESSAGE_PARM6	Parameter 6
	MESSAGE_PARM7	Parameter 7
	MESSAGE_PARM8	Parameter 8
	MESSAGE_PARM9	Parameter 9
	REVIEW_COMP	Reviewed

Table	Column	Column Description
	REVIEW_DT	Review Date
	REVIEW_USER_ID	Review User
	USER_ID	User
	VERSION	Version
C1_BSEG_DEAL_EXT	VERSION	Version
C1_BSEG_DEAL_ITEM	END_DT	End Date
	SEQNO	Sequence
	START_DT	Start Date
	VERSION	Version
C1_BSEG_DEAL_K	ENV_ID	Environment ID
C1_BSEG_DEAL_MSG	VERSION	Version
C1_BSEG_DEAL_READ	SEQNO	Sequence
	VERSION	Version
C1_BSEG_DEAL_SQ	VERSION	Version
C1_DEAL_PRICELIST_K	ENV_ID	Environment ID
C1_DEAL_PRICELIST_L	DESCR	Description
	DESCRLONG	Detailed Description
	LANGUAGE_CD	Language
	VERSION	Version
C1_MODEL_SQI	CURRENCY_CD	Currency Code

D.1.7   Column Format Change

None

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 V4.4.0.2.0 database.

D.2.1   Algorithms

The following algorithms are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Algorithm	Description
F1_VALURIIWS	Validate URI Component of IWS records
F1-CALDDETBO	Determine Calendar Dimension BO
F1-CALDT-PR	Create Calendar Dimension Record
F1-CALDT-SR	Select Calendar Date Details for Input Date Range
F1-CVGENVALP	Entity Validation Process Record
F1-CVGENVALS	Entity Validation Select Records
F1-CVGENXMLP	XML Resolution Process Record
F1-CVGENXMLS	XML Resolution Select Records
F1-HCBLOS	Batch Level Of Service
F1-MKTMSGINF	Market Message Information
F1MKTPEVTINF	Market Process Event Information
F1-MKTPRCINF	Market Process Information
F1-PFTY-VAL	Validate Process Flow Type
F1-TIMDDETBO	Determine Time Dimension BO
F1-TIME-PR	Create Time Dimension Record
F1-TIME-SR	Select Time Details
F1-URICMPFMT	Format URI Component
F1-VALURICMP	URI Component Validation

D.2.2   Algorithm Types

The following algorithm types are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Algorithm Type	Description
F1_VALURIIWS	Validate URI Component of IWS records
F1-CALDT-PR	Create Calendar Dimension Record
F1-CALDT-SR	Select Calendar Date Details for Input Date Range
F1-CVGENVALP	Entity Validation Process Record
F1-CVGENVALS	Entity Validation Select Records
F1-CVGENXMLP	XML Resolution Process Record
F1-CVGENXMLS	XML Resolution Select Records
F1-HCBLOS	Batch Level Of Service
F1-MKTMSGINF	Market Message Information
F1MKTPEVTINF	Market Process Event Information
F1-MKTPRCINF	Market Process Information
F1-PFTY-VAL	Validate Process Flow Type
F1-TIME-PR	Create Time Dimension Record
F1-URICMPFMT	Format URI Component
F1-VALURICMP	URI Component Validation

D.2.3   Zones

The following zones are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Zone	Description
F1-CALENDDMN	Calendar Dimension
F1-IMMSGLOG	Inbound Market Message Log
F1-INVMOBAPP	Invite User to Mobile Application
F1-MKTCFGD	Market Configuration
F1-MKTCFGLST	Market Configuration List
F1-MKTCFGSRC	Market Configuration Search
F1-MKTMSGQ	Market Message Search
F1-MKTMSGQ1	Market Message Type
F1-MKTMSGQ2	Reference Number

