Oracle Enterprise Taxation and Policy Management

Database Administrator's Guide

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Oracle Enterprise Taxation and Policy Management Database Administrator's Guide

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Preface

This guide provides instructions for installing and maintaining the database for Oracle Enterprise Taxation and Policy Management .

This preface contains these topics:

- **Audience**

- **Related Documents**

- **Updates to this Documentation**

- **Conventions**

Audience

Oracle Enterprise Taxation and Policy Management Database Administrator's Guide is intended for database administrators who will be installing and maintaining the database for Oracle Enterprise Taxation and Policy Management .

Related Documents

For more information, see these Oracle documents:

- *Oracle Enterprise Taxation and Policy Management Quick Install Guide*

- *Oracle Enterprise Taxation and Policy Management Installation Guide*

Updates to this Documentation

This documentation is provided with the version of the product indicated. Additional and updated information about the operations and configuration of the product is available from the Knowledge Base section of My Oracle Support (http://support.oracle.com). Please refer to My Oracle Support for more information.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1

Database Overview

This section provides an overview of the Oracle Enterprise Taxation and Policy Management database, including:

- **Supported Database Platforms**
- **Database Maintenance Rules**

Supported Database Platforms

This section defines the platforms on which Oracle Enterprise Taxation and Policy Management is verified to operate.

Supported Platforms Summary Table

Oracle Enterprise Taxation and Policy Management is certified on the following platforms:

Platform	Database Version
AIX 6.1 TL4 (POWER 64-bit)	Oracle Database Server 11.2.0.1 (64-bit)
Oracle Linux 5.5 (64-bit) x86_64 (64-bit)	Oracle Database Server 11.2.0.1 (64-bit)
Red Hat Enterprise Linux 5.5 (64-bit) x86_64 (64-bit)	Oracle Database Server 11.2.0.1 (64-bit)
Solaris 10 (SPARC 64-bit)	Oracle Database Server 11.2.0.1 (64-bit)
Windows Server 2008 R2 Windows Server 2008 SP2 (x86_64 64-bit)	Oracle Database Server 11.2.0.1 (64-bit)

Note: Oracle Enterprise Taxation and Policy Management is tested on both Oracle Database Enterprise Edition and Standard Edition. Some features, such as Advanced Compression and Partitioning, require the Enterprise Edition.

Refer to My Oracle Support for additional details.

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 Enterprise Taxation and Policy Management 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 Enterprise Taxation and Policy Management production environment.

The exceptions from this rule are Hibernate software version 3.3.2 ga and the Oracle Client version 11.2.0.1 or 11.2.0.2. These versions should not be upgraded.

Always contact Oracle Enterprise Taxation and Policy Management support prior to applying vendor updates that do not guarantee backward compatibility.

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 of these components is outlined in the installation section of this document.

What Changes Are Permitted

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.

- 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 (that is, 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.

What Changes Are Not Permitted

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 (altered, removed or added).

  - 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.

Chapter 2

Database Installation

This section provides the steps required to install or upgrade the Oracle Enterprise Taxation and Policy Management database, including:

- **Installation Overview**
- **Installing the Oracle Database**

Installation Overview

> **Note:** Refer to the *Oracle Enterprise Taxation and Policy Management Installation Guide* for the hardware and software versions required for the installation on Unix or Windows. This installation is for Oracle Enterprise Taxation and Policy Management v2.3.1 and the upgrade of Oracle Enterprise Taxation and Policy Management v2.3.0 to v2.3.1.

The following type of installation is available for Oracle Enterprise Taxation and Policy Management :

- **Initial Install** - a database populated with ETPM metadata.

- **Upgrade Install** - a database upgrade.

- **Demo Install** - a database populated with demo data.

> **Note:** The database installation requires a supported version of the Java Development Kit to be installed on the Windows desktop where the install package is staged and run from. Refer to the Supported Platform section of the *Oracle Enterprise Taxation and Policy Management Installation Guide* for the required version of Java.

For an Initial Install or Demo Install you will create an empty database on the Unix or Windows server and then populate the database with data. For a database Upgrade Install you will upgrade your current Oracle Enterprise Taxation and Policy Management database.

Review the Storage.xml file prior to Initial Install or Upgrade Install. Information in this file is used by CDXDBI while installing and upgrading the Oracle Enterprise Taxation and Policy Management database objects. Refer to **Updating Storage.xml** on page 3-4 for more details on updating this file.

For optimum storage allocation, database administrators should create multiple tablespaces with extents sized to store different types of tables/indexes. They can then edit this file before each upgrade and install process, to spread tables and indexes across these tablespaces. Tables and indexes can be created in parallel by editing the degree of parallelism.

Tablespace, storage options, securefile options, Advanced Compression, and parallel information are used only for new objects. Therefore, for initial installs, information for each object should be reviewed. For upgrades, only tablespace information for objects added in the current release needs to 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.

Installing the Oracle Database

This section outlines the process for installing the Oracle Database for Oracle Enterprise Taxation and Policy Management . It contains the following topics:

- **Database Scripts and Utilities**

- **Initial Installation**

- **Upgrade Install**

- **Demo Install**

- **Security Configuration**

- **Populating Language Data**

- **Installing Service Packs and Patches**

> **Note:** The installation tools outlined in this guide run on Windows and UNIX/Linux only. Please refer to **Supported Database Platforms** on page 1-2 for more information on supported platforms.

Database Scripts and Utilities

Follow these steps before you begin installing the database:

1. Set up a Microsoft Windows desktop with the Oracle Client (32-bit) installed and make sure you can connect to database which will be used for the install or upgrade.

2. Unzip the database.zip file to a Windows desktop. The database folder contains several files that will be referred to in the installation process.

3. You must have a supported version of the Java Development Kit installed on the Windows desktop where you stage and run the database installation package. Refer to the *Oracle Enterprise Taxation and Policy Management Installation Guide* for more information.

Initial Installation

This section describes the initial installation of the database.

Create Database

The Initial installation requires the following items to be installed before the installation can be started:

- An empty database must be created. Site standard techniques or tools should be used to create the database. The following example templates for creating the database are located under the relevant database version subdirectory of the "Database Creation\11g":

  - createdb.sql - Create Database

  - createdbcatalog.sql - Build database catalog tables.

  - createdbfiles.sql - Create data files for tablespaces

    You must update the storage.xml file located in the Install-Upgrade folder to match the tablespace names used in createdbfiles.sql

  - init.ora - Sample initialization parameters for the database

  - createcdxusers.sql - Create users

    It is strongly recommended to change the default users and roles to satisfy security requirements.

  - restartdb.sql - DB restart

> **Note:** Please copy the above files before you make any edits for site specific changes.

The CDXDBA utility provided in the Database Creation folder may be used to automate the process. See **Database Creation** on page 2-7 for more details. For an initial install, do not import the demo install data when you create the database.

Install the Database

The files for the Initial Install of Oracle Enterprise Taxation and Policy Management v2.3.1 are located in the Install-Upgrade folder.

You will need the following information to successfully execute CDXBI:

- The database system user password.

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

- The password for the application schema owner (for example, CISADM).

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

- A 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/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 for TUGBU jar files. The Jar files are bundled with the database package and can be found under \install-upgrade\jarfiles folder.

- Java Home (For example, C:\Java\jdk1.6.0_18)

To install the ETPM database:

1. Run CDXDBI.exe from under the Install-Upgrade folder. The utility prompts you to enter values for the following parameters:

   - The name of the target database.

   - The password for the SYSTEM user account in the database (in silent mode).

   - The name of the owner of the database schema.

   - The location of Java Home. (No spaces are allowed in the directory name.)

   - The location of TUGBU Jar files. (No spaces are allowed in the directory name.)

   - The password for the owner of the database schema. (Password is entered in silent mode.)

   - The Oracle user with read-write privileges to the database schema.

   - The Oracle user with read-only privileges to the database schema.

   - The Oracle database role with read-write privileges to the database schema.

   - The Oracle database role with read-only privileges to the database schema.

2. This utility populates the schema with the initial install data. 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.

CDXDBI 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, password of the SYSTEM account in the database, 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).

- Connects to the database as SYSTEM account, checks whether the user already has the application schema installed to verify whether this is an initial installation.

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

- Installs the schema, installs the system data, and configures security.

- Maintains install log tables in the database.

- Updates release ID when the install 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 CDXDBI###.log are created in the same folder as CDXDBI 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, CDXDBI 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.

Post-Install Tasks:

Refer to **Populating Language Data** on page 2-10 if the application is to run in a language other than English.

Database Statistics Generation

Before starting to use the database, generate the complete statistics for these new objects using the DBMS_STATS package.

Upgrade Install

The following section assumes an existing Oracle Enterprise Taxation Management installation on top of an Oracle Utilities Application Framework installation. Refer to the *Quick Install Guide* for supported upgrade paths.

If you are planning to upgrade ETPM and patches are installed past V2.3.0 SP1, contact Oracle Customer Support and provide a list of the single fixes that have been installed (<SPLEBASE>/etc/installed_fixes).

The files for the Upgrade Install of Oracle Enterprise Taxation and Policy Management v2.3.1 are located in the Install-Upgrade folder.

Install the Database

The following process will upgrade the system data to v2.3.1.

You will need the following information to successfully execute CDXBI:

- The database system user password.

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

- The password for the application schema owner (for example, CISADM).

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

- A 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/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).

- The location for TUGBU jar files. The Jar files are bundled with the database package and can be found under \install-upgrade\jarfiles folder.

- Java Home (For example, C:\Java\jdk1.6.0_18)

To upgrade the database:

1. Review and edit the Storage.xml file to set the various options as described in **Updating Storage.xml** on page 3-4.

   For optimum storage allocation, DBAs should create multiple tablespaces with extents sized to store different types of tables/indexes. They can then edit this file before each upgrade and install process, to spread the tables and indexes across these tablespaces. Tables and indexes can be created in parallel by editing degree of parallelism, it is set to 1.

   The information is used only for new objects. Refer to the New Tables section in **Schema Change** on page A-3 for the new tables in v2.3.1.

2. Run CDXDBI.exe. The utility prompts you to enter values for the following parameters:

   - The name of the target database.

   - The password for the SYSTEM user account in the database. (Password is entered in silent mode.)

   - The name of the owner of the database schema.

   - The location of Java Home. (No spaces are allowed in the directory name.)

   - TUGBU Jar files location. (No spaces are allowed in the directory name.)

   - The password for the owner of the database schema. (Password is entered in silent mode.).

   - The Oracle user with read-write privileges to the database schema.

   - The Oracle user with read-only privileges to the database schema.

   - The Oracle database role with read-write privileges to the database schema.

   - The Oracle database role with read-only privileges to the database schema.

3. The utility at this point is ready to perform the upgrade install and prompts you for permission to start the process.

4. The utility upgrades the schema and the 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.

CDXDBI 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, password of the SYSTEM account in the database, 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).

- Connects to the database as SYSTEM account, checks whether the user already has the application schema installed to verify whether this is an upgrade installation.

- Verifies whether the upgrade path from the current release id to the target release id is supported by the upgrade.

- Verifies whether the tablespace names already exist in Storage.xml file (the process aborts, if not).

- Upgrades the schema, upgrades 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 CDXDBI###.log are created in the same folder as CDXDBI 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, CDXDBI 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 feature configuration table. The password will be stored in encrypted format.

Post-Install

Refer to the **Populating Language Data** on page 2-10 if the application is to run in a language other than English.

Database Statistics Generation

During an install process, new database objects may be added to the target database. Before starting to use the database, generate the statistics for these new objects.

Environment Registration

> **Note:** If the target database is registered as a configuration laboratory or archiving database in another database, or another database has been registered as a configuration laboratory or archiving database in this database, it is required that you upgrade the registration at this stage.

The detailed instructions for environment registration can be found in the Oracle Enterprise Taxation and Policy Management user documentation. Please refer to this documentation before executing the environment registration utility EnvSetup.exe included in the post-install folder.

Demo Install

A demo installation consists of creating the database then importing the demo data.

Database Creation

> **Note:** The Unix and Windows installer will create an empty database and one tablespace for storing the application objects before running the install. The default name of the application tablespace is CISTS_01. If you do not use the default name or want to spread application objects

across multiple tablespaces, you must create the tablespaces of your choice and edit the Storage.xml file, supplied with the install package, before starting the installation process.

You should update the statistics after successful importing the demo data. Use the following code as an example:

```
BEGIN
SYS.DBMS_STATS.GATHER_SCHEMA_STATS (
OwnName => 'CISADM'
,Degree => 4
,Cascade => TRUE
,No_Invalidate => FALSE
,Method_opt => 'FOR ALL COLUMNS SIZE AUTO' ); END;
```

Importing Demo Data in an Existing Database

The demo database can be imported into an existing database using the database data pump import utility. Before importing the data, create the required database users and roles. Refer to the example template script createcdxusers .sql under the database creation folder to create users and roles. After creating the users and roles, use the datapump utility to import the exp_demo.dmp found under database creation folder. Once the dump file is imported, generate the required permissions by executing Oragensec utility. Refer to **Security Configuration** on page 2-10 section for more information.

UNIX

The database creation files are located in the DatabaseCreation folder.

1. FTP the contents of the Database Creation folder to a temporary directory on the UNIX server.

2. To create the database set the ORACLE_HOME and ORACLE_BASE variables.

3. Execute the utility cdxdba.plx by entering following command:

    ```
    perl cdxdba.plx
    ```

4. The script will prompt for parameter values:

    *   Enter the instance name (DEMO): DEMO

    *   Enter ORACLE_BASE: the directory where the setup files for the database will be created (/orasw/app/oracle):

    *   Enter ORACLE_HOME: the folder where the current version of Oracle software is installed (/orasw/app/oracle/product/10203):

    *   Enter ORACLE_DATA: the directory where the data files for the database will be created (/db05/oradata):

    *   Enter the character set for the database (AL32UTF8):

        Note: AL32UTF8 is the recommended database character set. The application also supports character sets for multi-languages.

5. Enter the values based on the settings of your database server. You can also accept the default values displayed if they match your database server settings. You will be prompted to confirm the settings and select Y or N to create the database.

    ```
    ORACLE_SID: DEMO
    ORACLE_HOME: /orasw/app/oracle/product/11201
    ORACLE_BASE: /orasw/app/oracle
    ORACLE_DATA: /db05/oradata
    Character Set: AL32UTF8
    Do you want to continue (Y/N)?
    ```

6. Once the database has been created, you will be prompted with the questions:

```
Do you want to import a demo database dump into
this database (Y/N)?
```

- For in initial install, select N to exit the database utility. Follow the steps in **Initial Installation** on page 2-3 to complete the initial installation.

