Oracle® Health Sciences Cohort Explorer

Administrator's Guide

Release 1.0

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Oracle Health Sciences Cohort Explorer Administrator's Guide, Release 1.0

E24438-01

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Preface

This guide provides information on Oracle Health Sciences Cohort Explorer (OHSCE) architecture and describes how to perform various administrative tasks in relation to it.

Audience

This document is intended for:

- implementation team that wants to explore OHSCE.
- Data Warehouse Administrators, ETL Developers and System Administrator

This guide assumes that you have the following general skills:

- Knowledge of Oracle Database
- Knowledge of Oracle Data Integrator (ODI)
- Familiarity with Oracle Healthcare Data Warehouse Foundation (HDWF)
- Familiarity with Oracle Business Intelligence Enterprise Edition (OBIEE)
- Familiarity with Oracle Health Sciences Clinical Development Center (CDC)

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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Finding Information and Patches on My Oracle Support

Your source for the latest information about Oracle Health Sciences Cohort Explorer is Oracle Support's self-service Web site, My Oracle Support (formerly MetaLink).

Before you install and use an Oracle software release, always visit the My Oracle Support Web site for the latest information, including alerts, release notes, documentation, and patches.

Creating a My Oracle Support Account

You must register at My Oracle Support to obtain a user name and password account before you can enter the Web site.

To register for My Oracle Support:

1. Open a Web browser to http://support.oracle.com.

2. Click the **Register here** link to create a My Oracle Support account. The registration page opens.

3. Follow the instructions on the registration page.

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To sign in to My Oracle Support:

1. Open a Web browser to http://support.oracle.com.

2. Click **Sign In**.

3. Enter your user name and password.

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The fastest way to search for product documentation, release notes, and white papers is by the article ID number.

To search by the article ID number:

1. Sign in to My Oracle Support at http://support.oracle.com.

2. Locate the Search box in the upper right corner of the My Oracle Support page.

3. Click the sources icon to the left of the search box, and then select Article ID from the list.

4. Enter the article ID number in the text box.

5. Click the magnifying glass icon to the right of the search box (or press the Enter key) to execute your search.

   The Knowledge page displays the results of your search. If the article is found, click the link to view the abstract, text, attachments, and related products.

In addition to searching by article ID, you can use the following My Oracle Support tools to browse and search the knowledge base:

- Product Focus — On the Knowledge page, you can drill into a product area through the Browse Knowledge menu on the left side of the page. In the Browse any Product, By Name field, type in part of the product name, and then select the product from the list. Alternatively, you can click the arrow icon to view the complete list of Oracle products and then select your product. This option lets you focus your browsing and searching on a specific product or set of products.

- Refine Search — Once you have results from a search, use the Refine Search options on the right side of the Knowledge page to narrow your search and make the results more relevant.

- Advanced Search — You can specify one or more search criteria, such as source, exact phrase, and related product, to find knowledge articles and documentation.

Finding Patches on My Oracle Support

Be sure to check My Oracle Support for the latest patches, if any, for your product. You can search for patches by patch ID or number, or by product or family.

To locate and download a patch:

1. Sign in to My Oracle Support at http://support.oracle.com.

2. Click the **Patches & Updates** tab.

   The Patches & Updates page opens and displays the Patch Search region. You have the following options:

   - In the Patch ID or Number is field, enter the primary bug number of the patch you want. This option is useful if you already know the patch number.

   - To find a patch by product name, release, and platform, click the Product or Family link to enter one or more search criteria.

3. Click **Search** to execute your query. The Patch Search Results page opens.

4. Click the patch ID number. The system displays details about the patch. In addition, you can view the Read Me file before downloading the patch.

5. Click **Download**. Follow the instructions on the screen to download, save, and install the patch files.

Finding Documentation on Oracle Technology Network

The Oracle Technology Network Web site contains links to all Oracle user and reference documentation. To find user documentation for Oracle products:

1. Go to the Oracle Technology Network at

   http://www.oracle.com/technetwork/index.html and log in.

2. Mouse over the Support tab, then click the **Documentation** hyperlink.

   Alternatively, go to Oracle Documentation page at

   http://www.oracle.com/technology/documentation/index.html

3. Navigate to the product you need and click the link.

   For example, scroll down to the Applications section and click Oracle Health Sciences Applications.

4. Click the link for the documentation you need.

Related Documents

For more information, see the following documents in the *Oracle Business Intelligence Suite Enterprise Edition 11g Release 1 (11.1.1)* documentation set, the *Oracle Health Sciences Clinical Development Center Release 3.1* documentation set, and the *Oracle Healthcare Data Warehouse Foundation Release 3.1* documentation set:

Oracle Business Intelligence Enterprise Edition Documentation

The *Oracle Business Intelligence Suite Enterprise Edition Online Documentation Library* (Part E21764) documentation set includes:

- *Oracle® Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E10544)

- *Oracle® Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E10540)

- *Oracle® Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E10541)

- *Oracle® Fusion Middleware Scheduling Jobs Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E18562)

- *Oracle® Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E10543)

- *Oracle® Fusion Middleware Developer's Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E10545)

- *Oracle® Fusion Middleware Integrator's Guide for Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1)* (Part E16364)

Oracle Health Sciences Clinical Development Center (CDC) Documentation

The *Oracle Health Sciences Clinical Development Center* documentation set includes:

- *Phase_Forward_CDC_Prerequisites_Guideline*

- *CDC-CDR 3.1 Client Installation Qualification*

- *CDC-CDR 3.1 Database Server Unix Installation Qualification*

- *CDC-CDR 3.1 CDRweb Installation Qualification*

- *PF_CDC_CDR_User_Guide*

- *PF_CDC_SCE_User_Guide*

- *PF_CDC_3.1_Release_Notes*

Oracle Healthcare Data Warehouse Foundation Documentation

The *Oracle Healthcare Data Warehouse Foundation* documentation set includes:

- *Oracle Healthcare Data Warehouse Foundation Release Notes*

- *Oracle Healthcare Data Warehouse Foundation Data Dictionary*

- *Oracle Healthcare Data Warehouse Foundation Glossary*

- *Oracle Healthcare Data Warehouse Foundation Programmer's Guide*

- *Oracle Healthcare Data Warehouse Foundation Electronic Technical Reference Manual*

Oracle Data Integrator Documentation

The *Oracle Data Integrator* documentation is a part of the *Oracle Fusion Middleware 11.1.1.5.0* documentation. Oracle Data Integrator documents in the Fusion Middleware Documentation Library are as follows:

- *Oracle® Fusion Middleware Getting Started with Oracle Data Integrator 11g Release 1 (11.1.1)*

- *Oracle® Fusion Middleware Developer's Guide for Oracle Data Integrator 11g Release 1 (11.1.1)*

- *Oracle® Fusion Middleware Installation Guide for Oracle Data Integrator 11g Release 1 (11.1.1)*

- *Oracle® Fusion Middleware Application Adapters Guide for Oracle Data Integrator 11g Release 1 (11.1.1)*

- *Oracle® Fusion Middleware Knowledge Module Developer's Guide for Oracle Data Integrator 11g Release 1 (11.1.1)*

- *Oracle® Fusion Middleware Connectivity and Knowledge Modules Guide for Oracle Data Integrator 11g Release 1 (11.1.1)*

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.

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1

Architecture

This chapter describes the architecture of Oracle Health Sciences Cohort Explorer. It contains the following topics:

- Overview on page 1-1
- ETL Behavior on page 1-1
- Oracle Data Integrator Work Repository Artifacts on page 1-2

Overview

OHSCE architecture includes the following principal components:

- A predefined Cohort data model containing tables of patient identifiable medical information and configuration data.
- Pre-built ODI based interfaces that are designed to extract patient related data from Oracle Healthcare Data Warehouse Foundation (HDWF).