Zone	Description
F1-MKTMSGTYP	Market Message Type
F1-MKTPEVLG	Market Process Event Log
F1-MKTPEVRO	Related Objects
F1-MKTPEVTDT	Market Process Event
F1-MKTPRCLG	Market Process Log
F1-MKTPRCQ	Market Process Search
F1-MKTPRCQ1	Market Process Type
F1-MKTPRDTL	Market Process
F1-MMDTLDISP	Market Message
F1-MMSGSTATS	Retrieve Market Message BO States
F1-MMTYPSRCH	Market Message Type Search
F1-MNGCTQ1	Managed Content Information
F1-MOBLOG	Mobile Log
F1-MPRCSTATS	Retrieve Market Process BO States
F1-MPTYPSRCH	Market Process Type Search
F1-MSGTYPLST	Market Message Type List
F1-OMMSGLOG	Outbound Market Message Log
F1-SDR-APS	Application Services
F1-TIMEDMN	Time Dimension
F1-UGASLNK	Application Services Linked
F1-UGASULK	Application Services Not Linked
F1-USRGRPS	User Groups
F1CALENDATE	Calendar Date
F1MKTPRTYL	Market Process Type List
F1MKTPRTYP	Market Process Type
F1MMOTRLOB	Other Related Objects
F1MMRELOBQRY	Related Market Messages and Processes
F1PROTRLOBJ	Other Related Objects
F1PRRELOBJ	Related Market Messages and Processes
F1PRRELPR	Related Processes

D.2.4   UI Maps

The following UI maps are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

UI Map	Description
F1-AddMktMsgLog	Market Message - Add User Log Entry
F1-AddMktPrcEvtLg	Market Process Event - Add User Log Entry
F1-AddMktProcLog	Market Process - Add User Log Entry
F1-CurrentToDo	Set current To Do
F1-IsCloud	Is Cloud
F1-MDTCloudLogFilter	Mobile Device Terminal Cloud Log Filter
F1-MktMsgTypeQueryFilter	Market Message Query Filters - By Type
F1-MobAppInviteContext	Mobile Application Invite (Context Map)
F1-ProcTypeQueryFilter	Market Process Query Filters
F1-ProcessFlowLogAdd	Process Flow - Add User Log Entry
F1-RecordActions2Fusion	BO Next Actions Fragment (For Inclusion)
F1-RefNumQueryFilter	Market Message Query Filter - By Reference

D.2.5   Maintenance Objects

The following maintenance objects are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Maintenance Object	Description
F1-CALENDDMN	Calendar Dimension
F1-MKTCFG	Market Configuration
F1-MKTMSGIN	Inbound Market Message
F1-MKTMSGOUT	Outbound Market Message
F1-MKTMSGTYP	Market Message Type
F1-MKTPRCEVT	Market Process Event
F1-MKTPRCTYP	Market Process Type
F1-MKTPROC	Market Process
F1-TIMEDMN	Time Dimension

D.2.6 To Do Types

None

D.2.7 Business Services

The following business services are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Business Service	Description
F1-CheckInstallMode	Check if the install mode is cloud
F1-CheckOnlineConnection	Check if Connection is Online or Batch
F1-GenericEntityValidation	Generic Entity Validation
F1-GetMobileAppBundle	Get Mobile App Bundle
F1-MMSGSTATS	Retrieve Market Message BO States
F1-MMTYPSRCH	Market Message Type Search
F1-MPRCSTATS	Retrieve Market Process BO States
F1-MPTYPSRCH	Retrieve Market Process Types
F1-RestIwsGetDetails	Rest IWS Get Details

D.2.8 Portals

The following portals are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Portal	Description
F1CALTMD	Calendar and Time Dimensions
F1INMM	Inbound Market Message
F1INMMLG	Inbound Market Message Log
F1INMRLOBJ	Inbound Market Message Related Objects
F1MKTCFG	Market Configuration
F1MKTCFS	Market Configuration Query
F1MKTMSG	Market Message Query
F1MKTPEV	Market Process Event
F1MKTPEVLG	Market Process Event Log
F1MKTPEVRO	Market Process Event Related Objects
F1MKTPR	Market Process
F1MKTPRCLG	Market Process Log