- For a demo install, select Y to import the Demo Install data.

For the Demo Install use the dump file exp_demo.dmp. This file needs to be copied from the database creation folder to the directory pointing to data_pump_dir ORACLE_BASE/ admin/<ORACLE SID>/dpdump. For example:

```
/orasw/app/oracle/admin/DEMO/dpdump.
```

- Enter the name of the dump file (exp_demo.dmp):

- Enter the name of the dump file directory (data_pump_dir):

- Enter the name of the log file (exp_demo.log):

```
Ready to import the CISADM schema into the database,
do you want to continue (Y/N)? Y
```

> **Note.** Update the oratab, tnsnames.ora and listener.ora files for the new database and check the connectivity to this database from another server and from your desktop.

Windows

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

1. To create a database, run the utility CDXDBA.exe located in the Windows folder.

   The utility will display a list with the following options:

   E - Export a schema from the database

   R - Refresh a schema with a database dump.

   C - Create/Recreate a local database.

   H - See help for the command line options.

   Q - Quit.

2. Select option C to create an empty database on your machine.

   Follow the prompts to complete the install.

3. Once the database has been created select R - Refresh a schema with a database dump file to load the Demo Install data.

   > **Note:** Do note load the demo install data for an initial install. Follow the steps in **Initial Installation** on page 2-3 to complete the initial installation

Option R causes the utility to drop all the objects from the schema and import the schema from a database dump file.

For the Demo Install use the dump file exp_demo.dmp. This file needs to be copied from the database creation folder to the directory pointing to data_pump_dir (, ORACLE_BASE\admin\<ORACLE SID>\dpdump\). For example, c:\oracle\admin\DEMO\dpdump.

> **Note:** Update the oratab, tnsnames.ora and listener.ora files for the new database and check the connectivity to this database from another server and from your desktop.

Security Configuration

The configuration utility and scripts are located in the Security folder.

Execute the OraGenSec.exe utility.

The script will prompt you for parameter values:

```
Enter the application read-only user or Schema Owner in the
database (e.g CISADM or CISREAD): CISADM

Enter the password for the user: CISADM

Enter the name of the Oracle Database: database name

Enter a comma-separated list of Oracle users in which synonyms need
to be created (e.g. cisuser,cisread): cisuser,cisread

Select the following options: A
(A/a): Generate security for All objects in the Database (e.g. A or
a for all objects)
(O/o): Generate security for specific Objects inputted in this
terminal (e.g. CI_ACCT,CI_ACCT_K)
Generate security for specific objects generated from an input File
(e.g. Security_Objects.txt)
```

The utility configures security for the application owner schema objects.

> **Note:** If you run Oragensec in Interactive Mode (without using the command
> line options), it will by default grant permissions to CIS_USER and
> CIS_READ Role. If you prefer to use site-specific roles then execute
> Oragensec after providing command line options.
>
> For example:

```
(Oragensec.exe -d [Schema Owner],[Schema Owner's
Password],[Database Name] -u [Read/Write User],[Read Only User] -r
[Read Only Role],[Read Write Role] -a A -l [Logfile Name)
```

> **Note:** Database vault must be disabled before running

Post-Install

Configure the security for the database. Refer to **Security Configuration** on page 2-10.

Refer to the **Populating Language Data** on page 2-10 if the application is to run in another language other than English.

Populating Language Data

At this point, the Oracle Enterprise Taxation and Policy Management database is ready for use. 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."

You can also install the language specific data packages (if available) into the database. Please contact your Oracle representative to receive information on these packages

Installing Service Packs and Patches

Periodically, Oracle Enterprise Taxation and Policy Management 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.

Between services packs, Oracle Enterprise Taxation and Policy Management releases patches to fix individual bugs. For information on installing patches, see knowledge base article ID 974985.1 on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support (https://support.oracle.com/).

Chapter 3

Database Design

This section provides a standard for database objects such as tables, columns, and indexes, for products using the 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**

Database Object Standard

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

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. See **Indexes** on page 3-3 for more information.

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 prefix 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. 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_FLD) 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. Prior to Version 4.1.0 of the framework the leading character of the base Owner Flag was used. From 4.1.0 on the first two characters of product's owner flag value should be used. For client specific implementation of index, use CM for Owner Flag.

- 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

- CMT206S2

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

Sequence

The base sequence name must be prefixed with the owner flag value of the product. The sequence numbers should be named as follows:

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, Framework its F1. 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, the framework is F1. 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, the framework is F1. Other examples are M1,C1,D1,D2, etc.

   For Example: F1FKVALID_SEQ

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.

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 cdxdbi 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 has to be adjusted 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 initial installs, information for each object should be reviewed by a DBA. For upgrades, 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.

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.

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.

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.

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.

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.

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.

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.

Null Column Support

Oracle Utilities Application Framework 4.1.0, Group Fix 2, 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 added to FW410 Group Fix 2 fixes the metadata to make sure that the existing tables will not be affected.

This new feature only supports tables maintained by Java. Thus, enhancing any existing tables to use null columns must be done only after making sure that the tables are maintained by Java, and not COBOL.

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.

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.

Foreign Key Constraints

Referential integrity is enforced by the application. In the database do not define FK constraints. Indexes are created on most of Foreign Key columns to increase performance.

Standard Columns

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

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.

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 irrespective of the language used (COBOL or JAVA).

Chapter 4

Database Implementation Guidelines

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

- **Configuration Guidelines**

  Note: Refer to My Oracle Support for more information.

Configuration Guidelines

This section includes 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.

Index Recommendations

Consider the following recommendations 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.

2. The foreign keys on a table should be indexes.

In an Oracle Utilities Application Framework environment, always make sure that the optimization parameters are set as follows:

```
optimizer_index_cost_adj=1
optimizer_index_caching=100
```

This will make sure that the optimizer gives a higher priority to index scans.

Table Partitioning Recommendations

As the number of batch threads increases, you may want to partition some tables and indices to achieve higher scalability. Monitor the AWR or statspack wait events and if you are observing significant buffer busy waits or GC waits then you should consider partitioning. Consider the following partitioning guidelines:

- Partition high volume transactional tables that use randomly generated Primary Key (PK) IDs (such as CI_TAX_FORM, CI_TAX_FORM_LOG, CI_FT) by range on the PK_ID. Create indexes that have the PK_ID as the leading column as LOCAL indexes, all other indexes should be GLOBAL.

- Ideally, the number of partitions created should be a multiple or divisor of the number of threads you are running the job with. For example, if you plan to submit jobs with 16 threads using 2 Thread pool workers, a good number of partitions my be 4, 8 or 16. Remember that when you want to add threads you should maintain the ratio of threads to partitions, so if you expect to grow by one thread pool worker with 8 threads, starting with 8 partitions may be better choice than 16.

- If you are using a RAC database, each thread pool worker process should be configured to point to a specific RAC instance (in other words, do not use load balancing). This will help minimize Global Cache synchronization by aligning threads to instances and instances to partitions.

Because jobs such as deferred tax monitor divide the work among the threads using contiguous PK ID ranges, following these recommendations will significantly reduce contention in the buffer cache (buffer busy waits and GC waits) by ensuring that each thread operates against a limited number of partitions.

For tables that use a sequential PK ID (such as CI_FORM_UPLD_STG) range based partitioning is not effective, so use hash partitioning on the PK to randomly distribute the requests. More partitions may be required to effectively reduce contention on these tables.

Transparent Data Encryption Recommendations

Oracle Utilities supports Oracle Transparent Data Encryption (TDE). Oracle 11gR1 supports tablespace level encryption. 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.

Data Compression Recommendations

Oracle Utilities supports Advanced Data Compression. This is available from Oracle 11gR1 onwards. Compression reduces the database storage footprint. Make sure that your resources are sufficiently sized for this as it involves additional hardware utilization from the system.

- Compression can be enabled at the Tablespace level or at the Table level.

- All CLOB fields should be stored as SecureFiles with Medium compression.

- All current month partitions should remain uncompressed.

For Non-Exadata hardware you can use any compression method to compress historic data. For Exadata hardware the historic data should be compressed with HCC compression using the QUERY HIGH method.

A separate license is required for using Advanced Data Compression. As a part of the Schema creation we create the product-owned tables with compression turned OFF. If you have the license then you can enable compression.

Database Vault Recommendations

We support Database Vault from the Oracle Utilities Application Framework 4.1.0. 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. Configuration is also supported beginning with the Oracle Utilities Application Framework 4.1.0 patch application with Database Vault.

Storage Recommendations

This section specifies recommended options for storing the database objects.

SecureFile for Storing LOBs

Beginning with Oracle 11g, tables having fields with data type of CLOB or BLOBS should have the LOB Columns stored as SecureFiles.

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

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

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

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

- For SecureFiles, make sure that the initialization parameter db_securefile is set to PERMITTED (the default).

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

    Note: To enable compression on SecureFiles, you must have an Oracle Advanced Compression license in addition to Oracle Database Enterprise Edition. This feature is not available for the standard edition of the Oracle database.

    If you are using Oracle Database Enterprise Edition, please ensure that the "COMPRESS" flag is turned on by setting it to "Y" in Storage.xml.

See **Database Syntax** on page 4-5 for more information on SecurFiles.

Database Configuration Recommendations

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

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.

Frequent Log Switches impacts the IO performance and can be avoided by having a bigger Redo log File Size.

Database Syntax

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);
```

Database Initialization Parameters

The recommended Initialization Parameters are given below. These parameters are a starting point for database tuning. An optimal value for a production environment may differ from one customer deployment to another.

db_block_size=8192

log_checkpoint_interval=0

db_file_multiblock_read_count=8

transactions=3000

open_cursors=3000

db_writer_processes=12

optimizer_index_cost_adj=1

optimizer_index_caching=100

db_files=1024

dbwr_io_slaves=10   (Only if Asynchronous IO is not Supported)

sessions=4500

memory_target=0

memory_max_target=0

sec_case_sensitive_logon=FALSE

processes=3000

dml_locks=4860

memory_max_target=0

memory_target=0

Chapter 5

The Oracle Conversion Tool

This section explains how to set up the application database configuration in Oracle to run the Conversion Tool Kit, including:

- **Database Configuration**
- **Script Installation**
- **Preparing the Production Database**
- **Preparing the Staging Database**

Refer to the section" The Conversion Process" in the *Oracle Enterprise Taxation and Policy Management Administration Guide* and the online help for further information.

> **Note:** All database related single fixes and service packs need to be applied against the production schema. Staging schema should not be updated with database single fixes or service packs. Staging schema need to be rebuilt for any fixes that contain DDL to create new database objects in production schema.

Database Configuration

The Conversion Tool Kit requires at least two sets of schema. One is to hold the staging data that the conversion tool gets the data from and performs validations. We call this schema the staging database. The target schema, which is referred to as the production database, is where the conversion tool inserts the validated data. Both the production database and the staging databases can reside in a single Oracle database or in different databases that are connected via a database link. Only the single database configuration is supported.

The following schematic diagram shows a sample configuration of both the production and staging environments in which the Conversion Tool Kit operates. There is no limit to how many staging databases can be configured for one production database. However, the production and staging databases must be the same release level.
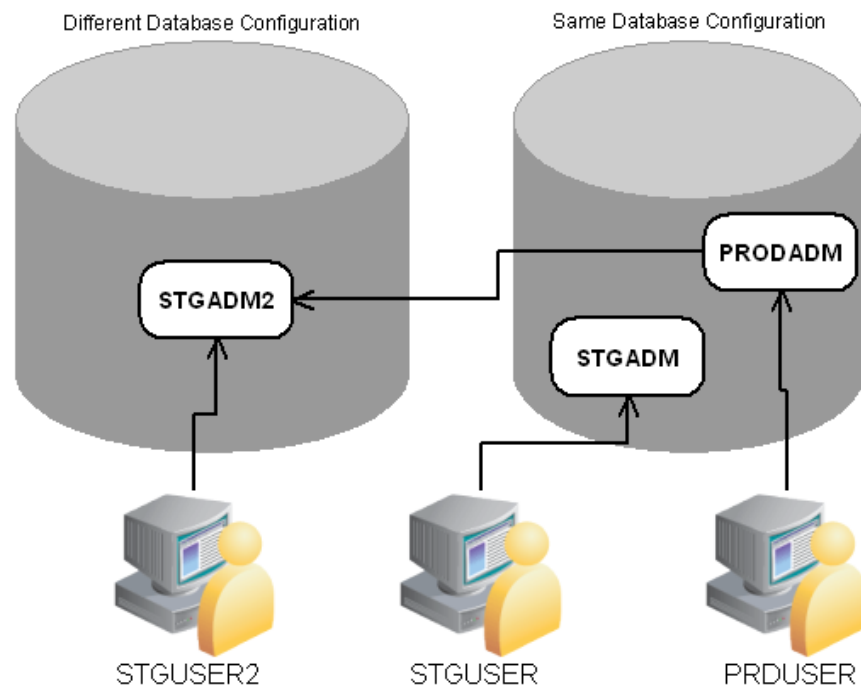
All the tables and views for the application are defined in the production database. The staging database has the same set of tables and views as the production database, except the tables that are grouped as part of the business configuration (control tables). Details on the differences of the tables of the two databases and of the conversion tool functionality are found in the Conversion Tool document.

Script Installation

With Oracle Enterprise Taxation and Policy Management v2.3.1 a new Conversion Setup Utility, ConvSetup.exe, is provided to set up conversion schemas.

1. Install the Oracle client V11g or later on Windows desktop and configure SQLNet to connect to the target database.

The Conversion folder contains the conversion setup utility: ConvSetup.exe and Conversion.bat.

This section of this document describes how to create the databases for the conversion tool kit.

Preparing the Production Database

If the production database does not exist create the database under the production schema owner (CISADM).

> If the production database is upgraded from the previous version of the application make sure all public synonyms that are created on the application tables are deleted. Instead, each application user should have private synonyms created on the application tables in order for the conversion tool configuration to work.

Preparing the Staging Database

Multiple staging databases can be set up to facilitate the conversion process if the customer data can be moved to the application in phases or concurrently by different project groups.

Once you have created a staging owner (STGADM), application user (STGUSER) and read access user (STGREAD), install the initial database option in the staging schema. The rest of the steps are listed below.

Run ConvSetup.exe from under the Conversion folder. The script prompts you for the following values:

- Database Platform: Oracle (O)
- Database connection info
- Database Name
- System Password
- Production Schema Name
- Staging Schema Name
- Read-Write user for Staging Schema.

ConvSetup.exe performs following tasks:

- Creates cx* views on the master/transaction tables in the production database.
- Grants the privileges on the master/transaction tables in the production database to the staging owner.
- Drops control tables and creates views on production control tables in the staging database.
- Grants privileges on the control tables to the staging owner.
- Grants privileges on the cx* views to the staging application user.
- Creates generated key tables.
- Creates generated table primary key and secondary indexes.

In addition to above tasks ConvSetup.exe also generates the following SQL scripts:

- create_cxviews.sql
- create_ctlviews.sql
- createck_tbls.sql
- create_grants.sql
- createck_pkix.sql
- createck_secix.sql

By default the conversion.bat updates all changes to the staging schema. If you want to generate only the above sql scripts and not apply changes to staging schema then update conversion.bat by removing "-u". The sql scripts can be applied to the staging schema later. The sqls scripts need to be executed in the same order as described above using SQL*PLus.

Once the staging schema has been set up, generate the security for the staging user using:

```
oragensec -d stgadm,schemapassword,database_name -r
 stg_read,stg_user -u stguser
```

Appendix A

Upgrades to the Oracle Enterprise Taxation and Policy Management Database

This document describes the database upgrade process for the Oracle Enterprise Taxation and Policy Management database from v2.3.0 to v2.3.1. It highlights changes made to the administrative tables and how those changes should be applied to the data in order for a v2.3.0 database to work with the v2.3.1 application, and to preserve the business logic implemented in the previous version of the application. The changes that do not require data upgrade are not described in this document. The tasks that need to be performed after running the upgrade scripts are included.

The added functionality of v2.3.1 is not the scope of this documentation. The upgrade scripts do not turn on the newly added functionality by default. For new functionality, refer the v2.3.1 Release Notes. See **New Tables** on page A-3 for a list of the new tables that are added in V2.3.1.

This section includes:

- **Automatic Data Upgrade**
- **After Upgrade System Configuration**
- **Schema Change**
- **New System Data**
- **Changed System Data**
- **Removed System Data**
- **Planned System Data Deprecation**
- **Planned Database Field Updates**

Automatic Data Upgrade

This section describes what the upgrade script will populate in new tables and columns to preserve the existing base product application functions of the previous version of Oracle Enterprise Taxation Management.

Characteristics

The characteristic entries for Person (CI_PER_CHAR), Location (CI_PREM_CHAR) and Customer Contact (CI_CC_CHAR) are updated to populate the SRCH_CHAR_VAL based on the appropriate characteristic value (CHAR_VAL, ADHOC_CHAR_VAL or CHAR_VAL_FKn).

Standard Form Lines

Form lines that currently reference a Related Form Field Name (RELATED_FLD_NAME) are updated to set the new FORM_LINE_MAPPING_FLG to Copy on Update (C1CU).

Form lines that currently reference a Related Form Field Name that is a foreign key to another table are updated to populate the BO_SCHEMA_USAGE_FLG to Data Type (C1DT) and to set appropriate FK_REF and UI_MAP_USAGE_FLG values.

- If RELATED_FLD_NAME is 'C1_FORM_SRCE_CD', the FK_REF is set to 'C1-FRMSC' and the UI_MAP_USAGE_FLG is set to Dropdown List (C1DD).

- If RELATED_FLD_NAME is 'ID_TYPE_CD' or 'SECONDARY_ID_TYPE_CD', the FK_REF is set to 'ID-TYPE' and the UI_MAP_USAGE_FLG is set to Dropdown List (C1DD).

- If RELATED_FLD_NAME is 'ACCT_ID', the FK_REF is set to 'ACCT' and the UI_MAP_USAGE_FLG is set to Input Field (C1IN).

- If RELATED_FLD_NAME is 'TAX_ROLE_ID', the FK_REF is set to 'C1-TXRL and the UI_MAP_USAGE_FLG is set to Input Field (C1IN).

- If RELATED_FLD_NAME is 'SA_ID', the FK_REF is set to 'SA' and the UI_MAP_USAGE_FLG is set to Input Field (C1IN).

Tax Type

Any tax type that references the C1-TaxTypeVariableCalendar as its lifecycle business object (LIFE_CYCLE_BO_CD), is updated to set the new EXTERNAL_USAGE_FLG to Optional (C1OP); set the new MAINT_OBL_FLG to Not Applicable (C1NA) and set the new CHNG_FIL_FREQ_OFF_CYCLE_FLG to Not Allowed (C1NA).

Tax Role

Any tax role that references the C1-TaxRoleVariableCalendar as its lifecycle business object (LIFE_CYCLE_BO_CD), is updated to set the status (BO_STATUS_CD) to EXPIRED if the record's end date is populated and in the past, otherwise the status (BO_STATUS_CD) is set to ACTIVE.

Tax and Registration Forms

Existing Tax Forms (CI_TAX_FORM) are updated to populate the Form Batch Header ID (FORM_BATCH_HDR_ID) by finding the form batch header linked to the form upload staging record that references this tax form id (TAX_FORM_ID). In addition, the new field TAX_FORM_AUTO_POST is updated to 'Y' for records in the READYFORPOST state and for forms that are in the PENDING state and where the FORM_BATCH_HDR_ID is populated.

Existing Registration Forms (CI_REG_FORM) are updated to populate the Form Batch Header ID (FORM_BATCH_HDR_ID) by finding the form batch header linked to the form upload staging record that references this registration form id (REG_FORM_ID).

Obligation Type Algorithms

Obligation types are updated to include new Close / Reactivate algorithms to maintain logic that was previously hard-coded.

- Any obligation type that has a special role (SPECIAL_ROLE_FLG) of Billable Charge (BC) is updated to include a new algorithm with the entity flag (SAT_ALG_ENTITY_FLG) of C1CR and ALG_CD of 'C1-CLSRC-BC'.

- Any obligation type that has Allow Billing (ALLOW_BILLING_SW) set to "Y" and does not have a special role (SPECIAL_ROLE_FLG) of Billable Charge (BC) is updated to include a new algorithm with the entity flag (SAT_ALG_ENTITY_FLG) of C1CR and ALG_CD of 'C1-CLSRC-SB'.

After Upgrade System Configuration

None.

Schema Change

New Tables

The following new tables are added to Oracle Enterprise Taxation Management V2.3.1.

Table	Description
C1_DRCT_DR_MNDT	Direct Debit Mandate
C1_DRCT_DR_MNDT_CHAR	Direct Debit Mandate Characteristics
C1_DRCT_DR_MNDT_K	Direct Debit Mandate Key
C1_DRCT_DR_MNDT_LOG	Direct Debit Mandate Log
C1_DRCT_DR_MNDT_LOG_PARM	Direct Debit Mandate Log Parameters
C1_TAX_ROLE_REL_TYPE	Tax Role Relationship Type
C1_TAX_ROLE_REL_TYPE_CHAR	Tax Role Relationship Type Characteristics
C1_TAX_ROLE_REL_TYPE_L	Tax Role Relationship Type Language
CI_TAX_ROLE_PER	Tax Role Related Person

New Views

None

Dropped Tables

None

Unsupported Tables

None

Added Columns

The following Table Columns are added to Oracle Enterprise Taxation Management V2.3.1

Table	Column	Required	Upgrade Notes
CI_CC_CHAR	SRCH_CHAR_VAL	Y	
CI_FILING_CAL	OVERLAPPING_PERIOD_DATES_FLG	N	
CI_FORM_LINE	BO_SCHEMA_USAGE_FLG	N	
CI_FORM_LINE	EXT_LKUP_BUS_OBJ_CD	N	
CI_FORM_LINE	FK_REF	N	
CI_FORM_LINE	FK_REF_TABLE	N	
CI_FORM_LINE	FORM_LINE_MAPPING_FLG	N	
CI_FORM_LINE	UI_MAP_USAGE_FLG	N	
CI_FORM_TY_CAL_PERIOD	FILING_PERIOD_DEFAULT_FLG	N	
CI_PER_CHAR	SRCH_CHAR_VAL	Y	
CI_PREM_CHAR	SRCH_CHAR_VAL	Y	
CI_SA_TYPE	C1_OVRD_GRACE_DAYS	N	
CI_SVC_TYPE	CHNG_FIL_FREQ_OFF_CYCLE_FLG	N	
CI_SVC_TYPE	EXTERNAL_ID_USAGE_FLG	N	
CI_SVC_TYPE	MAINT_OBL_FLG	N	
CI_TAX_FORM	TAX_FORM_AUTO_POST	N	
CI_TAX_ROLE	BO_STATUS_REASON_CD	N	
CI_TAX_ROLE	BUSINESS_NAME	N	
CI_TAX_ROLE	EXTERNAL_ID	N	
CI_TAX_ROLE	MONITOR_CONTROL_DT	N	
CI_TAX_ROLE_LOG	BO_STATUS_REASON_CD	N	
F1_ATTACHMENT	ATTACHMENT_FILE_NAME	N	
F1_ATTACHMENT	BO_DATA_AREA	N	
F1_SYNC_REQ	BO_STATUS_REASON_CD	N	
F1_SYNC_REQ_LOG	BO_STATUS_REASON_CD	N	

Dropped Columns

Table	Column
CI_TAX_FORM	PRNT_TAX_FORM_ID

Unsupported Table Columns

None

Column Format Change

Table	Column	From	To
CI_PAY_ST	EXT_REFERENCE_ID	CHAR:30	CHAR:36
CI_PAY_TNDR	EXT_REFERENCE_ID	CHAR:30	CHAR:36
CI_PAY_TNDR_ST	EXT_REFERENCE_ID	CHAR:30	CHAR:36
CI_PEVT_DTL_ST	EXT_REFERENCE_ID	CHAR:30	CHAR:36
CI_TNDR_ST_EXCP	EXT_REFERENCE_ID	CHAR:30	CHAR:36
F1_BNDL	EXT_REFERENCE_ID	CHAR:30	CHAR:36
F1_OBJ_REV	EXT_REFERENCE_ID	CHAR:30	CHAR:36
F1_SYNC_REQ_IN	EXT_REFERENCE_ID	CHAR:30	CHAR:36

New System Data

This section lists the new system data that are added for business process configuration.

Algorithm Types

The following algorithm types are new to V2.3.1.

Algorithm Type	Description
C1-ACCT-MLOC	Highlight Account With Multiple Locations
C1-ADC-CALPI	Update Penalty and Interest
C1-ADCS-UEDT	Audit Case - Update End Date
C1-ADF-CALPI	Update Penalty and Interest
C1-BK-INOBCK	Bankruptcy - Initial Covered Obligations Check
C1-CHARTYVAL	Transfer Payment To Form's Obligation - Validation
C1-CLSRC-BC	Billable Charge Obligation Close / Reactivate Criteria
C1-CLSRC-FP	Filing Period Obligation Close / Reactivate Criteria
C1-CLSRC-SB	Standard Billed Obligation Close / Reactivate Criteria
C1-CPAPRL	Create Payment
C1-DDM-INFO	Direct Debit Mandate Information
C1-DDM-VAL	Direct Debit Mandate - Validation
C1-DET-OBLIG	Determine Tender Account From Obligation
C1-DR-PAYOBL	Pay an Obligation
C1-EXCREDVAL	Create Payment - Validation
C1-FR-CTRFTF	Create Tax Role From Tax Form
C1-FR-DETFPE	Determine Tax Form Filing Period
C1-FR-FPVLRL	Determine Form Filing Period - Validation
C1-FR-PRTAVL	Check Pre-registered Tax Role and Account - Validation
C1-FR-PRTRAC	Check Pre-registered Tax Role and Account
C1-FR-VAFOFI	Form Filing Type Validation
C1-FR-VCFPO	Create Filing-Period Obligation - Validate

Algorithm Type	Description
C1-FR-VCTRFT	Create Tax Role From Tax Form - Validation
C1-FRMGL-PPR	Group Line - Post-Processing
C1-FTCALVAL	Filing Calendar Tax Form Type - Validation
C1-LT-DISP	Create PDF of Letter Image by calling Documaker
C1-LTR-CLLDC	Sample Collection Letter Extract
C1-MO-FBHINF	Form Batch Header Information
C1-OBL-COWTC	Create Obligations with Tax Role Based Calendar
C1-OBL-OFDD	Obligation - Override Filing Due Date
C1-OBL-VFPA	Obligation - Validate Filing Period Applicability
C1-OBTY-TXRC	Filing Period with Tax Role Calendar Obligation Information
C1-PER-MACCT	Highlight Person Linked to Multiple Accounts
C1-PERID-OWS	Validate Person ID by Calling OPA via a Web Service Adapter
C1-PTF-CLTFP	Copy Form Line Values to/from Related Form Field (Pre - processing
C1-PTF-VPAU	Parent Tax Form - Validate Payment Amount Update
C1-SEPA-VAL	SEPA Master Configuration - Validation
C1-TL-AD-EVT	Build Audit Case Events
C1-TL-AP-EVT	Build Appeal Events
C1-TL-CL-EVT	Build Collection Case Events
C1-TL-SP-EVT	Build Suppression Events
C1-TL-TF-EVT	Build Tax Form Events
C1-TPFO-APRL	Transfer Payment To Form's Obligation
C1-TPS-APRL	Transfer Payment To Suspense
C1-TT-EXVAL	Tax Type - External Usage ID Validation
C1-TT-ODTVAL	Tax Type - Override Due Date Validation
C1-TT-OMVAL	Tax Type - Obligation Maintenance Validation
C1-TXR-CAOBL	Tax Role - Cancel Obligations
C1-TXR-CAOBS	Tax Role - Cancel All Obligations

Algorithm Type	Description
C1-TXR-CTRED	Tax Role - Clear Tax Role End Date
C1-TXR-GEOBL	Tax Role - Generate New Obligations
C1-TXR-GHACO	Tax Role - Generate Historic and Current Obligations
C1-TXR-STINF	Tax Role Information
C1-TXR-TRTEX	Tax Role - Transition to Expired
C1-TXR-UMCDT	Tax Role - Update Monitor Control Date
C1-TXR-VAICD	Tax Role - Validate Additional Industry Codes
C1-TXR-VEXID	Tax Role - Validate External ID
C1-TXR-VFCCH	Tax Role - Validate Filing Calendar Changes
C1-TXR-VPHN	Tax Role - Validate Contact Phone Numbers
C1-TXR-VTXRP	Tax Role - Validate Tax Role Persons
C1-WT-VALDC	Checks Debt Category on Waiver Type and Adjustment Type

Algorithms

The following Algorithms are Framework Owned system data in V2.3.1.

Algorithm	Description
C1-ACCT-MLCC	Highlight Account With Multiple Locations
C1-ADC-CALPI	Update Penalty and Interest
C1-ADCS-UEDT	Audit Case - Update End Date
C1-ADF-CALPI	Calculate P&I after an Adjustment Freeze
C1-BK-INOBCK	Bankruptcy - Initial Covered Obligations Check
C1-CHARTYVAL	Transfer Payment To Form's Obligation - Validation
C1-CLSRC-BC	Billable Charge Obligation Close / Reactivate Criteria
C1-CLSRC-FP	Filing Period Obligation Close / Reactivate Criteria
C1-CLSRC-SB	Standard Billed Obligation Close / Reactivate Criteria

Algorithm	Description
C1-CPAPRL	Create Payment
C1-DDM-INFO	Direct Debit Mandate Information
C1-DDM-VAL	Direct Debit Mandate - Validation
C1-DET-OBLIG	Determine Tender Account From Obligation
C1-DR-PAYOBL	Pay an Obligation
C1-EXCREDVAL	Create Payment - Validation
C1-FR-CTRFTF	Create Tax Role From Tax Form
C1-FR-DETFPE	Determine Tax Form Filing Period