ETL Behavior

Following are the key system attributes and how they influence loading from HDWF tables to data mart tables:

- **DELETE_FLG** - The soft delete flag status determines whether a record in the data mart is deleted or not. Table 2-1 lists the source for each data mart table that determines the soft delete status of a record. If delete flag is set to *Y* in any of the source tables, the target record is automatically soft deleted.
- **INTEGRATION_ID** - This is populated from the INTEGRATION_ID of the main driving table, the table that decides the grain. Appendix A, "ETL Related Tables" on page A-1 lists the main driving tables, which determine the INTEGRATION_ID. If there is more than one driving tables, the INTEGRATION_IDs of these tables are concatenated with a separator.
- **DATASOURCE_NUM_ID** - This is populated from the DATASOURCE_NUM_ID of the main driving table. Appendix A, "ETL Related Tables" on page A-1 lists the main driving tables.
- **UPDATE_DT** - UPDATE_DT of HDWF tables determines when a record is created or updated in HDWF. If a record is updated after completion of the last ETL load, it is picked up for incremental load. UPDATE_DT of one or more source table associated with data mart table determines if the record should be picked. Appendix A, "ETL Related Tables" on page A-1 lists the source table for each data mart table that determine the updated status of record. When more than one

source table exists, the incremental load is performed if the UPDATE_DT of any of the source table records is later than the last load date and time.

- **CURRENT_FLG** - If multiple versions of the record are available in HDWF, only the current version is picked up. Current version is found in HDWF using CURRENT_FLG attribute.

- **Masking Patient INTEGRATION_ID** - To mask patient information, Patient INTEGRATION_ID from HDWF is not loaded into data mart, as it may contain patient identification information. In stead of INTEGRATION_ID, PT_ID from HDWF is populated to data mart.

- **Populating UOM_WID** - If UOM_WID cannot be resolved by ETL while loading data into data mart, the UOM_WID is populated with NAV value. The actual value of NAV is picked up from ETL Global configuration table C_LOAD_PARAM NAV.

- **Versioning Logic** - For each Integration ID in HDWF, there will be a single record in CDM. If there are multiple versions in HDWF, the most current version is loaded in the data mart. The most current version in HDWF is determined using CURRENT_FLG attribute.

Oracle Data Integrator Work Repository Artifacts

This section discusses the OHSCE ODI work repository artifacts.

The work repository contains one project called Oracle Healthcare Analytics.

Figure 1–1   Project Structure
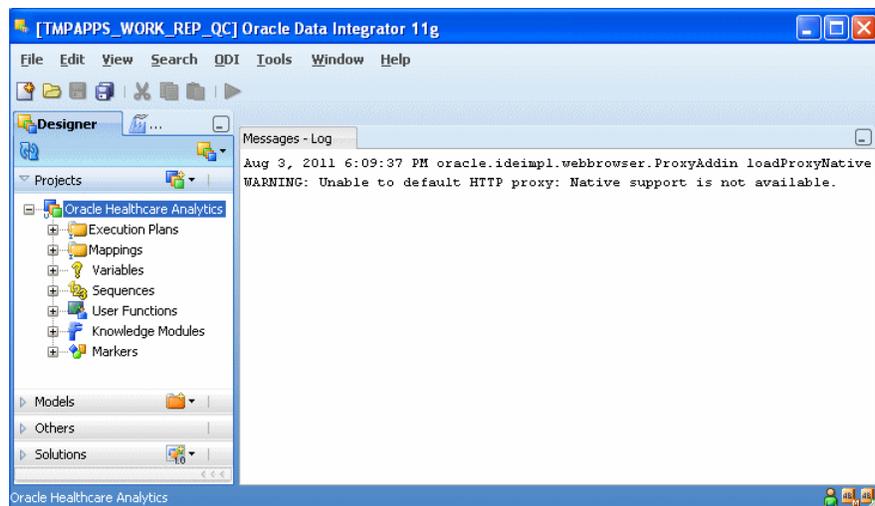
This project contains two main folders.

- Execution Plans
- Mappings

Figure 1–2   Folder Structure
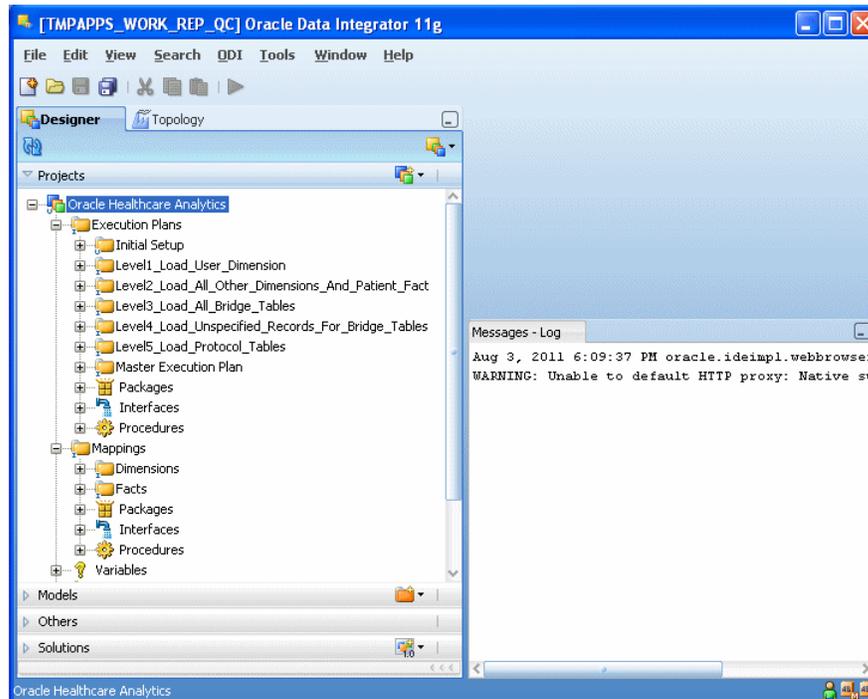
Execution Plans

Execution plan folder contains ETL artifacts related to packaging and executions of ETLs.

Table 1–1   Execution Plan Folder Contents

Folder	Description
Level1_Load_User_ Dimension	Loads User dimension.
Level2_Load_All_Other_ Dimensions_And_Patient_ Fact	Loads all dimensions in parallel followed by Patient fact and unspecified records for dimensions.
Level3_Load_All_Bridge_ Tables	Loads all bridge tables in parallel.
Level4_Load_Unspecified_ Records_For_Bridge_Tables	Loads unspecified records for bridge tables.
Level5_Load_Protocol_ Tables	Loads protocol related tables.
Master Execution Plan	This is the incremental load execution plan. Level1 to Level5 packages are included in this plan. Oracle recommends that you do not run the individual packages. Refer to Chapter 3, "Executing ETLs" on page 3 for order of execution.
Initial Setup	The folder contains three sub folders; Create DBLink, Full_ Load_Execution_Plan, and Generate_All_Scenarios.
	Full_Load_Execution_Plan is the full load execution plan. Refer to Chapter 3, "Executing ETLs" on page 1 for order of execution.

Mappings

Mappings folder contains the interfaces that load data mart tables.

Table 1–2   Mappings Folder Contents

Folder	Description
Dimensions	Contains ETLs for all dimensions and bridge tables.
Facts	Contains ETL for the Patient fact.

An ODI package is created to populate each data mart table. Each package comprises the following sequence to populate the corresponding data model table:

1. Refresh all the ODI variables used for that particular package.

2. Run any one of the interfaces (full load or incremental load) depending on the type of load.

For a comprehensive list of interfaces and their corresponding packages refer to Appendix B, "Work Repository Artifacts" on page B-1

Figure 1-3 depicts the design on ODI package for the table W_EHA_RACE_PATIENT_ H:

Figure 1–3   ODI Package for the Table W_EHA_RACE_PATIENT_H
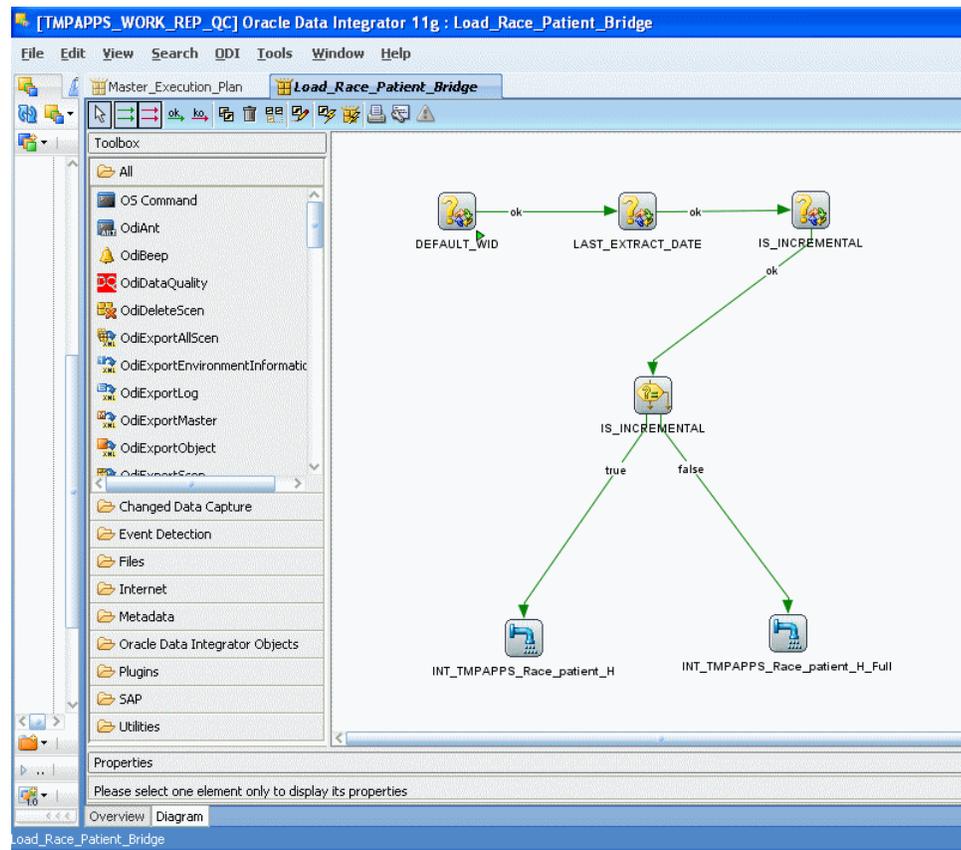
Variables

ETL parameters are passed using ODI variables. The variable values are refreshed during an ETL run from the C_LOAD_PARAM table. For a comprehensive list of Variables refer to Appendix B, "Work Repository Artifacts" on page B-1

Figure 1–4   Variables in ODI Repository
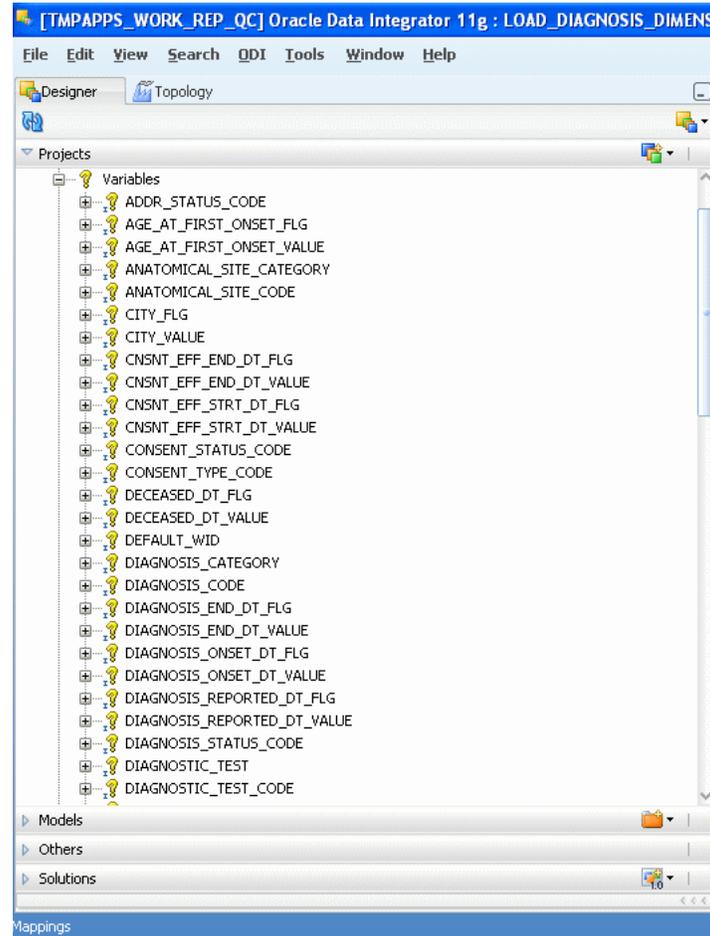
Sequences

Sequences are used for populating ROW_WID columns in each of the data mart tables. For a comprehensive list of sequences refer to Appendix B, "Work Repository Artifacts" on page B-1

Figure 1–5   Sequences in ODI Repository
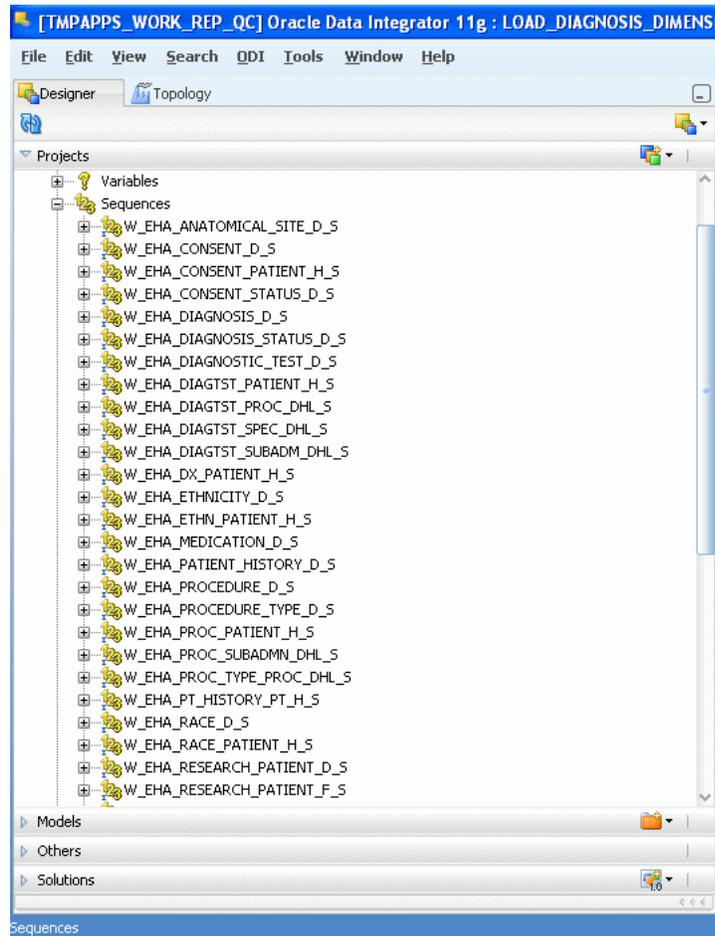
User-defined Functions

OHSCE uses a number of user-defined functions.

Table 1–3   User-defined Functions

Function	Group
GET_USER_WID	User WID
ADD_TO_DATE	Date Operation
COALESCE	Logical Operation
GET_SCEN_NAME	Substitution
NEXTVAL	Sequence Operation
QUALIFY	Substitution
SESSSTARTTIME	Date Operation
TO_CHAR_FORMAT	Conversion Operation
%NOW%	Date Operation

Knowledge Modules

Knowledge modules are code templates provided by ODI. Following is the list of knowledge modules of OHSCE:

- LKM TMP APPS Oracle to Oracle (DBLINK)

- CKM oracle

- IKM TMP APPS Oracle Control Append

- IKM TMP APPS Oracle Incremental Update

Models

Models contain meta data of all OHSCE tables. Following is the list of models of OHSCE:

- Oracle TMPAPPS Datamart contains the data mart tables.

- Oracle Configuration Tables contains the ETL configurations tables.

- Oracle HDM contains the HDWF tables.