Portal	Description
F1MKTPRCRO	Market Process Related Objects
F1MKTPTY	Market Process Type
F1MMTYPE	Market Message Type
F1OTMRLOBJ	Outbound Market Message Related Objects
F1OUTMM	Outbound Market Message
F1OUTMMLG	Outbound Market Message Log
F1PRCQRY	Market Process Query
F1PROCFL	Process Flow Log
F1SYSDRV	System Data Review
F1UGAPSV	User Group Services Management

D.2.9   Business Objects

The following business objects are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Business Object	Description
F1-CalendarDimension	Calendar Dimension
F1-InboundMessageLite	Inbound Market Message - Main Fields
F1-MarketConfigPhysicalBO	Physical BO for Market Configuration
F1-MarketMessageTypeLite	Market Message Type - Main Fields
F1-MarketMessageTypePhysicalBO	Physical BO for Market Message Type
F1-MarketProcTypeBundlingAddBO	Bundling Add BO for Market Process Type
F1-MarketProcessLite	Market Process - Main Fields
F1-MarketProcessTypeLite	Market Process Type - Main Fields, Events
F1-MarketProcessTypePhysicalBO	Physical BO for Market Process Type
F1-MktPrcEventLite	Market Process Event - Main Fields
F1-MobileIdentityConfiguration	Mobile Identity Configuration
F1-OutboundMessageLite	Outbound Market Message - Main Fields
F1-RESTOwnerURLComponent	Owner Configuration for REST Services
F1-TimeDimension	Time Dimension

D.2.10 Lookups

The following lookups are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Field	Field Value	Description
F1_CAL_QUARTER_FLG	3	Q3
	1	Q1
	4	Q4
	2	Q2
F1_FISC_PERIOD_FLG	12	P12
	10	P10
	7	P07
	2	P02
	1	P01
	4	P04
	5	P05
	6	P06
	3	P03
	9	P09
	11	P11
	8	P08
F1_FISC_QUARTER_FLG	1	Q1
	3	Q3
	4	Q4
	2	Q2
F1_RESV_KEY_SRC_FLG	CONV	Conversion Staging
	SYNC	Synchronization Master Configuration
F1_WEEKDAY_FLG	4	Wed
	3	Tue
	5	Thu
	1	Sun
	6	Fri

Field	Field Value	Description
	7	Sat
	2	Mon
MKT_DATA_TYPE_FLG	MSG	Message Data
	RAW	Raw Data
	PRC	Process Data
MKT_EXEC_TYPE_FLG	MKTD	To Do
	MKIG	Ignore
	MKEX	Exception
MKT_REF_TYPE_FLG	F1CT	Customer Transaction Reference Number
	F1DR	Document Reference Number
	F1FN	File Name
	F1XR	Cross Reference Number
	F1TR	Transaction Reference Number
	F1OT	Original Transaction Reference Number
MKT_REL_OBJ_TYPE_FLG	F1PE	Market Process Event
	F1PR	Market Process
	F1IM	Inbound Market Message
	F1OM	Outbound Market Message
MKTMSG_FLOW_FLG	OUT	Outbound
	IN	Inbound
	OTH	Other
MKTMSGTYP_STAT_FLG	F1AC	Active
	F1IN	Inactive
MKTPROC_REL_TYPE_FLG	F1PT	Parent Process
	F1SB	Sibling Process
	F1CH	Child Process
MKTPROCTYP_STAT_FLG	F1AC	Active
	F1IN	Inactive
OPER_PARM_TYPE_FLG	PATH	Path
	QRY	Query

Field	Field Value	Description
PROD_STATUS_FLG	F1IN	Inactive
	F1AC	Active
VAL_ENT_OPT_FLG	F1VR	Validation Rules
	F1SC	Schema Validation

D.2.11 Foreign Key References

The following foreign key references are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Foreign Key Reference	Description
F1-MCFL	Market Configuration List
F1-MKTCF	Market Configuration
F1-MKTIN	Inbound Market Message
F1-MKTOM	Outbound Market Message
F1-MKTPR	Market Process
F1-MPEVT	Market Process Event
F1-MPTYP	Market Process Type
F1-MSGTP	Market Message Type
F1FD-BO	BO Option - Fiscal Details Script