C1-FR-FPVLRL	Determine Form Filing Period - Validation
C1-FR-PRTAVL	Check Pre-registered Tax Role and Account - Validation
C1-FR-PRTRAC	Check Pre-registered Tax Role and Account
C1-FR-VAFOFI	Form Filing Type Validation
C1-FR-VCFPO	Create Filing-Period Obligation - Validate
C1-FR-VCTRFT	Create Tax Role From Tax Form - Validation
C1-FRM-RLCAN	Tax Form - Apply Cancellation Rules
C1-FRMGL-PPR	Group Line - Post-Processing
C1-FTCALVAL	Filing Calendar Tax Form Type - Validation
C1-FUST-XUDO	Form Upload Staging Type - XSL Transformation - Upload Data Only
C1-LT-DISP	Create PDF of Letter Image by calling Documaker
C1-MO-FBHINF	Form Batch Header Information
C1-OBL-COWTC	Create Obligations with Tax Role Based Calendar
C1-OBL-OFDD	Obligation - Override Filing Due Date
C1-OBL-VFPA	Obligation - Validate Filing Period Is Required
C1-OBTY-TXRC	Filing Period with Tax Role Calendar Obligation Information
C1-PER-MACC	Highlight Person Linked to Multiple Accounts
C1-PER-MADV	Highlight Person Linked to Multiple Accounts

Algorithm	Description
C1-PTF-CLTFP	Copy Form Line Values to/from Related Form Field (Pre - processing)
C1-PTF-VPAU	Parent Tax Form - Validate Payment Amount Update
C1-SEPA-VAL	SEPA Master Configuration - Validation
C1-TL-APL-AC	Build Appeal Events for Account
C1-TL-APL-TR	Build Appeal Events for Tax Role
C1-TL-AUD-AC	Build Audit Case Events for Account
C1-TL-AUD-TR	Build Audit Case Events for Tax Role
C1-TL-COL-AC	Build Collection Case Events for Account
C1-TL-PAY-AC	Build Payment Events for Account
C1-TL-PAY-TR	Build Payment Events for Tax Role
C1-TL-SUP-AC	Build Suppression Events for Account
C1-TL-SUP-TR	Build Tax Form Events for Tax Role
C1-TL-TXF-AC	Build Tax Form Events for Account
C1-TL-TXF-TR	Build Tax Form Events for Tax Role
C1-TPFO-APRL	Transfer Payment To Form's Obligation
C1-TPS-APRL	Transfer Payment To Suspense
C1-TT-EXVAL	Tax Type - External Usage ID Validation
C1-TT-ODTVAL	Tax Type - Override Due Date Validation
C1-TT-OMVAL	Tax Type - Obligation Maintenance Validation
C1-TXR-CAOBL	Tax Role - Cancel Obligations
C1-TXR-CAOBS	Tax Role - Cancel All Obligations
C1-TXR-CTRED	Tax Role - Clear Tax Role End Date
C1-TXR-GEOBL	Tax Role - Generate New Obligations
C1-TXR-GHACO	Tax Role - Generate Historic and Current Obligations
C1-TXR-STINF	Tax Role Information
C1-TXR-TRTEX	Tax Role - Transition to Expired
C1-TXR-UMCDT	Tax Role - Update Monitor Control Date
C1-TXR-VAICD	Tax Role - Validate Additional Industry Codes
C1-TXR-VEXID	Tax Role - Validate External ID

Algorithm	Description
C1-TXR-VFCCH	Tax Role - Validate Filing Calendar Changes
C1-TXR-VPHN	Tax Role - Validate Contact Phone Numbers
C1-TXR-VTXRP	Tax Role - Validate Tax Role Persons
C1-WT-VALDC	Checks Debt Category on Waiver Type and AdjustmentType

Application Services

Users are allowed to access transactions and portal zones by being granted access to the respective application services. The following table contains the new application services made available in this release. You must link these services to your user groups if you want the users in these groups to have access to these pages / zones.

Application Service	Description
C1-DDMANDATEBOAS	Direct Debit Mandate Business Object
C1-DDMANDATEM	Direct Debit Mandate MO
C1-SEPAMASTERCONFIG	SEPA Master Configuration Business Object
C1-TAXRLERELTYP	Tax Role Relationship Type portal
C1-TAXROLEBOAS	Tax Role Business Object
C1-TAXROLERELTY	Tax Role Relationship Type
C1360ACTADDRS	360 Degree Address Zone
C1360ACTCOLLS	360 Degree Active Collections Zone
C1360ACTFRMHST	360 Degree Account Form History Zone
C1360ACTOVW	360 Degree Account Overview Zone
C1360ACTTREE	360 Degree Account Tree Zone
C1360ACTTXRLS	360 Degree Tax Roles Zone
C1360OBLOVW	360 Degree Obligation Overview Zone
C1360PERACCTS	360 Degree Person's Accounts Zone
C1360PEROVW	360 Degree Person Overview Zone
C1360PERTREE	360 Degree Person Tree Zone
C1360SQP	360 Degree Search Portal
C1360TXRFRMHST	360 Degree Tax Role Form History Zone
C1360TXROBLS	360 Degree Tax Role's Obligations Zone
C1360TXROVW	360 Degree Tax Role Overview Zone

Application Service	Description
C1360TXRRELPER	360 Degree Tax Role Related Persons Zone
C1360VWM	360 Degree View Portal
C1ACDDMG	Account's Direct Debit Mandates
C1DDMMP	Direct Debit Mandate Portal
C1L360BP	360 Degree Credit Allocation Zone
C1OPAPPL	Account Or Person Open Appeal
C1TXOBQ	Obligation's Tax Forms
C1TXRLG	Account's Active Tax Roles
C1TXRLRE	Tax Role Relationship Type

Access Mode Added to Application Service

The following access modes are added to existing Application Service in V2.3.1

Application Service	Description	Access Mode
C1-PARENTTAXFORMBOAS	Parent Tax Form BO	Audit (C1AU)
C1-PARENTTAXFORMBOAS	Parent Tax Form BO	Form Receive Date Change (C1FR)

Batch Controls

The following Batch Controls are new to V2.3.1.

Batch Control	Description
C1-OBDBL	Obligation Detailed Balance Extract
C1-RGMP	Registration Form Deferred Monitor - Batch Posting
C1-RGMU	Registration Form Deferred Monitor - Uploaded Forms
C1-RGSTL	Registration Form - In Status Too Long
C1-SDDCE	SEPA Direct Debit Collection Extract
C1-TRMDD	Tax Role - Monitor with Control Date (Deferred)
C1-TXFRM	Tax Form Deferred Monitor
C1-TXSTL	Tax Form - In Status Too Long
CIPVCCTI	Insert CI_CC_CHAR
CIPVCCTV	Foreign Key validation CI_CC_CHAR

Batch Control	Description
CIPVTXPI	Insert CI_TAX_ROLE_PER
CIPVTXPV	Foreign Key validation CI_TAX_ROLE_PER

New Parameters added to Existing Batch Control

None.

Lookup Fields

The following Lookup Fields are new to V2.3.1.

Lookup Field
360_ADDR_SRC_FLG
BO_SCHEMA_USAGE_FLG
C1_APPR_LVL_FLG
C1_FT_GL_BALANCE_SKIP_FLG
C1_RESTR_BY_ENT_FLG
C1_TAX_FORM_DUPLICATE_FLG
CHK_RCR_FLG
CHNG_FIL_FREQ_OFF_CYCLE_FLG
CREDIT_ALLOC_FORMAT_FLG
DRCT_DR_PAY_TYPE_FLG
EFF_FILING_CALS_FOUND_FLG
EXTERNAL_ID_USAGE_FLG
FILING_PERIOD_BASIS_FLG
FILING_PERIOD_DEFAULT_FLG
FILING_PER_FROM_TAX_ROLE_FLG
FORM_LINE_MAPPING_FLG
FORM_TY_FILING_PER_DFLT_FLG
FR_FFV_INIT_FILING_RULE_FLG
FR_FFV_LIMIT_TO_FORM_TYPE_FLG
FR_FFV_MULTI_FILING_RULE_FLG
FUZZY_SEARCH_USAGE_FLG
GEN_SA_PLUGIN_FOUND_FLG

Lookup Field
MAINT_OBL_FLG
MULTI_MATCH_PERIOD_ACTION_FLG
OVERLAPPING_PERIOD_DATES_FLG
OVRD_DUEDT_FLG
PER_NAME_SEARCH_TYPE_FLG
PHONETIC_SEARCH_USAGE_FLG
REL_TRANS_BO_AVAILABILITY_FLG
SA_STAT_OPT_FLG
TAXFORM_FILING_PER_CHECK_FLG
TAXPAYER_FROM_TAX_ROLE_FLG
UI_MAP_USAGE_FLG

Business Objects

The following Business Objects are added data to V2.3.1.

Business Object	Description
C1-CheckPreregTaxRoleAccount	Check Pre-registered Tax Role and Account
C1-CreatePayment	Create Payment
C1-CreateTaxRoleFromTaxForm	Create Tax Role From Tax Form
C1-DetermineTaxFormFilingPer	Determine Tax Form Filing Period
C1-DirectDebitMandate	Direct Debit Mandate
C1-FilingCalendarTaxFormType	Filing Calendar Tax Form Type
C1-FinancialRelTypeLookup	Financial Relationship Type
C1-FormFilingValidation	Form Filing Type Validation
C1-PersonOverview	Person - Overview
C1-SEPAMasterConfiguration	SEPA Master Configuration
C1-TaxRoleRelType	Tax Role Relationship Type
C1-TransferPmtToFormObligation	Transfer Payment To Form's Obligation
C1-TransferPmtToSuspense	Transfer Payment To Suspense

FK References

The following FK References are new to V2.3.1.

FK Reference	Description
C1-ADJTC	Adjustment Type by Adjustment Category
C1-DDMAN	Direct Debit Mandate
C1-MATTY	Match Type
C1-PAYCR	Payment Cancel Reason
C1-RGFTY	Registration Form Type
C1-TNDTY	Tender Type
C1-TRREL	Tax Role Relationship Type
C1LF-BO	BO Option - Related Lookup Value Field

Lookups

The following Lookups are added to Oracle Enterprise Taxation Management V2.3.1.

Lookup Field Name	Field Value	Language	Description
360_ADDR_SRC_FLG	ACCT	ENG	Account
360_ADDR_SRC_FLG	ACPR	ENG	Account Person
360_ADDR_SRC_FLG	PER	ENG	Person
ACCESS_MODE	C1AU	ENG	Audit
ACCESS_MODE	C1EX	ENG	Expired
ACCESS_MODE	C1FR	ENG	Form Receive Date Change
ALG_ENTITY_FLG	C1CR	ENG	Obligation Type - Close / Reactivate Criteria
ALG_ENTITY_FLG	C1GO	ENG	Obligation Type - Generate Obligations
BO_SCHEMA_USAGE_FLG	C1DT	ENG	Data Type
BO_SCHEMA_USAGE_FLG	C1FK	ENG	FK Reference
BUS_OBJ_OPT_FLG	C1LF	ENG	Related Lookup Value Field
C1FP_OPT_TYP_FLG	C1VD	ENG	Validate Upload Data
C1FT_OPT_TYP_FLG	C1NA	ENG	Effective Date Optional for Debit Adjustments
C1_APPR_LVL_FLG	C1ML	ENG	Multiple
C1_APPR_LVL_FLG	C1SN	ENG	Single
C1_BO_STATUS_CATEGORY_FLG	C1ST	ENG	Status Too Long
C1_FORM_CHANNEL_FLG	C1EL	ENG	Electronic
C1_FORM_CHANNEL_FLG	C1LB	ENG	Lockbox
C1_FORM_CHANNEL_FLG	C1PR	ENG	Paper
C1_FT_GL_BALANCE_SKIP_FLG	C1SK	ENG	Skip
C1_RESTR_BY_ENT_FLG	C1AC	ENG	Account
C1_RESTR_BY_ENT_FLG	C1TR	ENG	Tax Role

Lookup Field Name	Field Value	Language	Description
C1_TAX_FORM_DUPLICATE_FLG	C1AD	ENG	Duplicate for form adjustment
C1_TAX_FORM_DUPLICATE_FLG	C1AU	ENG	Duplicate for form audit
C1_TAX_FORM_DUPLICATE_FLG	C1TR	ENG	Duplicate for form transfer
CHAR_ENTITY_FLG	C1ML	ENG	Direct Debit Mandate Log
CHAR_ENTITY_FLG	C1MN	ENG	Direct Debit Mandate
CHAR_ENTITY_FLG	C1TS	ENG	Tax Role Relationship Type
CHK_RCR_FLG	MARC	ENG	May Recur
CHK_RCR_FLG	MNRC	ENG	Must Not Recur
CHK_RCR_FLG	MSRC	ENG	Must Recur
CHNG_FIL_FREQ_OFF_CYCLE_FLG	C1AL	ENG	Allowed
CHNG_FIL_FREQ_OFF_CYCLE_FLG	C1NA	ENG	Not Allowed
CREDIT_ALLOC_FORMAT_FLG	C1CC	ENG	Control Central
CREDIT_ALLOC_FORMAT_FLG	C1DV	ENG	360 Degree View
DEFN_FLD_USG_FLG	C1FK	ENG	Use FK Reference
DEFN_FLD_USG_FLG	C1XL	ENG	Use Extendable Lookup
DRCT_DR_PAY_TYPE_FLG	C1RC	ENG	Recurrent
EFF_FILING_CALS_FOUND_FLG	C1AV	ENG	Available
EFF_FILING_CALS_FOUND_FLG	C1NA	ENG	Not Available
EXTERNAL_ID_USAGE_FLG	C1NA	ENG	Not Allowed
EXTERNAL_ID_USAGE_FLG	C1OP	ENG	Optional
EXTERNAL_ID_USAGE_FLG	C1RE	ENG	Required
F1GC_OPT_TYP_FLG	C1FS	ENG	Fuzzy Searching Enabled

Lookup Field Name	Field Value	Language	Description
F1_STATE_CONDITION_FLG	C1RE	ENG	Re-edited
F1_UI_CTXT_FLDS_FLG	C1TR	ENG	Tax Role
FILING_PERIOD_BASIS_FLG	C1FT	ENG	From Form Type
FILING_PERIOD_BASIS_FLG	C1TT	ENG	From Tax Type
FILING_PERIOD_DEFAULT_FLG	C1NO	ENG	No
FILING_PERIOD_DEFAULT_FLG	C1YS	ENG	Yes
FILING_PER_FROM_TAX_ROLE_FLG	C1AP	ENG	Applicable
FILING_PER_FROM_TAX_ROLE_FLG	C1NA	ENG	Not Applicable
FORM_LINE_MAPPING_FLG	C1CU	ENG	Copy On Update
FORM_LINE_MAPPING_FLG	C1CV	ENG	Copy Via Validation Rule
FORM_TY_FILING_PER_DFLT_FLG	C1NO	ENG	No
FORM_TY_FILING_PER_DFLT_FLG	C1YS	ENG	Yes
FR_FFV_INIT_FILING_RULE_FLG	C1AL	ENG	Allowed
FR_FFV_INIT_FILING_RULE_FLG	C1NA	ENG	Not Allowed
FR_FFV_LIMIT_TO_FORM_TYPE_FLG	C1NO	ENG	No
FR_FFV_LIMIT_TO_FORM_TYPE_FLG	C1YE	ENG	Yes
FR_FFV_MULTI_FILING_RULE_FLG	C1AL	ENG	Allowed
FR_FFV_MULTI_FILING_RULE_FLG	C1NA	ENG	Not Allowed
FUZZY_SEARCH_USAGE_FLG	C1AP	ENG	Applicable
FUZZY_SEARCH_USAGE_FLG	C1NA	ENG	Not Applicable

Lookup Field Name	Field Value	Language	Description
GEN_SA_PLUGIN_FOUND_FLG	C1AV	ENG	Available
GEN_SA_PLUGIN_FOUND_FLG	C1NA	ENG	Not Available
MAINT_OBL_FLG	C1AP	ENG	Applicable
MAINT_OBL_FLG	C1NA	ENG	Not Applicable
MODULE_FLG	C1WS	ENG	WSS (Legacy)
MULTI_MATCH_PERIOD_ACTION_FLG	C1CN	ENG	Continue
MULTI_MATCH_PERIOD_ACTION_FLG	C1EX	ENG	Create Exception
OVERLAPPING_PERIOD_DATES_FLG	C1AL	ENG	Allowed
OVERLAPPING_PERIOD_DATES_FLG	C1NA	ENG	Not Allowed
OVRD_DUEDT_FLG	C1AP	ENG	Applicable
OVRD_DUEDT_FLG	C1NA	ENG	Not Applicable
PER_NAME_SEARCH_TYPE_FLG	C1FZ	ENG	Fuzzy
PER_NAME_SEARCH_TYPE_FLG	C1ST	ENG	Standard
PHONETIC_SEARCH_USAGE_FLG	C1AP	ENG	Applicable
PHONETIC_SEARCH_USAGE_FLG	C1NA	ENG	Not Applicable
REL_TRANS_BO_AVAILABILITY_FLG	C1AV	ENG	Available
REL_TRANS_BO_AVAILABILITY_FLG	C1NA	ENG	Not Available