Figure 1–6   Model in ODI Repository

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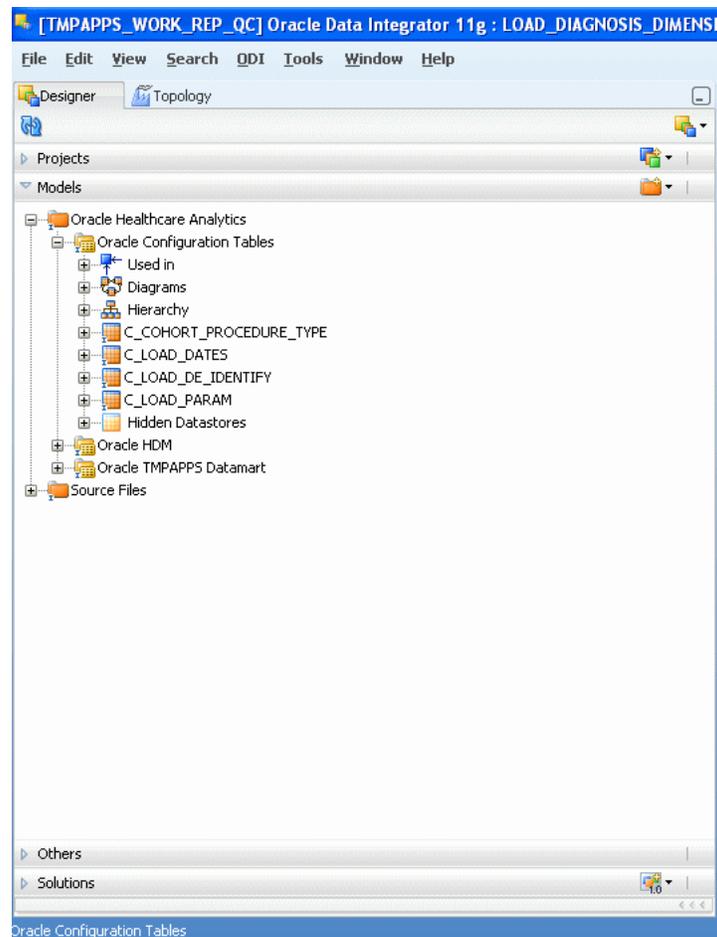
Configuration Steps

This chapter describes the different configuration steps required in different cases. It contains the following topics:

- ETL Configuration on page 2-1
- Report Configuration on page 2-5

ETL Configuration

Configuring the C_LOAD_PARAM Table

The C_LOAD_PARAM table is used to store the seed data needed for loading into the 33 data model tables. The attributes of this table are described in the table below. After the OHSCE installs successfully, this table is populated with default seed data. You must change the value in **PARAM_VALUE** field according to your requirements.

Table 2–1   C_LOAD_PARAM Table Attributes

Column Name	Column Type	Description
PACKAGE_NAME	VARCHAR2 (300)	Name of the ODI package that includes the variable, full and incremental interfaces
PARAM_NAME	VARCHAR2 (80)	Name of the ODI parameter used in the interface
PARAM_VALUE	VARCHAR2 (4000)	Actual value of the ODI parameter used in the interface
INSERT_DT	DATE	Date when the record got inserted

You must update the **PARAM_VALUE** fields with appropriate code type values.

PACKAGE_NAME records starting with **LOAD** are configuration records for loading into their respective data model table. For example, in the table above, the package LOAD_CONSENT_DIMENSION is the configuration record required for loading W_EHA_CONSENT_D. You must therefore provide appropriate code type value for loading W_EHA_CONSENT_D in the field PARAM_VALUE for that corresponding package.

For **PACKAGE_NAME** records containing **SEED_NAV_RECORDS** and **SEED_NA_RECORDS**, the PARAM_VALUE fields may or may not be changed. These records are needed to populate NAV and NA records in all dimension tables (%_D).

ETL Global Parameters

Following is the list of global parameters applicable for all ETLs. Oracle recommends that you do not make any modification to these parameters.

Table 2–2   ETL Global Parameters in C_LOAD_PARAM Table

PACKAGE_NAME	PARAM_NAME	PARAM_VALUE	DESCRIPTION
GLOBAL	HIERARCHY_NAME	DEFAULT_HIERARCHY	NULL
GLOBAL	SEPERATOR	~	NULL
SEED_NA_RECORDS	$NA_VARCHAR2	NA	NULL
SEED_NA_RECORDS	$NA_CHAR	1	NULL
SEED_NA_RECORDS	$NA_NUMBER	9999	NULL
SEED_NA_RECORDS	$NA_WID	-2	NULL
SEED_NA_RECORDS	$NA_DESC	No value	NULL
SEED_NA_RECORDS	$NA_DATE	1-Jan-00	NULL
SEED_NA_RECORDS	$NA_CODE	$NULL_NO_VAL$	NULL
SEED_NAV_RECORDS	$NAV_VARCHAR2	NAV	NULL
SEED_NAV_RECORDS	$NAV_CHAR	1	NULL
SEED_NAV_RECORDS	$NAV_NUMBER	9999	NULL
SEED_NAV_RECORDS	$NAV_WID	-1	NULL
SEED_NAV_RECORDS	$NAV_DESC	No value is set for exclusion	NULL
SEED_NAV_RECORDS	$NAV_DATE	1-Jan-00	NULL
SEED_NAV_RECORDS	$NAV_CODE	$NULL_NO_VAL_SET_EXCL$	NULL

Configuring C_LOAD_DE_IDENTIFY Attributes

The C_LOAD_DE_IDENTIFY table is used to store de-identification attributes and its values for the de-identification process. De-identification is the process of removal or masking of identifying information like patient's name, medical record number, birth date, and social security number from medical records, to protect patient privacy.

This table is also loaded with default seed data when the application is installed successfully. You may change the values for the fields DE_IDENTITY_VALUE and DE_IDENTITY_FLG according to your business needs. The default configuration is to move the value of Patient's de-identification attributes as it is from HDWF to CDM. Oracle recommends that you enable masking of these attributes. The attributes of the table are described below.

Table 2–3   C_LOAD_DE_IDENTIFY Table Attributes

Column Name	Column Type	Description
PACKAGE_NAME	VARCHAR2 (300)	Name of the ODI package that includes the variable, full and incremental interfaces
TARGET_TABLE_NAME	VARCHAR2 (80)	Name of the main target table that is loaded by this package
PARAM_NAME	VARCHAR2 (80)	Name of the parameter used in the interface
PARAM_DATA_TYPE	VARCHAR2 (80)	Data type of the parameter. The supported data types can be varchar, number and date
DE_IDENTITY_VALUE	VARCHAR2 (4000)	De identity value of the parameter used in the interface. This field will contain value when the DE_IDENTITY_FLG is set to 'S'
DE_IDENTITY_FLG	VARCHAR2 (1)	A flag used to represent the type of value supplied to the parameter S represents Standard Value C represents the Custom Value; this will call the PL/SQL function customized by customer.
INSERT_DT	DATE	Date when the record got inserted

You can choose any one of these three masking options:

- Populate HDM value as it is to their corresponding CDM attributes. (no masking)

- Populate a standard value to the CDM de-identification attributes. (Masking with constant value)

- Populate a calculated value to the CDM de-identification attributes (Masking with a calculated value)

A configuration table called C_LOAD_DE_IDENTIFY is created to choose any one of the above option and three de-identification functions are created for finding the calculated value of each type of value (for example, CHAR, NUMBER, DATE). These are:

- CUSTOM_HDM_DATE_DE_IDENTIFY (…) -- user-defined function to encrypt a DATE attribute

- CUSTOM_HDM_NUMBER_DE_IDENTIFY (…) -- user-defined function to encrypt a NUMBER attribute

- CUSTOM_HDM_STRING_DE_IDENTIFY (…)   -- user-defined function to encrypt a CHAR or STRING attribute

You can change the logic of these three functions. Use the DE_IDENTITY_FLG and DE_IDENTITY_VALUE fields in the table C_LOAD_DE_IDENTIFY to choose the option for any de-identification attribute.

Each de-identification attribute has a corresponding record in this table. Provide **null**, **S**, or **C** values for each record in the DE_IDENTITY_FLG field, based on the following criteria:

- If you do not want masking for any attribute at any time, leave the **null** value in this field. In this case, the value from HDWF attribute is populated to corresponding attribute of CDM.

- If you want mask the value of attribute, configure the DE_IDENTIFY_FLG as 'S' and configure the value of DE_IDENTIFY_VALUE with the masked value that you would like to populate into it's corresponding CDM attribute.

    For example, if you want to mask the value of DIAGNOSIS_ONSET_DT attribute of W_EHA_DX_PATIENT_H to '01-01-1900', configure the record as following.