D.2.12 Batch Controls

The following batch controls are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Batch Control	Description
F1-BICDD	Generate Calendar Dimension
F1-BITMD	Generate Time Dimension
F1-CVASG	Assign Production Keys Template
F1-CVCTS	Copy To Staging Template
F1-CVINS	Insert to Production Template
F1-CVVAL	Entity Validation Template
F1-CVXML	XML Resolution Template
F1-GEIXP	Generalized Initial Export Template

Batch Control	Description
F1-IMCRL	ILM Crawler - Inbound Market Message
F1-IPUM	Initialize Market Transaction Management
F1-MIMMN	Inbound Market Message Monitor
F1-MKCRL	ILM Crawler - Market Process
F1-MKMSO	Outbound Market Message Monitor
F1-MKPRP	Market Process Monitor
F1-MNTPL	Monitor Template
F1-MPECL	ILM Crawler - Market Process Event
F1-MPEVR	Market Process Event Monitor
F1-OMCRL	ILM Crawler - Outbound Market Message
F1-PFCRL	ILM Crawler - Process Flow
F1-SSCRL	ILM Crawler - Statistics Snapshot

D.2.13 Application Services

The following application services are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Application Service	Description
F1-ANALYBATCH	Analytics Batch
F1-CALENDARDIMENSION	Calendar Dimension MO
F1-CONVERSION	Conversion Batch
F1-DATAEXPORT	Data Export
F1-IMCRL	ILM Crawler - Inbound Market Message
F1-IPUM	Initialize Market Transaction Management
F1-MIMMN	Inbound Market Message Monitor
F1-MKCRL	ILM Crawler - Market Process
F1-MKMSO	Outbound Market Message Monitor
F1-MKPRP	Market Process Monitor
F1-MKTCFG	Market Configuration MO
F1-MKTMSGIN	Inbound Market Message MO
F1-MKTMSGOUT	Outbound Market Message MO
F1-MKTMSGTYP	Market Message Type MO

Application Service	Description
F1-MKTPRCEVT	Market Process Event MO
F1-MKTPRCTYP	Market Process Type MO
F1-MKTPROC	Market Process MO
F1-MPECL	ILM Crawler - Market Process Event
F1-MPEVRM	Market Process Event Monitor
F1-OMCRL	ILM Crawler - Outbound Market Message
F1-PFCRL	ILM Crawler - Process Flow
F1-SSCRL	ILM Crawler - Statistics Snapshot
F1-TIMEDIMENSION	Time Dimension MO
F1CALTMD	Calendar and Time Dimensions Portal
F1INMM	Inbound Market Message Portal
F1INVMOBAPP	Invite User to Mobile Application
F1MKTCFG	Market Configuration Portal
F1MKTCFS	Market Configuration Query Portal
F1MKTMSG	Market Message Query Portal
F1MKTPEV	Market Process Event Portal
F1MKTPR	Market Process Portal
F1MKTPTY	Market Process Type Portal
F1MMTYPE	Market Message Type Portal
F1OUTMM	Outbound Market Message Portal
F1PRCQRY	Market Process Query Portal
F1SYSDRV	System Data Review Portal
F1UGAPSV	User Group Services Management Portal

D.2.14 Characteristic Types

The following characteristic types are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Characteristic Type	Description
F1-URL	URI Component

D.2.15 Scripts

The following scripts are newly added in the Oracle Utilities Application Framework V4.4.0.2.0 database:

Script	Description
F1-AMktMsgLg	Market Message - Add User Log Entry
F1-AMktPEvLg	Market Process Event - Add User Log Entry
F1-AMktPrcLg	Market Process - Add User Log Entry
F1-CALDT-PR	Create Calendar Dimension Record
F1-CALDT-SR	Select Calendar Date Details for Input Date Range
F1-CurToDo	Set Current To Do Entry
F1-InvMobApp	Invite User to Mobile Application
F1-InvMobVis	Zone Visibility - Display Mobile Application Invite Zone in Dashboard
F1-InvUsrMob	Invite User to Mobile Application
F1-MktMsgInf	Market Message Information
F1-MktMsgTyM	Market Message Type - Maintain
F1-MktPrcInf	Market Process Information
F1-MobIdDis	Mobile Identity Configuration - Display
F1-MobIdMCfg	Mobile Identity Master Configuration
F1-MobIdPre	Mobile Identity Configuration - Pre-processing
F1-PFTY-VAL	Validate Process Flow Type
F1-PFUsrLgA	Process Flow - Add User Log Entry
F1-RetMMType	Retrieve Market Message Types
F1-RetMPType	Retrieve Market Process Types
F1-ShwDfltDt	Show Default Dates in Mobile Log Portal
F1-ShwModeZn	Zone Visibility - Display Zone based on Install Mode in Portal
F1-TIME-PR	Create Time Dimension Record
F1-UGApSvc	Link / Unlink Application Services to a User Group
F1-UGApSvcSS	Link / Unlink Application Services to a User Group
F1-URICmpFmt	Format URI Component
F1MKtPEvtMn	Market Process Event - Maintain
F1MktCfgMnt	Market Configuration - Maintain
F1MktMsgInMn	Inbound Market Message - Maintain
F1MktMsgOtMn	Outbound Market Message - Maintain

Script	Description
F1MktPEvtInf	Market Process Event Information
F1MktPrcMnt	Market Process - Maintain
F1MktPrcTyM	Market Process Type - Maintain
F1PrLoadGrvy	Preload Groovy Classes
F1_ValURICmp	URI Component Validation
F1_ValURIIWS	Validate URI Component of IWS records

Appendix E :   Oracle   Utilities   Application Framework System Table Guide

This section lists the system tables owned by Oracle Utilities Application Framework V4.4.0.2.0 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 of installation of the product. 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 updatable columns in these tables are 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
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 **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)
	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.
	Field Value (FIELD_VALUE)
	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.
	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, 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, CI_MSG, CI_MSG_L
Standard Data Fields	Message Category (MESSAGE_CAT_NBR) • 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. • Implementer Message Categories are 80000 and 90000 • Reserved for Tests – 99999 Message Number (MESSAGE_NBR) for message categories • Message numbers below 1000 are reserved for common messages. Implementers must not use message numbers below 1000. Message Number (MESSAGE_NBR) for Java message categories • Subsystem Standard Messages - 00001 thru 02000 • Reserved - 02001 thru 09999 • Published Messages - 10001 thru 11000 • Package Messages - 10001 thru 90000 • Reserved - 90001 thru 99999 • Each package is allocated 100 message numbers, each starting from 101. • 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. • 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, CI_MD_TBL_L, CI_MD_TBL_FLD_L, CI_MD_FLD, CI_MD_FLD_L, F1_DB_OBJECTS_REPO
Standard Data Fields	Table Name (TBL_NAME) Table names must match with the physical table name or view name in the database. 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. 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) Index Name for Primary Constraints <Index Name>Rnn for Foreign Key Constraints Where 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, CI_PORTAL_ZONE, C1_PORTAL_OPT, CI_ZONE, CI_ZONE_L, CI_ZONE_PRM, CI_ZONE_HDL, CI_ZONE_HDL_L, 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) • A new Zone can be added to the Product owned Portal Pages. • 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) 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, CI_SCR_CRT_GRP, CI_SCR_CRT_GRP_L, CI_SCR_DA, CI_SCR_FLD_MAP, CI_SCR_PRMPT, CI_SCR_PRMPT_L, 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, CI_TD_SRTKEY_TY, CI_TD_DRLKEY_TY, CI_TD_SRTKEY_TY_L
Standard Data Fields	**To Do Type** (TD_TYPE_CD)
Customer Modification	Creation Batch Code (CRE_BATCH_CD), Route Batch Code (RTE_BATCH_CD), 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, CI_XAI_CLASS, CI_XAI_CLASS_L, CI_XAI_ENV_HNDL, CI_XAI_ENV_HNDL_L, CI_XAI_FORMAT, CI_XAI_FORMAT_L, CI_XAI_RCVR, CI_XAI_RCVR_L, CI_XAI_RCVR_CTX, CI_XAI_RCVR_RSP, CI_XAI_RCVR_RGRP, CI_XAI_SENDER, CI_XAI_SERNDER_L, 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, 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.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 of 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 of 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_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
F1_MOBILE_COMPONENT	MG	Mobile Component
F1_MOBILE_COMPONENT_L	MG	Mobile Component Language
F1_MOB_COMP_CHAR	MG	Mobile Component Characteristics