RULE_EVT_FLG	C1CA	ENG	Cancel
RULE_EVT_FLG	C1WV	ENG	WSS Validate
SAT_ALG_ENTITY_FLG	C1CR	ENG	Obligation Close/ Reactivate
SAT_ALG_ENTITY_FLG	C1GO	ENG	Generate Obligations
SA_STAT_OPT_FLG	C1AL	ENG	All
SA_STAT_OPT_FLG	C1NC	ENG	Non-Closed / Non-Canceled

Lookup Field Name	Field Value	Language	Description
TAXFORM_FILING_ PER_CHECK_FLG	C1CP	ENG	No Effective Filing Calendar for Period
TAXFORM_FILING_ PER_CHECK_FLG	C1CR	ENG	No Effective Calendars for Tax Role
TAXFORM_FILING_ PER_CHECK_FLG	C1MC	ENG	Matching Effective Calendar
TAXFORM_FILING_ PER_CHECK_FLG	C1MP	ENG	Multiple Effective Filing Calendars for Period
TAXFORM_FILING_ PER_CHECK_FLG	C1NM	ENG	No Matching Effective Calendar
TAXPAYER_FROM_T AX_ROLE_FLG	C1AP	ENG	Applicable
TAXPAYER_FROM_T AX_ROLE_FLG	C1NA	ENG	Not Applicable
UI_MAP_USAGE_FL G	C1DD	ENG	Dropdown List
UI_MAP_USAGE_FL G	C1IN	ENG	Input Field

Maintenance Objects

The following Maintenance Objects are new to V2.3.1.

MO Code	Description
C1-DDMANDATE	Direct Debit Mandate
C1-TRRELTYP	Tax Role Relationship Type

Scripts

The following Scripts are Framework-owned system data in V2.3.1.

Script	Description
C1-360SrchVF	360 Degree Search - Validate Person Query Filters
C1-ActOverVw	360 Degree Account Overview - Retrieve Details for Display
C1-AddDDMLog	Direct Debit Mandate - Add User Log Entry
C1-AppVRules	Generic Form - Apply Validation Rules

Script	Description
C1-AsmtList	Obligation - Assessment List With No Assessment Grouping
C1-BoMoVal	Validate Business Object For MO
C1-CFPOPre	Create Filing-Period Obligation - Pre-processing
C1-CharTyVal	Transfer Payment To Form's Obligation - Validation
C1-ChgRecvDt	Form Receive Date Change
C1-CrAlDtls	360 Degree - Credit Allocation Retrieve Details for Display
C1-CrTxRlPre	Create Tax Role From Tax Form - Pre-processing
C1-DDMDisp	Direct Debit Mandate - Retrieve Details for Display
C1-DDMMain	Direct Debit Mandate - Maintain
C1-DDMPre	Direct Debit Mandate - Pre-processing
C1-DETFPPre	Determine Tax Form Filing Period - Pre-processing
C1-ExCredVal	Create Payment - Validation
C1-FBHFBOSts	Form Batch Header - Retrieve Form BO Status
C1-FCFTyPre	Filing Calendar Tax Form Type - Pre-processing
C1-FCTFTPost	Filing Calendar Tax Form Type - Post-processing
C1-FCaTFDisp	Filing Calendar Tax Form Type - Retrieve Details for Display
C1-FRBOVal	Form Rule - Validate Form Rule BO
C1-FTCalVal	Form Type Filing Period Validation
C1-FilPerInf	Get Filing Period Information Description
C1-FrmLnActD	Form Line - Retrieve Action Details for Display
C1-FrmScActD	Form Section - Retrieve Action Details for Display
C1-GncAcZnVs	Zone Visibility - Based on Id and BO Option
C1-NavFilPer	Navigate to Filing Calendar/Filing Period Maintenance Page

Script	Description
C1-OblOverVw	360 Degree Obligation Overview - Retrieve Details for Display
C1-PRTRACPR	Check Pre-registered Tax Role and Account - Pre-processing
C1-PerOverVw	360 Degree Person Overview - Retrieve Details for Display
C1-PerfRcvDt	Perform Receive Date Change
C1-RvRsTyDis	Review Response Type - Retrieve Details for Display
C1-RwCtShwZn	Zone Visibility - Based on Row Count
C1-SEPAPre	SEPA Master Configuration - Pre-processing
C1-TRRelDisp	Tax Role Relationship Type - Retrieve Details for Display
C1-TTExIdVal	Tax Type - External Usage ID Validation
C1-TTODDtVal	Tax Type - Override Due Date Validation
C1-TTOblMVal	Tax Type - Obligation Maintenance Validation
C1-TaxTypDsp	Tax Type - Retrieve Details for Display
C1-TxFActn	Tax Form - Retrieve Action Details for Display
C1-TxFrUpdAP	Tax Form - Update Automatic Posting
C1-TxROverVw	360 Degree Tax Role Overview - Retrieve Details for Display
C1-TxRTyMain	Tax Role Relationship Type - Maintain
C1-TxRlExCED	Tax Role - Clear Tax Role End Date
C1-TxRlList	Gets the Tax Role List with No Tax Role Grouping
C1-TxRlVlAIC	Tax Role - Validate Additional Industry Codes
C1-TxRlVlTPH	Tax Role - Validate Contact Phone Numbers
C1-TxRlVlTRP	Tax Role - Validate Tax Role Persons
C1-VaAcTa	Validate Required Fields Account and Tax Type
C1-ValAFrHst	360 Degree View Account Form History - Validate Filters
C1-ValBoMo	Retrieve and Validate Standard BO Options

Script	Description
C1-ValFBHIFF	Form Batch Header - Validate Included Forms Filter
C1-ValTRFHst	360 Degree View Tax Role Form History - Validate Filters
C1-ValTRObls	360 Degree View Tax Role Obligations - Validate Filters
C1-ValTRole	Tax Role - Validate Obligation Start and End Dates Filter
C1-ValTxRlsQ	360 Degree View Account Tax Roles - Validate Filters

To Do Types

The following To Do Type is new to V2.3.1.

To Do Type	Description
C1-RGMP	Registration Form Deferred Monitor - Batch Posting
C1-RGMU	Registration Form Deferred Monitor - Uploaded Forms
C1-RGSTL	Registration Form - In Status Too Long
C1-TRMDD	Tax Role - Monitor with Control Date (Deferred)
C1-TXFRM	Tax Form Deferred Monitor
C1-TXSTL	Tax Form - In Status Too Long

Portals

The following Portals are new to V2.3.1.

Portal	Description
C1360ACCT	360 Degree View - Account
C1360FIN	360 Degree View - Financial
C1360SQP	360 Degree Search
C1360TXR	360 Degree View - Tax Role
C1360VWM	360 Degree View
C1ACDDMG	Account's Direct Debit Mandates
C1DDMMP	Direct Debit Mandate

Portal	Description
C1MNLP	Direct Debit Mandate Log
C1OPAPPL	Account Or Person Open Appeal
C1PERMPTL	Person - Miscellaneous
C1TRLP	Tax Role Log
C1TXOBQ	Obligation's Tax Forms
C1TXRLG	Account's Active Tax Roles
C1TXRLRE	Tax Role Relationship Type

Portal Zones

The following Portal Zones are added to V2.3.1

Portal	Zone
C1360ACCT	C1-360ACTOVW
C1360ACCT	C1-ACTADDRS
C1360ACCT	C1-ACTCOLLS
C1360ACCT	C1-ACTFRMHST
C1360ACCT	C1-ACTTREE
C1360ACCT	C1-ACTTXRLS
C1360FIN	C1-360CRALOC
C1360FIN	CI_AFH
C1360SQP	C1-360QRY
C1360TXR	C1-360OBLOVW
C1360TXR	C1-360TXROVW
C1360TXR	C1-ACTTXRLS
C1360TXR	C1-TXRFRMHST
C1360TXR	C1-TXROBLS
C1360TXR	C1-TXRRELPER

UI Maps

The following UI Maps are added to V2.3.1.

Map	Description
C1-360CreditAllocation	360 Degree View - Credit Allocation
C1-360QueryByPerson	360 Degree Search - Person Query Filter
C1-AccTaxTypeSaFilter	Obligation - Filter by Account, Dates, Tax Type, Status
C1-AccountFormHistoryFilter	360 Degree View Account Form Hist - Filter
C1-AccountOverviewDisplay	360 Degree Account Overview - Display
C1-BatchHeaderBatchIDQryFilter	Filter by External Form Batch ID / Form Batch Header
C1-ChangeRecvDt	Prompt for Receive Date Change
C1-ChkPreRegTxRlAcctDisp	Check Pre-registered Tax Role and Account - Display
C1-ChkPreRegTxRlAcctMaint	Check Pre-registered Tax Role and Account - Maintenance
C1-CreatePaymentDisplay	Create Payment - Display
C1-CreatePaymentMaint	Create Payment - Maintenance
C1-CreateTaxRoleFromTaxFormDis	Create Tax Role From Tax Form - Display
C1-CreateTaxRoleFromTaxFormMai	Create Tax Role From Tax Form - Maintenance
C1-CreditAllocBalanceByDebtCat	Credit Allocation - Debt Category Balance
C1-CreditAllocationFTDetails	Credit Allocation - FT Details
C1-CreditAllocationFilter	Credit Allocation - Filter
C1-DDMandateDisplay	Direct Debit Mandate - Display
C1-DDMandateMaint	Direct Debit Mandate - Maintenance
C1-DetTaxFormFilingPeriodDispl	Determine Tax Form Filing Period - Display
C1-DetTaxFormFilingPeriodMaint	Determine Tax Form Filing Period - Maintenance
C1-DirectDebitMandateUserLog	Direct Debit Mandate - Add User Log Entry
C1-FBHIncludedFormsFilter	Form Batch Header - Included Forms Filter
C1-FilingCalTaxFormTypeDisplay	Filing Calendar Tax Form Type - Display
C1-FilingCalTaxFormTypeMaint	Filing Calendar Tax Form Type - Maintenance

Map	Description
C1-FilingCalYearQueryFilter	Filing Period - Filter by Calendar, End Year
C1-FinancialRelTypeDisplay	Financial Relationship Type - Display
C1-FinancialRelTypeMaint	Financial Relationship Type - Maintenance
C1-FormFilingValDisplay	Form Filing Type Validation - Display
C1-FormFilingValMaint	Form Filing Type Validation - Maintenance
C1-FormRuleBOQryFilter	Form Rule - Filter by Form Rule Business Object
C1-FormRuleGrpQryFilter	Form Rule - Filter by Form Rule Group
C1-IncludeClosedObligations	Filter by start,end date and include closed obligations
C1-ObligationOverviewDisplay	360 Degree Obligation Overview - Display
C1-ObligationsFilter	360 Degree View Obligations - Filter
C1-PersonNameSaQryFilter	Obligation - Filter by Name, Dates, Status
C1-PersonOverviewDisplay	360 Degree Person Overview - Display
C1-SEPAMasterConfigDisplay	SEPA Master Configuration - Display
C1-SEPAMasterConfigMaint	SEPA Master Configuration - Maintenance
C1-StandardTaxFormTypeDispFrg	Standard Tax Form Type Display Fragment
C1-StandardTaxFormTypeMaintFrg	Standard Tax Form Type Maintanence Fragment
C1-TaxFormActions	Tax Form - Actions
C1-TaxRoleFormHistoryFilter	360 Degree View Tax Role Form Hst - Filter
C1-TaxRoleIdSaQryFltr	Obligation - Filter by Tax Role, Status
C1-TaxRoleOverviewDisplay	360 Degree Tax Role Overview - Display
C1-TaxRoleRelFilter	Tax Role Relationship - Filter by Tax Role Relationship Type
C1-TaxRoleRelTypeDisplay	Tax Role Relationship Type - Display
C1-TaxRoleRelTypeMaint	Tax Role Relationship Type - Maintenance
C1-TaxRolesFilter	360 Degree View Account Tax Roles - Filter
C1-TaxTypeStandardDisplay	Standard Tax Type Display
C1-TaxTypeVariableCalDisplay	Variable Calendar Tax Type - Display
C1-TransPmtToFormOblDisplay	Transfer Payment To Form's Obligation - Display
C1-TransPmtToFormOblMaint	Transfer Payment To Form's Obligation - Maintenance

Map	Description
C1-TransPmtToSuspenseDisplay	Transfer Payment To Suspense - Display
C1-TransPmtToSuspenseMaint	Transfer Payment To Suspense - Maintenance

XAI Inbound Services

None

Zone Types

None.

Zones

The following new Zones are added to V2.3.1.

Zone	Zone Type	Description
C1-360ACTOVW	F1-MAPEXPL	Account Overview
C1-360CRALOC	F1-MAPEXPL	Credit Allocation Detail
C1-360OBLOVW	F1-MAPEXPL	Obligation Overview
C1-360PEROVW	F1-MAPEXPL	Person Overview
C1-360QRY	F1-DE-MULQRY	360 Degree Search
C1-360QRYQ1	F1-DE-QUERY	Person
C1-360QRYQ2	F1-DE-QUERY	Account
C1-360QRYQ3	F1-DE-QUERY	External Tax Role
C1-360TXROVW	F1-MAPEXPL	Tax Role Overview
C1-ACCTRYS	F1-DE-SINGLE	Account - Retrieve Tax Types of Tax Roles
C1-ACCTUACS	F1-DE-SINGLE	Person - Get Acounts User has access
C1-ACTADDRS	F1-DE	Addresses
C1-ACTCOLLS	F1-DE	Active Collections
C1-ACTFRMHST	F1-DE	Form History
C1-ACTFRMTYS	F1-DE-SINGLE	Account - Retrieve Form Types of Tax Forms
C1-ACTTAXTYS	F1-DE-SINGLE	Account - Retrieve Tax Types of Tax Forms
C1-ACTTREE	F1-DE	Account Tree

Zone	Zone Type	Description
C1-ACTTRYS	F1-DE-SINGLE	Account - Retrieve Tax Types of Tax Roles
C1-ACTTXRLS	F1-DE	Tax Roles
C1-ADJRELOBJ	F1-DE-SINGLE	Adjustment - Get Related Object Log (Characteristic Value)
C1-ADJTSRCQ1	F1-DE-QUERY	Adjustment Type Code / Description
C1-ADJTYSRC	F1-DE-MULQRY	Adjustment Type by Adjustment Category
C1-BOSTMONPR	F1-DE-SINGLE	Retrieve BO Status Monitor Process
C1-CHKUCAOP	F1-DE-SINGLE	Check Overpayment User's Previous Actions
C1-CHKUCAPPR	F1-DE-SINGLE	Check Approval User's Previous Actions
C1-DDMAND	F1-MAPDERV	Direct Debit Mandate
C1-DDMANDLG	F1-DE	Direct Debit Mandate Log
C1-DDMGT	F1-DE	Account's Direct Debit Mandates
C1-DSTSRC	F1-DE-MULQRY	Distribution Code Search
C1-DSTSRCQ1	F1-DE-QUERY	Distribution Code / Description
C1-FILPERSRC	F1-DE-QUERY	Filing Period Search
C1-FRULEQRY1	F1-DE-QUERY	Form Rule Code / Description
C1-FRULEQRY2	F1-DE-QUERY	Form Rule Group
C1-FRULEQRY3	F1-DE-QUERY	Form Rule Business Object
C1-IDTYPEFMT	F1-DE-SINGLE	Retrieve ID Type Format