Table 2–4   C_LOAD_DE_IDENTIFY Table Seed Data

PACKAGE_NAME	TARGET_TABLE_ NAME	PARAM_NAME	PARAM_ DATA_ TYPE	DE_IDENTITY_ VALUE	DE_ IDENTITY_ FLG	INSERT_ DT
LOAD_DX_ PATIENT_BRIDGE	W_EHA_DX_ PATIENT_H	DIAGNOSIS_ ONSET_DT	DATE	01/01/1900 00:00:00	S	NULL

> **Note:**   Ensure that the PARAM_DATA_TYPE column in C_LOAD_ DE_IDENTIFY is configured to the data type column of attribute to be masked.
>
> Ensure the value of PARAM_VALUE is correctly formatted. No quotes should be prefixed or suffixed to the literal configured.
>
> For date fields, it should be MM/DD/YYYY HH24:MI:SS.
>
> For varchar field, it should be a varchar.
>
> For Number, it has to be valid number.

■ If you want to populate standard values for any attribute, provide value **S** in this field. Also provide the standard value to be populated in CDM, in the field DE_IDENTITY_VALUE.

■ If you want to populate calculated values, provide value **C** in this field. In this case the value from any one of the three functions listed above (depending on the data type of the attribute) is populated.

Standard Configuration of the C_LOAD_DATES Table

The C_LOAD_DATES table is called the job control table. During the incremental load, it is used to store the most recent execution details of ODI packages and therefore, this table is loaded automatically during the execution of ODI components. You do not need to update this table.

Table 2–5   C_LOAD_DATES Table Attributes

Column Name	Column Type	Description
PACKAGE_NAME	VARCHAR2 (300)	Name of the ODI package that includes the variable, full and incremental interfaces
TARGET_TABLE_NAME	VARCHAR2 (300)	Name of the main target table that is loaded by this package
ETL_PROC_WID	NUMBER (10)	Unique identifier that is used to populate for all the records in that table for a particular load
LAST_MAX_DATE	DATE	Last extract timestamp -1 second of the previous extraction
INSERT_DT	DATE	Date when the record got inserted

Standard Configuration of the C_COHORT_PROCEDURE_TYPE Table

The C_COHORT_PROCEDURE_TYPE table is used to store different procedure- types used in Oracle Health Sciences Cohort Explorer reports. The attributes of the table are described below.

Table 2–6   C_COHORT_PROCEDURE_TYPE Table Attributes

Column Name	Column Type	Description
COHORT_PROC_TYP_ID	NUMBER(10,0)	The Surrogate key for Procedure Type
COHORT_PROC_TYP_CODE	VARCHAR2(80 BYTE)	The Actual (functional) code of Procedure Type
INSERT_DT	DATE	Date when the record got inserted
UPDATE_DT	DATE	The record last updation date
DELETE_FLG	CHAR(1 BYTE)	The soft delete flag of the record
INTEGRATION_ID	VARCHAR2(400 BYTE)	The integration ID of the each procedure type code
DATASOURCE_NUM_ID	NUMBER(10,0)	The data source number ID of the each procedure type code

The C_COHORT_PROCEDURE_TYPE table contains seed data as shown below. Oracle recommends that you do not modify the seed data in this configuration table as these procedure types are used in Oracle Health Sciences Cohort Explorer reports.

Table 2–7   C_COHORT_PROCEDURE_TYPE Table Seed Data

COHORT_ PROC_ TYP_ID	COHORT_PROC_TYP_ CODE	INSERT_ DT	UPDATE_DT	DELETE_ FLG	INTEGRATION_ID	DATASOURCE_ NUM_ID
1	PROC_CHEMO_CODE	11-JAN-11	11-JAN-11	N	PROC_CHEMO_ CODE	1
2	PROC_ONCOLOGY_ CODE	11-JAN-11	11-JAN-11	N	PROC_ ONCOLOGY_ CODE	1
3	PROC_SURGERY_ CODE	11-JAN-11	11-JAN-11	N	PROC_SURGERY_ CODE	1

Report Configuration

Customizing Reports Hierarchy

OHSCE supports two hierarchies, one for diagnosis and the other for anatomical site. The data model supports a 15 level hierarchy for both diagnosis, and anatomical site, however for this version of OHSCE we are only using 8 of the 15 levels for diagnosis, and 6 of the 15 levels for anatomical site.

You can use more than the default number of levels by adding new levels to the pre-built hierarchies in the Business Modeling and Mapping (BMM) Layer of the RPD. After you add parent levels to the default hierarchies, you must add members to each additional level. These members should then be moved to the appropriate folder in the Presentation Layer.

Once added to the hierarchy definition and the presentation layer, the additional hierarchy members can be used in custom reports and dashboards.

3

Executing ETLs

This chapter discusses interface logic and execution plans. This chapter contains the following topics:

- Executing Full Load on page 3-1
- Executing Incremental Load on page 3-3
- Executing an Individual ETL on page 3-4
- Scheduling an ETL Execution Plan on page 3-6

In a typical ETL process, data warehouse must be deployed (full load) and subsequently recently created, changed or deleted records will be incrementally applied to the data warehouse (incremental).

There are two packages:

- Full_Load_Execution_Plan for full load
- Master_Execution_Plan for incremental load

The Full Load execution plan executes is designed to load data mart tables in a particular sequence with certain assumptions about the volume of data available expected in different tables. Following is the strategy to create sequence:

Based on referential integrity among different CDM tables, create a load order, which maximizes parallel execution to minimize total time of loading CDM data mart.

If the volume of data is extremely large, performing parallel execution may result in resource contention, which will dramatically degrade the overall performance of the system. Oracle recommends that you formulate a load strategy based on the volume of data. The strategy should try to minimize the execution time by maximizing parallel executions taking into account resource constraints.

Executing Full Load

To execute the initial load you must execute the following two scripts from the OHSCE user:

- cohort_drop_indexes.sql – This script will drop indexes and should be run before initial data load.
- cohort_create_indexes.sql – This script will recreates indexes and should be run after initial data load. This will prompt for the index tablespace parameter.

The Full Load execution plan runs ETLs in the following order:

1. Load user dimension.

2. Load all other dimensions in parallel and then load W_EHA_RESEARCH_
   PATIENT_F.

3. Load unspecified records in all _D tables.

4. Load all bridge tables in the following order:

   1. LOAD_PATIENT_HISTORY_PATIENT_BRIDGE, LOAD_ETHNICITY_
      PATIENT_BRIDGE, and LOAD_SPECIMEN_PATIENT_BRIDGE in parallel.

   2. LOAD_CONSENT_PATIENT_BRIDGE, LOAD_PROCEDURE_PATIENT_
      BRIDGE, and LOAD_RACE_PATIENT_BRIDGE in parallel

   3. LOAD_DIAGNOSTIC_TEST_PATIENT_BRIDGE

   4. LOAD_DX_PATIENT_BRIDGE

   5. LOAD_SUBADMN_PATIENT_BRIDGE

   6. FULL_LOAD_ALL_DHL_TABLES. This package executes %_DHL related
      ETLs in parallel.

5. Load unspecified records for three bridge tables.

6. Load protocol related tables.

To execute a full load, perform the following steps:

1. Navigate to **Execution Plans** > **Initial Setup** > **Full_Load_Execution_Plan** >
   Packages > **Full_Load_Execution_Plan** > **Scenarios**.