Table Name	Upgrade Action	Description
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
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
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

Table Name	Upgrade Action	Description
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
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

Table Name	Upgrade Action	Description
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
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

Table Name	Upgrade Action	Description
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
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

Table Name	Upgrade Action	Description
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
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

Table Name	Upgrade Action	Description
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
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

Table Name	Upgrade Action	Description
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 V2.9.0.1.0 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 *ORMB V29010 Patch Guide (Doc ID: 2749067.1)* on My Oracle Support.

F.1   Applying a Rollup Pack

Once you install Oracle Revenue Management and Billing Version 2.9.0.1.0, you need to apply the rollup packs listed in *ORMB V29010 Patch Guide (Doc ID: 2749067.1)*. 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_V2.9.0.1.0_App_Rollup`, `RMB_V2.9.0.1.0_DB_Rollup`, and `RMB_V2.9.0.1.0_PFDs`.

3. Change to the `RMB_V2.9.0.1.0_DB_Rollup` folder using the following command:

    AIX, Linux:

    `cd <DESTINATION_FOLDER_1>/RMB_V2.9.0.1.0_DB_Rollup`

    Windows:

    `cd <DESTINATION_FOLDER_1>\RMB_V2.9.0.1.0_DB_Rollup`

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

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

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

Appendix 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](#)
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- antlr4-runtime-4.5.3.jar
- antlr-runtime-3.2.jar

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- castor-xml-1.4.1.jar
- castor-xml-schema-1.4.1.jar
- cglib-3.2.4.jar
- commonj-12.1.3.0.0.jar
- commons-beanutils-1.9.3.jar
- commons-cli-1.3.1.jar
- commons-codec-1.9.jar
- commons-codec-1.12.jar
- commons-collections-3.2.2.jar
- commons-collections4-4.3.jar

- commons-fileupload-1.3.3.jar
- commons-io-2.6.jar
- commons-lang-2.2.jar
- commons-lang3-3.4.jar
- commons-logging-1.2.jar
- ehcache-core-2.5.2.jar
- fontbox-2.0.16.jar
- fop-2.4.jar
- groovy-2.4.12.jar
- groovy-xml-2.4.12.jar
- httpclient-4.5.5.jar
- httpcore-4.4.9.jar
- jackson-annotations-2.8.5.jar
- jackson-annotations-2.9.8.jar
- jackson-core-2.8.5.jar
- jackson-core-2.9.8.jar
- jackson-databind-2.8.5.jar
- jackson-databind-2.9.8.jar
- jettison-1.3.8.jar
- log4j-1.2.17.jar
- log4j-api-2.11.0.jar
- log4j-core-2.11.0.jar
- log4j-slf4j-impl-2.11.0.jar
- poi-4.1.0.jar
- poi-examples-4.1.0.jar
- poi-excelant-4.1.0.jar
- poi-ooxml-4.1.0.jar
- poi-ooxml-schemas-4.1.0.jarx
- poi-scratchpad-4.1.0.jar
- serializer-2.7.2.jar
- velocity-1.7.jar
- xalan-2.7.2.jar
- xercesImpl-2.12.0.jar
- xml-apis-1.4.01.jar
- xml-apis-ext-1.3.04.jar
- xmlgraphics-commons-2.4.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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swagger-ui.js

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