C1-INDCD	F1-DE-QUERY	Industry Code / Description
C1-OBLTAXR	F1-DE	Obligations for Account and Tax Role
C1-OBLWNTXRL	F1-DE-SINGLE	Check Account has Obligation without Tax Role
C1-OBTYSRC	F1-DE-MULQRY	Obligation Type Search
C1-OBTYSRCQ1	F1-DE-QUERY	Division/Obligation Type/ Tax Type/Description
C1-OPENAPPLS	F1-DE	Open Appeals for Person or Account

Zone	Zone Type	Description
C1-PERACCTS	F1-DE	Accounts
C1-PERTREE	F1-DE	Person Tree
C1-RETCURBAL	F1-DE-SINGLE	Get Current Balance of Account/Tax Role
C1-RETDBOBL	F1-DE	Obligations Eligible for Detailed Balance
C1-RETFILCAL	F1-DE-QUERY	Retrieve Filing Calendar for Obligation Type and Tax Type
C1-RETFKREFD	F1-DE-SINGLE	Form Line - Retrieve FK Reference Details
C1-RETFPAPPL	F1-DE-SINGLE	Retrieve Obligation Type's Filing Period Applicability
C1-RETMBOSTS	F1-DE-SINGLE	Maintenance Object - Retrieve Multiple BO Status
C1-RETTFSTAT	F1-DE-SINGLE	Account/Tax Role - Get Tax Form Statuses
C1-RFRALGTYD	F1-DE-SINGLE	Form Rule - Get 'Apply Rule' Algorithm Description
C1-RFSRC	F1-DE-MULQRY	Rate Factor Search
C1-RFSRCQ1	F1-DE-QUERY	Rate Factor / Description
C1-RSSRC	F1-DE-MULQRY	Rate Schedule Search
C1-RSSRCQ1	F1-DE-QUERY	Rate Schedule / Description
C1-TRRPCNT	F1-DE	Tax Role - Get Active Related Persons
C1-TXACCTRL	F1-DE-SINGLE	Person's Account Relationship List
C1-TXOBLL	F1-DE-SINGLE	Tax Forms for Obligation
C1-TXRFRMHST	F1-DE	Form History
C1-TXRLDIVS	F1-DE-SINGLE	Tax Role - Get Division of Obligations
C1-TXRLGT	F1-DE-SINGLE	Account 's Active Tax Roles
C1-TXRLOBLDB	F1-DE	Tax Role Obligations Eligible for Detailed Balance
C1-TXRLOTYS	F1-DE-SINGLE	Tax Role - Get Types of Obligations
C1-TXRLQRYQ1	F1-DE-QUERY	Person Name and Person ID Type / Value
C1-TXRLQRYQ2	F1-DE-QUERY	Account

Zone	Zone Type	Description
C1-TXRLQRYQ3	F1-DE-QUERY	External ID
C1-TXRLQRYQ4	F1-DE-QUERY	Tax Role ID
C1-TXRLRELGT	F1-DE-SINGLE	Tax Role Relationship Type List
C1-TXRLRELQY	F1-DE-SINGLE	Tax Role Relationship List
C1-TXRLRELTY	F1-MAPDERV	Tax Role Relationship Type
C1-TXROBLS	F1-DE	Obligations
C1-TXRRELPER	F1-DE	Related Persons

Changed System Data

The following sections highlight significant changes to existing system data.

Tax Form Application Services

Any application service that is related to a tax form business object where the PARENT_BO_CD = 'C1-ParentTaxForm' is updated to include the ACCESS_MODE for Form Receive Date Change (C1FR). In addition, any user group that has access to one of these application services and has access to the access mode of Change (C) is updated to include access to the C1FR access mode.

Any application service that is related to a tax form business object where the PARENT_BO_CD = 'C1-ParentTaxForm' is updated to include the ACCESS_MODE for Audit (C1AU).

Form Type BO Options

Any form type business object that does not already have appropriate Status Category options defined for its states is updated as follows:

- If the status has a BO status option record with the BO_OPT_FL of State Condition (F1SC) and BO_OPT_VAL of Active (C1AC), then a new entry in F1_BUS_OBJ_STATUS_OPT is created with the BO_OPT_FL set to Status Category (C1SC) and BO_OPT_VAL of In Effect (C1IE)

- If the status has a BO status option record with the BO_OPT_FL of State Condition (F1SC) and BO_OPT_VAL that does not equal Active (C1AC), then a new entry in F1_BUS_OBJ_STATUS_OPT is created with the BO_OPT_FL set to Status Category (C1SC) and BO_OPT_VAL of Not In Effect (C1NE)

Form Upload Staging Type BO Algorithms

The C1-FormUploadStagingType business object is updated to insert a CM algorithm entry in F1_BUS_OBJ_ALG with BO_SEVT_FLG set to Map Form Upload Data (C1FU) and ALG_CD set to C1-FUST-XSLT. In addition, a CM entry is added to the F1_BUS_OBJ_OPT to turn off the base algorithm for the C1FU plug-in spot. BUS_OBJ_OPT_FLG is set to Inactivate Algorithm (F1IA) and BUS_OBJ_OPT_VAL is set to C1-FUST-XUDO.

Tax Form BO Algorithms

The C1-ParentTaxForm business object has been updated to insert CM monitor algorithms for the Pending and Ready for Post states and add BO status options to the same states to inactivate the base algorithms in order to preserve the previous logic.

- A CM entry is added to F1_BUS_OBJ_STATUS_ALG with BO_STATUS_CD set to PENDING, BO_STATUS_SEVT_FLG set to Monitor (F1AT) and ALG_CD set to C1-PTF-TRPV. In addition, a CM entry is added to the F1_BUS_OBJ_STATUS_OPT with BO_STATUS_CD set to PENDING, BO_OPT_FLG set to Inactivate Algorithm (F1IA) and BO_OPT_VAL is set to F1-AT-RQJ.

- A CM entry is added to F1_BUS_OBJ_STATUS_ALG with BO_STATUS_CD set to READYFORPOST, BO_STATUS_SEVT_FLG set to Monitor (F1AT) and ALG_CD set to C1-TRNFRMRPT. In addition, a CM entry is added to the F1_BUS_OBJ_STATUS_OPT with BO_STATUS_CD set to READYFORPOST, BO_OPT_FLG set to Inactivate Algorithm (F1IA) and BO_OPT_VAL is set to F1-AT-RQJ.

Installation Algorithms

The installation options are updated to include the two new alert algorithms. A row is inserted into CI_INSTALL_ALG for each with INS_ALG_ENTITY_FLG set to Alert (CCAL). The two values of the ALG_CD are C1-ACCT-MLCC and C1-PER-MACC.

Financial Transaction Feature Option

An entry is inserted into a financial transaction feature configuration to indicate that an FT's effective date should be optional per previous behavior. If there is not already a feature configuration record (CI_WFM) with a feature type (EXT_SYS_TYP_FLG) of Financial Transaction Options (C1FT), a record is inserted along with an entry in the language table (CI_WFM_L) with the DESCR set to 'Financial Transaction Options'.

A record is inserted into CI_WFM_OPT for the Financial Transaction Options feature configuration with an option type (EXT_OPT_TYPE) of Effective Date Optional for Debit Adjustments (C1NA) and an option value (WFM_OPT_VAL) of 'Y'.

Search Zone on FK Reference

The following FK references (CI_FK_REF) were updated to reference an appropriate search zone (ZONE_CD).

FK Reference	Description	Zone
C1-BOMO	Business Objects for MO	F1-BOMOSRC
SICCD	Industry Code	C1-INDCD
C1-DSTCD	Distribution Code	C1-DSTSRC
C1-RFACT	Rate Factor	C1-RFSRC
C1-RCHD	Rate Schedule	C1-RSSRC

Removed System Data

The following sections highlight system data no longer supported as of this release.

Account Activity History Zone

The following components related to the Account Activity History Zone are no longer supported and have been updated to have a CM owner flag.

Table	Description	Condition
CI_ZONE	Zone	ZONE_CD = 'CI_ACTHIST'
CI_ZONE_L	Zone Language	ZONE_CD = 'CI_ACTHIST'
CI_ZONE_PRM	Zone Parameters	ZONE_CD = 'CI_ACTHIST'
CI_PORTAL_ZONE	Portal Zone	ZONE_CD = 'CI_ACTHIST'
SC_APP_SERVICE	Application Service	APP_SVC_ID = 'CILCAAHP'
SC_APP_SERVICE_L	Application Service Language	APP_SVC_ID = 'CILCAAHP'
SC_USR_GRP_PROF	User Group Profile	APP_SVC_ID = 'CILCAAHP'
SC_ACCESS_CNTL	User Group Access Control	APP_SVC_ID = 'CILCAAHP'

Tax Type and Tax Role Action Zones

The actions zone on the tax type and tax role portals are no longer supported as the actions have been moved to the display maps for base product business objects. The owner flag is changed to CM to maintain previous behavior for upgrade purposes.

"The owner flag has been changed to CM for the CI_PORTAL_ZONE record where ZONE_CD equals 'C1-TXTYPACTN'.

"The owner flag has been changed to CM for the CI_PORTAL_ZONE record where ZONE_CD equals 'C1-TXRLACTN'.

Business Service

The business service C1-GetFUSTypByFormTypSrcStatus is extraneous and has been removed. It was a data explorer BS for the zone C1-FUST-TYSS. However, there is another base business service (C1-FUST-TYSS) that does the same thing.

Planned System Data Deprecation

The script C1-FVShwZn was created in the previous release of the product but is a duplicate of C1-FEShwZn. Any zones referring to C1-FVShwZn should be changed to instead use C1-FEShwZn. C1-FVShwZn will be removed in a future release.

The following configuration data is not used in any base processing and is scheduled to be removed in a future release:

Type of Object	Object ID	Comments
Business Service	C1-GetOblReturnAssessmentFT	
Zone	C1-ROBLRETFT	Used by the business service C1-GetOblReturnAssessmentFT.

Planned Database Field Updates

The following table / field definitions have a discrepancy between the definition in the database and the definition in the Table / Field metadata. They are correctly configured to be non-nullable in the metadata and incorrectly configured as nullable in the database. The database configuration will be corrected in a future release. Note that until this is fixed, when adding and updating the data using product supplied services the data is populated correctly with spaces. To ensure that the future upgrade correcting the database definition is smooth, any updates that are made outside of the system supplied service should not enter null values into these fields.

Table	Field
C1_APPEAL	STATUS_UPD_DTTM
C1_AUDIT_CASE	AUDIT_PERIOD_END_DT
C1_AUDIT_CASE_LOG	LOG_DTTM
C1_BANKRUPTCY	STATUS_UPD_DTTM
C1_BANKRUPTCY_PER	END_DT
C1_BANKRUPTCY_PER	START_DT
C1_DRCT_DR_MNDT	STATUS_UPD_DTTM
C1_REVIEW	REVIEWER_RESP_DUE_DT
C1_REVIEW	REVIEW_DECISION_DT
C1_REVIEW	REVIEW_DT
C1_REVIEW	STATUS_UPD_DTTM
C1_REVIEW	TAXPAYER_RESP_DUE_DT
C1_SUPPRESSION	END_DT
C1_SUPPRESSION	STATUS_UPD_DTTM
C1_SUPPRESSION_ENTITY	ADD_DT
C1_SUPPRESSION_PROCESS	ADD_DT
CI_ADJ_CALC_LN	EFFDT
CI_ADJ_LOG	LOG_DTTM
CI_AM_ACTIVITY_TYPE	STATUS_UPD_DTTM
CI_AM_REQ	STATUS_UPD_DTTM
CI_APPR_REQ	STATUS_UPD_DTTM
CI_ASSET	STATUS_UPD_DTTM
CI_ASSET_REL	END_DT
CI_ASSET_REL	START_DT
CI_ASSET_REL	STATUS_UPD_DTTM
CI_ASSET_TYPE	STATUS_UPD_DTTM
CI_BILL	WIN_START_DT

Table	Field
CI_BILL_EVT	STATUS_UPD_DTTM
CI_BILL_EVT	TRIGGER_DT
CI_BILL_EVT	TRIGGER_END_DT
CI_BILL_EVT_TYPE	STATUS_UPD_DTTM
CI_BSEG	WIN_START_DT
CI_BSEG_CALC	EFFDT
CI_COLL_CASE	STATUS_UPD_DTTM
CI_COLL_CASE_TYPE	STATUS_UPD_DTTM
CI_FILING_CAL_PERIOD	GRACE_DT
CI_FORM_BATCH_HDR	STATUS_UPD_DTTM
CI_FORM_TYPE	END_DT
CI_FORM_TYPE	STATUS_UPD_DTTM
CI_FORM_UPLD_STG	STATUS_UPD_DTTM
CI_FORM_UPLD_STG_TYPE	CRE_DTTM
CI_OP_PROC	OP_PROC_TRIGGER_DT
CI_OP_PROC	STATUS_UPD_DTTM
CI_OP_PROC_TYPE	STATUS_UPD_DTTM
CI_PI_CTRL	EFFDT
CI_PI_CTRL	STATUS_UPD_DTTM
CI_PROC_FLOW	STATUS_UPD_DTTM
CI_PROC_FLOW_TYPE	CRE_DTTM
CI_REG_FORM	RECV_DT
CI_REG_FORM	STATUS_UPD_DTTM
CI_REG_FORM_EXCP	CLOSED_DTTM
CI_SA	CALC_THRU_DT
CI_SA	FILING_END_DT
CI_SA	OVRD_FILING_DUE_DT
CI_SA	OVRD_PAY_DUE_DT
CI_TAX_FORM	END_DT
CI_TAX_FORM	RECV_DT
CI_TAX_FORM	STATUS_UPD_DTTM
CI_TAX_FORM_EXCP	CLOSED_DTTM
CI_TAX_ROLE	END_DT

Table	Field
CI_TAX_ROLE	STATUS_UPD_DTTM
CI_TAX_ROLE_LOG	LOG_DTTM
CI_WAIVER	EFF_END_DT
CI_WAIVER	EFF_START_DT
CI_WAIVER	STATUS_UPD_DTTM
CI_WAIVER_TYPE	STATUS_UPD_DTTM

Appendix B

Oracle Enterprise Taxation and Policy Management System Table Guide

This chapter lists the system tables owned by Oracle Enterprise Taxation and Policy Management V2.3.1 and explains the data standards of the system tables. The data standards are required for Oracle Enterprise Taxation and Policy Management installation, development within Oracle Enterprise Taxation and Policy Management, configuration of the product, and customization of the product. Adhering to the data standards is a prerequisite for a seamless upgrade to the next release of the product.

For information about the application framework system tables, see **Appendix B: Oracle Application Framework System Table Guide**.

This section includes:

• **Business Configuration Tables**

Business Configuration Tables

Installation Options

The installation option has only one row that is shipped with the initial installation of the product. The updateable 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	C0_INSTALLATION
Initial Data	Location Geo Type Usage: Required
	Alternate Representation: None
	Person ID Usage: Required
	Bill Segment Freeze Option: Freeze At Will
	Accounting Date Freeze Option: Change If Period Is Closed
	Rollover Threshold Factor: 0.7
	User Can Override Bill Date: Yes
	Fund Accounting: Not Practiced

Appendix C

Upgrades to the Oracle Utilities Application Framework Database

This document describes the database upgrade process for the Oracle Utilities Application Framework database from last released blueprint version of V4.1.0 to V4.1.0 Group Fix 2 It highlights changes made to the administrative tables and how those changes should be applied to the data in order for your current database to work with the V4.1.0.2 Group Fix 2 application, and to preserve the business logic implemented in the previous version of the application. The changes that do not require data upgrade are not described in this document. The tasks that need to be performed after running the upgrade scripts are included.

The added functionality of V4.1.0 Group Fix 2 is not the scope of this documentation. The upgrade scripts do not turn on the newly added functionality by default. For new functionality, refer the V4.1.0 Group Fix 2 User Guides. In the last section of this document you will find a list of the new tables that are added in V4.1.0 Group Fix-2.

This section includes:

• **Automatic Data Upgrade**

• **Schema Change**

• **New System Data**

Automatic Data Upgrade

This section describes what the upgrade script will populate in new tables and columns to preserve the existing base product application functions of the previous version of Oracle Utilities Application Framework.

Nullable column support

Oracle Utilities Application Framework 4.1.0, Group Fix 2, 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 added to FW410 Group Fix 2 fixes the metadata to make sure that the existing tables will not be affected.

This new feature only supports tables maintained by Java. Thus, enhancing any existing tables to use null columns must be done only after making sure that the tables are maintained by Java, and not COBOL.

Schema Change

New Tables

The following new tables are added to Oracle Utilities Application Framework V4.1.0.

Tables	Description
F1_GENERIC_GTT	Generic Global Temporary Table
F1_SVC_TASK	Service Task
F1_SVC_TASK_CHAR	Service Task Characteristics
F1_SVC_TASK_K	Service Task Key
F1_SVC_TASK_LOG	Service Task Log
F1_SVC_TASK_LOG_PARM	Service Task Log Parameters
F1_SVC_TASK_REL_OBJ	Service Task Related Objects
F1_SVC_TASK_TYPE	Service Task Type
F1_SVC_TASK_TYPE_CHAR	Service Task Type Characteristics
F1_SVC_TASK_TYPE_L	Service Task Type Language
F1_SYNC_REQ_EXTRACT	Sync Request Extract

New Views

None

Dropped Tables

None

Unsupported Tables

None

Added Columns

The following Table Columns are added to Oracle Utilities Application Framework V4.1.0.

Table	Column	Required	Upgrade Note
F1_ATTACHMENT	ATTACHMENT_FILE_NAME	N	
F1_ATTACHMENT	BO_DATA_AREA	N	
F1_SYNC_REQ	BO_STATUS_REASON_CD	N	
F1_SYNC_REQ_LOG	BO_STATUS_REASON_CD	N	

Dropped Columns

None

Unsupported Table Columns

None

Column Format Change

None

New System Data

This section lists the new system data that are added for business process configuration.

Algorithm Type

The following algorithm types are new to V4.1.0 Group Fix2.

Algorithm Type	Description
F1-ATCHM-INF	Attachment Information
F1-BOSTATFS	Take BO Status/Reason Final Snapshot
F1-CMPSNAPSR	Compare Initial and Final Snapshot. Populate Status Reason if discarded
F1-DECRT-INF	Decision Report Information
F1-EXTL-CDCP	Extendable Lookup Change Data Capture
F1-FINALSNAP	Take Final Snapshot
F1-INITSNAPS	Take Initial Snapshot
F1-LDAPIMPRT	Ldap Import callback after manipulating user, group, or membership
F1-PRPETDATA	Prepare Extract Data
F1-TRNDF-CS	Transition to Default Next State if Custom Snapshot is False
F1-WAITFRSRE	Wait for Finalized Related Sync Request to be Extracted

Algorithm

The following Algorithms are Framework Owned system data in V4.1.0 Group Fix2.

Algorithm	Description
F1-ATCHM-INF	Attachment Information
F1-BOSTATFS	Take BO Status/Reason Final Snapshot
F1-CMPSNAPSR	Compare Sync Request Snapshots, populate status reason if discarded.
F1-DECRT-INF	Decision Report Information
F1-FINALSNAP	Take Final Snapshot
F1-INITSNAPS	Take Initial Snapshot
F1-LDAPIMPRT	LDAP Import Sample Algorithm
F1-PRPETDATA	Prepare Extract Data
F1-TRNDF-CS	Transition to Default Next State if Custom Snapshot is False

Algorithm	Description
F1-WAITFRSRE	Wait for Finalized Related Sync Request to be Extracted

Application Service

The following Application Services are new to V4.1.0 Group Fix2.

Application Service	Description
F1-ATTACHMENTBOAS	Attachment Based BO
F1-STASKTYPE	Service Task Type MO
F1-SVCTASK	Service Task MO

Access Mode Added to Application Service

The following Access Mode is added to existing Application Services and is new to V4.1.0 Group Fix2.

Application Service	Description	Access Mode
F1-DFLTS	Default Application Service	Execute (F1EX)

Batch Control

The following Batch Controls are new to V4.1.0 Group Fix2.

Batch Control	Description
F1-LDAP	Ldap Import
F1-LKPIL	Standard Lookup Initial Load
F1-STKDF	Service Task Scheduled Monitor Process(Deferred)
F1-STKTR	Service Task Periodic Monitor Process
F1-SYNEF	Sync Request Extract
F1-SYNIL	Sync Request Initial Load
F1-XMLPG	Completed/in error XAI upload staging records cleanup
LDAPIMP	ZZ Ldap Import Example
WX-NOTIF	Self-Service Notification Monitor

Business Object

The following Business Objects are Framework Owned system data in V4.1.0 Group Fix2.

Business Object	Description
F1-BIGeneralMasterConfig	Generic BI Configuration
F1-GenericBISyncRequest	Generic BI Sync Request
F1-JpegImage	Jpeg Image
F1-Mp3Audio	MP3 Audio
F1-ServiceTaskTypeBundlingAdd	Bundling Add BO for Service Task Type
F1-ServiceTaskTypePhysical	Physical BO for Service Task Type
F1-Text	Text Document
F1-WavAudio	Wav Audio

FK Reference

The following FK References are new to V4.1.0 Group Fix2.

FK Reference	Description
F1-ATHVW	Attachment View
F1-STASK	Service Task
F1-STKTY	Service Task Type
F1BO-BO	BO Option - Business Object to Read
F1DA-BO	BO Options - Snapshot Data Area
F1ET-BO	BO Options - Batch Process for Extract
F1MC-BO	BO Option - Managed Content XSL
F1PS-BO	BO Option - Post Script For Extract
F1SR-BO	BO Option - Status Reason Business Object
F1SY-BO	BO Option - Star Schema Type

Lookups

The following Lookups are added to Oracle Utilities Application Framework V4.1.0 Group Fix2.

Lookup Field Name	Field Value	Language	Description
ALG_ENTITY_FLG	F1LD	ENG	Installation - Ldap Import

Lookup Field Name	Field Value	Language	Description
ALG_ENTITY_FLG	F1SE	ENG	Sync Request - Initial Load Eligibility
ALG_ENTITY_FLG	F1SF	ENG	Sync Request - Initial Load Filter
BUS_OBJ_OPT_FLG	F1BI	ENG	Binary
BUS_OBJ_OPT_FLG	F1BO	ENG	Business Object to Read
BUS_OBJ_OPT_FLG	F1CT	ENG	Content Type
BUS_OBJ_OPT_FLG	F1DA	ENG	Snapshot Data Area
BUS_OBJ_OPT_FLG	F1EP	ENG	Element Population Rule
BUS_OBJ_OPT_FLG	F1ET	ENG	Batch Process for Extract
BUS_OBJ_OPT_FLG	F1MC	ENG	Managed Content XSL
BUS_OBJ_OPT_FLG	F1PS	ENG	Post Service Script For Extract
BUS_OBJ_OPT_FLG	F1SE	ENG	Supported File Extension
BUS_OBJ_OPT_FLG	F1SY	ENG	Star Schema Type
CHANGE_TYPE_FLG	D	ENG	Delete
CHANGE_TYPE_FLG	I	ENG	Update / Insert
CHAR_ENTITY_FLG	F1SK	ENG	serviceTask
CHAR_ENTITY_FLG	F1SL	ENG	serviceTaskLog
CHAR_ENTITY_FLG	F1ST	ENG	serviceTaskType
F1GC_OPT_TYP_FLG	F1BI	ENG	Data Source Indicator
F1LF_OPT_TYP_FLG	F1DO	ENG	Display XSL Override
F1LF_OPT_TYP_FLG	F1EO	ENG	Edit XSL Override
F1QM_OPT_TYP_FLG	F1XR	ENG	Disable Role Validation On Completion
F1_STAR_SCHEMA_TYPE_FLG	F1DM	ENG	Dimension
F1_STAR_SCHEMA_TYPE_FLG	F1FC	ENG	Fact
F1_STASK_TYPE_STATUS_FLG	F1AC	ENG	Active
F1_STASK_TYPE_STATUS_FLG	F1IN	ENG	Inactive
F1_SVC_TASK_CL_FLG	C1OC	ENG	Outage Call
F1_SVC_TASK_CL_FLG	F1DF	ENG	Default
F1_SVC_TASK_CL_FLG	WXSS	ENG	Self-service

Lookup Field Name	Field Value	Language	Description
INS_ALG_ENTITY_FLG	F1LD	ENG	Ldap Import
NAV_OPT_TYPE_FLG	F1AT	ENG	Attachment
NBR_GRP_SYMBOL	Z	ENG	South Asian
RCVR_CTXT_FLG	JMSP	ENG	JMS Password
RCVR_CTXT_FLG	JMSU	ENG	JMS User
SENDER_CTXT_FLG	JMSH	ENG	JMS Header
UI_MAP_TYPE_FLG	F1XL	ENG	Complete XHTML Document
UI_MAP_TYPE_FLG	F1XR	ENG	XHTML Fragment
XAI_OPTION_FLG	ALOC	ENG	WSDL service address location

Maintenance Object

The following Maintenance Objects are new to V4.1.0 Group Fix2.

MO code	Description
F1-STASKTYPE	Service Task Type
F1-SVCTASK	Service Task

Script

The following Scripts are Framework-owned system data in V4.1.0 Group Fix2.

Script	Description
F1-BOStatFS	Take BO Status/Reason Final Snapshot
F1-CFSCGP	Convert Final Snapshots of Sync Request and Create General Process
F1-CmpSnapSR	Compare Initial and Final Snapshot. Populate Status Reason if discarded
F1-DecRptInf	Decision Report - Information
F1-ExtLCDCP	Extendable Lookup Change Data Capture
F1-FinalSnap	Take Final Snapshot
F1-FltrSQL	Zone User Filters - SQL Condition
F1-InitSnaps	Take Initial Snapshot
F1-PrpEtData	Prepare Extract Data
F1-TrnDef-CS	Transition to Default Next State if Custom Snapshot is False

Script	Description
F1-VSyncBoOp	Validate Sync BO Options
F1-WaitFRSRE	Wait for Finalized Related Sync Request to be Extracted
F1-XMLSnapBO	Return XML Snapshot of a BO Instance

To do Type

The following To Do type is new to V4.1.0 Group Fix2.

None

Portal

The following Portal is new to V4.1.0 Group Fix2.

None

Portal Zone

The following Portal Zones are added to V4.1.0 Group Fix2

None

UI Map

The following UI Maps are Framework Owned system data in V4.1.0 Group Fix2.

Map	Description
F1-BIGeneralMasterConfigDisp	Master configuration for BI - Display
F1-BIGeneralMasterConfigMaint	Master configuration for BI - Maint

XAI Inbound Service

The following XAI Inbound Service is new to V4.1.0 Group Fix2.

XAI Inbound Service name	Description
F1-ORAGEOCD	Geocode Address XAI Inbound Service

Zone Type

The following Zone Types are new to V4.1.0 Group Fix2.

None

Zone

The following new Zones are added to V4.1.0 Group Fix2.

Zone	Zone Type	Description
F1-BOMOSRC	F1-DE-QUERY	Business Object Search for MO
F1-GETBOSTRS	F1-DE-SINGLE	Get BO statuses, conditions and reasons
F1-GETFINLSR	F1-DE-SINGLE	Get Finalized Sync Request

Appendix D

Oracle Application Framework System Table Guide

This section lists the system tables owned by the Oracle Utilities Application Framework V4.1.0 and explains the data standards of the system tables. The data standards are required for the installation of Oracle Utilities Application Framework, development within the Oracle Utilities Application Framework, and 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 the Application Framework System Tables**

• **System Table Standards**

• **Guidelines for System Table Updates**

• **System Table List**

About the Application Framework System Tables

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

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

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.

Guidelines for System Table Updates