2. Right-click **FULL_LOAD_EXECUTION_PLAN**.

3. Select **Execute**.

Figure 3–1 Executing a Full Load
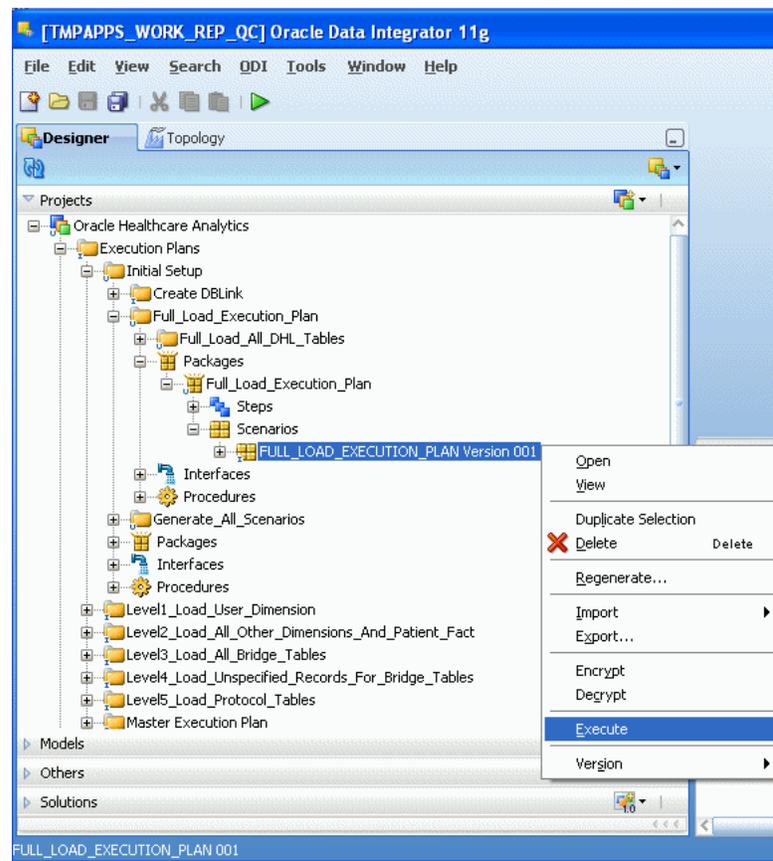
Executing Incremental Load

The last successful ETL load time for a given interface will be used to filter new and changed records in HDWF. In case auxiliary or child tables (tables that are joined to the base source table and whose data will be populated into data mart tables) are used as the source, the **UPDATE_DT** of these tables will be considered as well. Following is the code snippet used in the filter condition.

```
UPDATE_DT > TO_DATE ('#LAST_EXTRACT_DATE','MM/DD/YYYY HH24: MI:
SS')
```

where *LAST_EXTRACT_DATE* is the ODI variable name.

An ODI variable *LAST_EXTRACT_DATE* is used to retrieve the value of **LAST_MAX_DT** from the table and this variable is referred in the **UPDATE_DT** logic in the incremental load interface. Following is the code snippet used for this variable:

```
SELECT case when COUNT (*)>0 then TO_CHAR_FORMAT (MIN (LAST_MAX_
DATE),'MM/DD/YYYY HH24: MI: SS') else '01/01/1900 00:00:00' end

FROM QUALIFY (C_LOAD_DATES)

WHERE PACKAGE_NAME='GET_SCEN_NAME ()'
```

The Incremental Load execution plan runs ETLs in the following order:

1. Load user dimension.

2. Load all other dimensions in parallel and then load W_EHA_RESEARCH_
    PATIENT_F.

3. Load unspecified records in all _D tables.

4. Load all bridge tables in parallel.

5. Load unspecified records for three bridge tables.

6. Load protocol related tables.

To execute an incremental load, perform the following steps:

1. Navigate to **Execution Plans** > **Master Execution Plan** > **Packages** > **Master_ Execution_Plan** > **Scenarios**.

2. Right-click **MASTER_EXECUTION_PLAN**.

3. Select **Execute**.

Figure 3–2
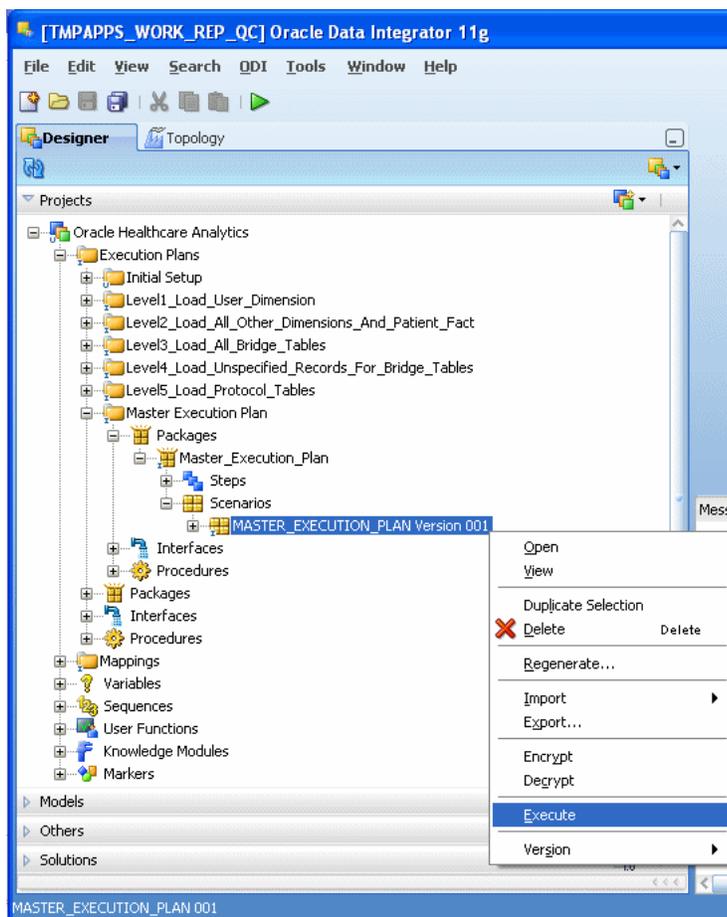
Executing an Individual ETL

In an ODI package associated with a data mart table, a decision is made whether to run the incremental load or initial load using the variable *IS_INCREMENTAL*, as shown in figure 3-1. The logic for this variable returns Y for incremental load and N for full load.

Once the load is completed successfully, a record will be inserted in C_LOAD_DATES job control table. Following is an example of such a record:

Table 3–1 Example of an Inserted Record

PACKAGE_ NAME	TARGET_ TABLE_NAME	ETL_PROC_ WID	LAST_MAX_DT	INSERT_DT
LOAD_ CONSENT_ DIMENSION	W_EHA_ CONSENT_D	14600	5/10/2011 17:02	5/10/2011 17:03

where,

- **PACKAGE_NAME** is the package for loading the W_EHA_CONSENT_D table.

- **TARGET_TABLE_NAME** is the target table name.

- **ETL_PROC_WID** is the unique identifier created using odiRef function.

- **LAST_MAX_DT** is the last_extract_date (current system timestamp -1second) of the source schema.

- **INSERT_DT** is the date on which the record is inserted into this table.

Following is the code snippet used for the *IS_INCREMENTAL* variable:

```
SELECT CASE WHEN COUNT (*)>0 THEN 'Y' ELSE 'N' END

FROM QUALIFY (C_LOAD_DATES)

WHERE PACKAGE_NAME = 'GET_SCEN_NAME ()
```

Perform the following steps to execute an individual ETL:

For example, to execute ETL for Diagnosis dimension, perform the following steps:

1. Navigate to **Mappings** > **Dimensions** > **Load_Diagnosis_Dimension** > **Packages** > **Load_Diagnosis_Dimension** > **Scenarios**.

2. Right-click **LOAD_DIAGNOSIS_DIMENSION**.

3. Select **Execute**.

Figure 3–3   Executing an Individual ETL
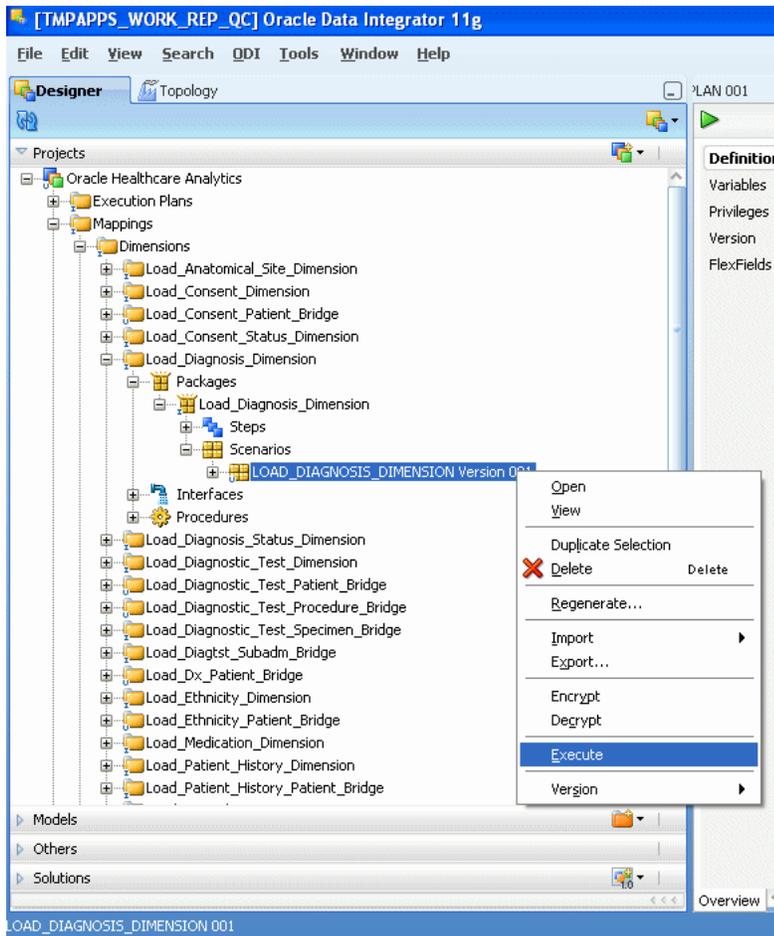
Scheduling an ETL Execution Plan

Scheduling an execution plan implies that its corresponding scenario needs to be scheduled. Perform the following steps to schedule a scenario:

1. Open a scenario.

2. Right-click **Scheduling**.

3. Select **New Scheduling** and provide different scheduling options as needed.

4. Click **Save** on the File main menu. The execution plan will be initiated accordingly.

For more information on scheduling an ETL execution plan refer to *Oracle® Fusion Middleware Getting Started with Oracle Data Integrator 11g Release 1 (11.1.1)*

Figure 3–4   Scheduling an ETL Execution Plan

A
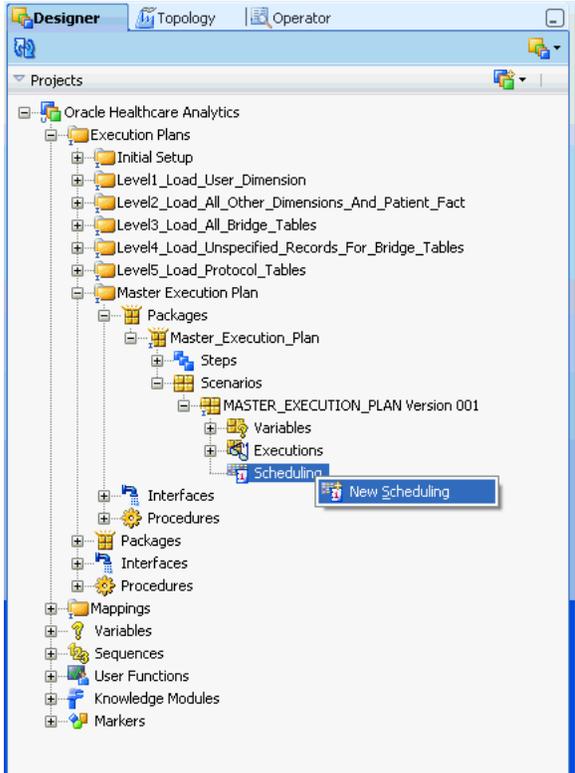
ETL Related Tables

The appendix contains the following topics:

- Mapping of Key System Attributes Between HDWF and CDM
- Configuring Code Types and Codes Used in ETL
- C_LOAD_DE_IDENTIFY Table

Mapping of Key System Attributes Between HDWF and CDM

The following table describes the source HDWF driving entity table for each data model table in OHSCE.

Table A–1   Mapping of Key System Attributes

CDM Table	Key Attributes	HDWF Table(s)
W_USER_D	Datasource Num ID	HDM_USER
	Integration ID	HDM_USER
	Delete Flag	HDM_USER
	Update Date	HDM_USER
W_UOM_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY,HDM_CD_SYS,HDM_CD_REPOSITORY_CD_TYP,HDM_CD_TYP
	Update Date	HDM_CD_REPOSITORY,HDM_CD_SYS
W_EHA_DIAGTST_PATIENT_H	Datasource Num ID	HDM_INTVN_OBSV
	Integration ID	HDM_INTVN_OBSV
	Delete Flag	HDM_INTVN_OBSV,HDM_INTVN,HDM_OBSV,W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_INTVN_OBSV,HDM_INTVN,HDM_OBSV
W_EHA_DIAGTST_PROC_DHL	Datasource Num ID	HDM_INTVN_OBSV
	Integration ID	HDM_INTVN_OBSV,HDM_RELTD_INTVN
	Delete Flag	HDM_INTVN_OBSV,HDM_INTVN,HDM_OBSV,HDM_RELTD_INTVNW_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_INTVN_OBSV,HDM_INTVN,HDM_OBSV,HDM_RELTD_INTVN

Table A–1   (Cont.) Mapping of Key System Attributes

CDM Table	Key Attributes	HDWF Table(s)
W_EHA_DIAGTST_PROC_DHL	Datasource Num ID	HDM_INTVN_OBSV
	Integration ID	HDM_INTVN_OBSV,HDM_RELTD_INTVN
	Delete Flag	HDM_INTVN_OBSV,HDM_INTVN,HDM_OBSV,HDM_RELTD_INTVNW_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_INTVN_OBSV,HDM_INTVN,HDM_OBSV,HDM_RELTD_INTVN
W_EHA_DIAGTST_SPEC_DHL	Datasource Num ID	HDM_SPCMN
	Integration ID	HDM_SPCMN
	Delete Flag	HDM_SPCMN,HDM_INTVN,W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_SPCMN,HDM_INTVN
W_EHA_PT_HISTORY_PT_H	Datasource Num ID	HDM_PT_HX
	Integration ID	HDM_PT_HX
	Delete Flag	HDM_PT_HX,HDM_SUBST_HX,W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_PT_HX
W_EHA_PROC_PATIENT_H	Datasource Num ID	HDM_INTVN
	Integration ID	HDM_INTVN
	Delete Flag	HDM_INTVN,W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_INTVN
W_EHA_PROCEDURE_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY,HDM_CD_SYS,HDM_CD_REPOSITORY_CD_TYP,HDM_CD_TYP
	Update Date	HDM_CD_REPOSITORY,HDM_CD_SYS
W_EHA_CONSENT_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_RACE_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_DIAGNOSTIC_TEST_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS

Table A–1   (Cont.) Mapping of Key System Attributes

CDM Table	Key Attributes	HDWF Table(s)
W_EHA_ETHNICITY_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_PATIENT_HISTORY_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_SPECIMEN_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_CONSENT_STATUS_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_DIAGNOSIS_STATUS_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_CONSENT_PATIENT_H	Datasource Num ID	HDM_CNSNT
	Integration ID	HDM_CNSNT
	Delete Flag	HDM_CNSNT, HDM_PT, W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_CNSNT
W_EHA_ETHN_PATIENT_H	Datasource Num ID	HDM_IND_PRTY_ETHN
	Integration ID	HDM_IND_PRTY_ETHN
	Delete Flag	HDM_IND_PRTY_ETHN, HDM_PT, W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_IND_PRTY_ETHN
W_EHA_SUBADMN_PATIENT_H	Datasource Num ID	HDM_INTVN_SUSBST
	Integration ID	HDM_INTVN_SUSBST
	Delete Flag	HDM_INTVN_SUSBST, HDM_INTVN, HDM_SUBADMN, HDM_PT, W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_INTVN_SUSBST, HDM_INTVN, HDM_SUBADMN
W_EHA_RESEARCH_PATIENT_F	Datasource Num ID	HDM_PT
	Integration ID	HDM_PT
	Delete Flag	HDM_PT
	Update Date	HDM_PT