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

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.

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.

Currency Code

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

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

DB Process

Properties	Description
Tables	CI_DB_PROC, CI_DB_PROC_L, CI_DB_INSTR, CI_DB_INSTR_L, L, CI_DB_INSTR_OVRD
Initial Data	Copy DB Process (CL-COPDB). This DB process allows users to copy a DB process from one database to another using Config Lab utility.

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) and Europe (EURO).

Installation Options

Installation Option has only one row that is shipped with the initial installation of the 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.

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).

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

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.

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 Utilities Customer Care 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 the 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.

Starting with version 2.2 of the framework a new system data upgrade rule was introduced - 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&C1 override CM, and so on. This rule will be applied to the following tables: CI_CHAR_ENTITY, CI_MD_MO_ALG, 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, F1_BUS_OBJ_STATUS_L

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

Algorithm

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

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 care and billing products prior to version 2.0 will continue to use CI as a prefix for the application service.
Customer Modification	None

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) on Batch Control Parameters Table (CI_BATCH_CTRL_P)

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)
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)

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)

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)

Properties	Description
Customer Modification	Adhoc Characteristic Value Validation Rule (ADHOC_VAL_ALG_CD) on Characteristic Entity Table (CI_CHAR_ENTITY)

Data Area

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

Display Icon

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

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)

Lookup

Properties	Description
Tables	CI_LOOKUP_FIELD, CI_LOOKUP_VAL, CI_LOOKUP_VAL_L, F1_EXT_LOOKUP_VAL, F1_EXT_LOOKUP_VAL_L

Properties	Description
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 can extend the Oracle Utilities Application Framework owned lookup field's value with caution. When it needs to be extended, prefix the first letter of the Owner Flag to the value. For example, when adding a new value to the algorithm entity flag (ALG_ENTITY_FLG), prefix with C1 if you are developing an Oracle Utilities Customer Care and Billing product. Introduced in V 4.0.1: **Value (F1_EXT_LOOKUP_VALUE)** • This will allow storing longer value keys rather than the normal 4byte lookup values.
Customer Modification	Override Description (DESCR_OVRD) on Lookup Field Value Language Table (CI_LOOKUP_VAL_L)

A new Feature option is defined through adding a value to EXT_SYS_TYP_FLG. The field value for this look up field must be prefixed by the Owner flag value.

Map

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

Managed Content

Properties	Description
Tables	F1_MANAG_CONTENT, F1_MANAG_CONTENT_L
Standard Data Fields	Managed Content (MANAG_CONTENT_CD)
Customer Modification	None

Messages

Properties	Description
Tables	CI_MSG_CATEGORY, CI_MSG_CATEGORY_L, CI_MSG, CI_MSG_L

Properties	Description
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. You must use only the assigned category for your product. • Oracle Utilities Customer Care and Billing and Oracle Utilities Business Intelligence - 00001 thru 00100 • Oracle Utilities Application Framework Java - 11001 thru 11100 • Oracle Utilities Customer Care and Billing Java - 11101 thru 11200 • Oracle Utilities Business Intelligence Java - 11201 thru 11300 • Implementer COBOL - 90000 • Implementer WSS - 90001 • Implementer Java - 90002 • Reserved for Tests - 99999 Message Number (MESSAGE_NBR) for COBOL 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.

Properties	Description
Customer Modification	Override Description (DESCRLONG_OVRD), Message Text Override (MESSAGE_TEXT_OVRD)

Meta Data - 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.

Meta Data - 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

Meta Data - 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)

Meta Data - 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_REF, 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

Properties	Description
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),

Meta Data - 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

Meta Data - 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

Meta Data - 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

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

Portal and Zone

Properties	Description
Tables	CI_PORTAL, CI_PORTAL_L, CI_PORTAL_ZONE, 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
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).

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.

Schema

Properties	Description
Tables	F1_SCHEMA
Standard Data Fields	Schema Name (SCHEMA_NAME)
Customer Modification	None

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

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 Code (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)

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 XAI Option Table (CI_XAI_OPTION)

The following XAI tables might have system data installed upon the initial installation but a subsequence system data upgrade process will not update the content of these table unless the change is documented in the database upgrade guide : 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

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)

Oracle Utilities Application Framework Only Tables

All data of the tables in this group belong to the Oracle Utilities Application Framework. No data modification or addition is allowed for these tables by base product development and customer modification. When an environment is upgraded to the next release of the Oracle Utilities Application Framework, the upgrade process will refresh the data in these tables.

- CI_MD_AT_DTL / CI_MD_AT_DTL_L
- CI_MD_ATT_TY
- CI_MD_CTL / CI_MD_CTL_L
- CI_MD_CTL_TMPL
- CI_MD_ELTY / CI_MD_ELTY_L
- CI_MD_ELTY_AT
- CI_MD_LOOKUP / CI_MD_LOOKUP_F
- CI_MD_PDF / CI_MD_PDF_VAL
- CI_MD_MSG / CI_MD_MSG_L
- CI_MD_SRC_TYPE / CI_MD_SRC_TYPE_L
- CI_MD_TMPL / CI_MD_TMPL_L
- CI_MD_TMPL_ELTY
- CI_MD_TMPL_VAR / CI_MD_TMPL_VAR_L
- CI_MD_VAR / CI_MD_VAR_DTL / CI_MD_VAR_DTL_L
- CI_XAI_EXECUTER / CI_XAI_EXECUTER_L

System Table List

This section contains names of system tables, upgrade actions, and a brief description of tables. The upgrade actions are explained below.

Keep (KP): The data in the table in the customer's database is kept untouched. No insert or delete is performed to this table by the upgrade process. The initial installation will add necessary data for the system

Merge (MG): The non-base product data in the table in the database is kept untouched. If the data belongs to the base product, any changes pertaining to the new version of the software are performed.

Refresh (RF): The existing data in the table is replaced with the data from the base product table.

> **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	KP	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_CURRENCY_CD	KP	Currency Code
CI_CURRENCY_CD_L	KP	Currency Code Language
CI_DB_INSTR	KP	DB Process Instruction
CI_DB_INSTR_ALG	KP	DB Process Instruction Algorithm
CI_DB_INSTR_L	KP	DB Process Instruction Language
CI_DB_INST_OVRD	KP	DB Process Instruction Override
CI_DB_PROC	KP	DB Process
CI_DB_PROC_L	KP	DB Process Language
CI_DISP_ICON	MG	Display Icon
CI_DISP_ICON_L	MG	Display Icon Language
CI_DISP_PROF	KP	Display Profile
CI_DISP_PROF_L	KP	Display Profile 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_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_CONST	MG	Constraints
CI_MD_CONST_FLD	MG	Constraint Fields
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_FLD	MG	Field
CI_MD_FLD_L	MG	Field Language

Table Name	Upgrade Action	Description
CI_MD_LOOKUP	RF	MD Lookup Field Value
CI_MD_LOOKUP_F	RF	MD Lookup Field
CI_MD_MENU	MG	Menu Information
CI_MD_MENU_IMOD	MG	Menu Item Module Maint
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_MSG	RF	MD Message
CI_MD_MSG_L	RF	MD Message Language
CI_MD_NAV	MG	Navigation Key
CI_MD_PDF	RF	Predefined Fields
CI_MD_PDF_VAL	RF	Predefined Values
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
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

Table Name	Upgrade Action	Description
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_SRC_TYPE	RF	Source Type
CI_MD_SRC_TYPE_L	RF	Source Type Language
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_TMPL	RF	Template
CI_MD_TMPL_ELTY	RF	Template Element Types
CI_MD_TMPL_L	RF	Template Language
CI_MD_TMPL_VAR	RF	Template Variable
CI_MD_TMPL_VAR_L	RF	Template Variable Language
CI_MD_VAR	RF	Variable
CI_MD_VAR_DTL	RF	Variable Detail
CI_MD_VAR_DTL_L	RF	Variable Detail Language
CI_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

Table Name	Upgrade Action	Description
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
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_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_USR_NAV_LINK	MG	User Favorite Links
CI_USR_PORTAL	KP	User Portal
CI_USR_ZONE	KP	User Zone
CI_XAI_ADAPTER	MG	XAI Adapter
CI_XAI_ADAPTER_L	MG	XAI Adapter Lang
CI_XAI_CLASS	MG	XAI Class
CI_XAI_CLASS_L	MG	XAI Class Language

Table Name	Upgrade Action	Description
CI_XAI_ENV_HNDL	MG	XAI Envelope Handler
CI_XAI_ENV_HNDL_L	MG	XAI Envelope Handler 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
CI_XAI_IN_SVC	MG	XAI Inbound Service
CI_XAI_IN_SVC_L	MG	XAI Inbound Service Language
CI_XAI_JNDI_SVR	KP	XAI JNDI Server
CI_XAI_JNDI_SVR_L	KP	XAI JNDI Server Language
CI_XAI_OPTION	KP	XAI 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_SENDER	KP	XAI Sender
CI_XAI_SENDER_L	KP	XAI Sender Language
CI_XAI_SNDR_CTX	KP	XAI Sender Context
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

Table Name	Upgrade Action	Description
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_CHAR	KP	Status Reason Characteristic
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_EXT_LOOKUP_VAL	MG	Extendable Lookup
F1_EXT_LOOKUP_VAL_L	MG	Extendable Lookup Language
F1_INSTALLATION	KP	Installation Option - Framework
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_SCHEMA	MG	Schema
SC_ACCESS_CNTL	MG	User Group Access Control
SC_APP_SERVICE	MG	Application Service
SC_APP_SERVICE_L	MG	Application Service Language
SC_USER	KP	User
SC_USER_GROUP	KP	User Group
SC_USER_GROUP_L	KP	User Group Language
SC_USR_GRP_PROF	MG	User Group Profile

Table Name	Upgrade Action	Description
SC_USR_GRP_USR	KP	User Group User

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