Table A–1   (Cont.) Mapping of Key System Attributes

CDM Table	Key Attributes	HDWF Table(s)
W_EHA_PROCEDURE_TYPE_D	Datasource Num ID	HDM_CD_TYP
	Integration ID	HDM_CD_TYP
	Delete Flag	HDM_CD_TYP, C_COHORT_PROCEDURE_TYPE
	Update Date	HDM_CD_TYP
W_EHA_PROC_TYPE_PROC_DHL	Datasource Num ID	HDM_CD_REPOSITORY_CD_TYP
	Integration ID	HDM_CD_REPOSITORY_CD_TYP
	Delete Flag	HDM_CD_TYP, HDM_CD_REPOSITORY_CD_TYP, W_EHA_PROCEDURE_D, C_COHORT_PROCEDURE_TYPE,W_EHA_PROCEDURE_TYPE_D
	Update Date	HDM_CD_REPOSITORY
W_EHA_SPECIMEN_PATIENT_H	Datasource Num ID	HDM_SPCMN
	Integration ID	HDM_SPCMN
	Delete Flag	HDM_PT, W_EHA_RESEARCH_PATIENT_D, W_EHA_ANATOMICAL_SITE_D,HDM_SPCMN,W_EHA_SPECIMEN_D
	Update Date	HDM_SPCMN
W_EHA_RACE_PATIENT_H	Datasource Num ID	HDM_IND_PRTY_RC
	Integration ID	HDM_IND_PRTY_RC
	Delete Flag	HDM_IND_PRTY_RC, HDM_PT, HDM_CD_REPOSITORY
	Update Date	HDM_IND_PRTY_RC
W_EHA_PROC_SUBADMN_DHL	Datasource Num ID	HDM_INTVN_SUBST
	Integration ID	HDM_INTVN_SUBST, HDM_RELTD_INTVN
	Delete Flag	HDM_RELTD_INTVN, HDM_INTVN_SUBST, W_EHA_MEDICATION_D,HDM_INTVN,W_EHA_PROCEDURE_D,HDM_PT,HDM_SUBADMN
	Update Date	HDM_RELTD_INTVN, HDM_INTVN_SUBST, HDM_INTVN,HDM_PT,HDM_SUBADMN
W_EHA_MEDICATION_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	HDM_CD_REPOSITORY, HDM_CD_SYS
W_EHA_RESEARCH_PATIENT_D	Datasource Num ID	HDM_PT
	Integration ID	HDM_PT.PT_ID
	Delete Flag	HDM_PT,HDM_IND_PRTY,HDM_LOC,HDM_PRTY_ADDR
	Update Date	HDM_PT,HDM_IND_PRTY,HDM_LOC
W_EHA_DX_PATIENT_H	Datasource Num ID	HDM_CNRN_ANATSITE
	Integration ID	HDM_CNRN_ANATSITE
	Delete Flag	HDM_CNRN_ANATSITE,HDM_CNRN,W_EHA_RESEARCH_PATIENT_D
	Update Date	HDM_CNRN_ANATSITE,HDM_CNRN

Table A–1   (Cont.) Mapping of Key System Attributes

CDM Table	Key Attributes	HDWF Table(s)
W_EHA_DIAGTST_SUBADMN_DHL	Datasource Num ID	HDM_INTVN_SUBST
	Integration ID	HDM_INTVN_SUBST
	Delete Flag	HDM_RELTD_INTVN,W_EHA_RESEARCH_PATIENT_D,HDM_INTVN,HDM_INTVN_SUBST,HDM_SUBADMN
	Update Date	HDM_RELTD_INTVN,HDM_INTVN,HDM_INTVN_SUBST,HDM_SUBADMN
W_EHA_ANATOMICAL_SITE_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	Not Applicable as ETL always runs only in Full Load
W_EHA_DIAGNOSIS_D	Datasource Num ID	HDM_CD_REPOSITORY
	Integration ID	HDM_CD_REPOSITORY
	Delete Flag	HDM_CD_REPOSITORY, HDM_CD_REPOSITORY_CD_TYP, HDM_CD_TYP, HDM_CD_SYS
	Update Date	Not Applicable as ETL always runs only in Full Load

Configuring Code Types and Codes Used in ETL

Following is the list of parameters available to configure different code types:

Table A–2   Configuring Code Types and Codes Used in ETL

PACKAGE_NAME	PARAM_NAME	PARAM_VALUE	DESCRIPTION
LOAD_ANATOMICAL_SITE_DIMENSION	ANATOMICAL_SITE_CODE	ANATOMICAL_SITE_CODE	NULL
LOAD_CONSENT_DIMENSION	CONSENT_TYPE_CODE	CONSENT_TYPE	NULL
LOAD_CONSENT_PATIENT_BRIDGE	CONSENT_TYPE_CODE	CONSENT_TYPE_CODE	NULL
LOAD_CONSENT_PATIENT_BRIDGE	CONSENT_STATUS_CODE	CONSENT_STATUS_CODE	NULL
LOAD_CONSENT_STATUS_DIMENSION	CONSENT_STATUS_CODE	CONSENT_STATUS_CODE	NULL
LOAD_DIAGNOSIS_DIMENSION	DIAGNOSIS_CODE	DIAGNOSIS_CODE	NULL
LOAD_DIAGNOSIS_STATUS_DIMENSION	DIAGNOSIS_STATUS_CODE	DIAGNOSIS_STATUS_CODE	NULL
LOAD_DIAGNOSTIC_TEST_DIMENSION	DIAGNOSTIC_TEST_CODE	DIAGNOSTIC_TEST_CODE	NULL
LOAD_DIAGNOSTIC_TEST_PATIENT_BRIDGE	DIAGNOSTIC_TEST_CODE	DIAGNOSTIC_TEST_CODE	NULL
LOAD_DIAGNOSTIC_TEST_PROCEDURE_BRIDGE	RESULTING_CODE	RESULTING	NULL
LOAD_DIAGNOSTIC_TEST_PROCEDURE_BRIDGE	PRE_INTERVENTION_DIAGNOSTIC_TEST_CODE	PRE_INTERVENTION_DIAGNOSTIC_TEST	NULL
LOAD_DIAGNOSTIC_TEST_PROCEDURE_BRIDGE	INTRA_INTERVENTION_DIAGNOSTIC_TEST_CODE	INTRA_INTERVENTION_DIAGNOSTIC_TEST	NULL

Table A–2   (Cont.) Configuring Code Types and Codes Used in ETL

PACKAGE_NAME	PARAM_NAME	PARAM_VALUE	DESCRIPTION
LOAD_DIAGNOSTIC_TEST_ PROCEDURE_BRIDGE	PROCEDURE_CODE	PROCEDURE_CODE	NULL
LOAD_DIAGNOSTIC_TEST_ PROCEDURE_BRIDGE	POST_INTERVENTION_ DIAGNOSTIC_TEST_CODE	POST_INTERVENTION_ DIAGNOSTIC_TEST	NULL
LOAD_DIAGNOSTIC_TEST_ SPECIMEN_BRIDGE	DIAGNOSTIC_TEST_CODE	DIAGNOSTIC_TEST_CODE	NULL
LOAD_DIAGTST_SUBADM_ BRIDGE	MEDICATION_CODE	MEDICATION_CODE	NULL
LOAD_DIAGTST_SUBADM_ BRIDGE	DIAGNOSTIC_TEST_CODE	DIAGNOSTIC_TEST_CODE	NULL
LOAD_DIAGTST_SUBADM_ BRIDGE	PRE_INTERVENTION_ MEDICATION	PRE_INTERVENTION_ MEDICATION	NULL
LOAD_DIAGTST_SUBADM_ BRIDGE	INTRA_INTERVENTION_ MEDICATION	INTRA_INTERVENTION_ MEDICATION	NULL
LOAD_DIAGTST_SUBADM_ BRIDGE	POST_INTERVENTION_ MEDICATION	POST_INTERVENTION_ MEDICATION	NULL
LOAD_DX_PATIENT_BRIDGE	DIAGNOSIS_CODE	'DIAGNOSIS_CODE', 'DIAGNOSIS_CATEGORY'	NULL
LOAD_DX_PATIENT_BRIDGE	DIAGNOSIS_STATUS_CODE	DIAGNOSIS_STATUS_CODE	NULL
LOAD_ETHNICITY_ DIMENSION	ETHNICITY_CODE	ETHNICITY_CODE	NULL
LOAD_MEDICATION_ DIMENSION	MEDICATION_CODE	MEDICATION_CODE	NULL
LOAD_PATIENT_HISTORY_ DIMENSION	PATIENT_HISTORY_CODE	PATIENT_HISTORY_CODE	NULL
LOAD_PROCEDURE_ DIMENSION	PROCEDURE_CODE	PROCEDURE_CODE	NULL
LOAD_PROCEDURE_PATIENT_ BRIDGE	PROCEDURE_CODE	PROCEDURE_CODE	NULL
LOAD_PROCEDURE_ SUBSTANCEADMINISTRATION _BRIDGE	MEDICATION_CODE	MEDICATION_CODE	NULL
LOAD_PROCEDURE_ SUBSTANCEADMINISTRATION _BRIDGE	PROCEDURE_CODE	PROCEDURE_CODE	NULL
LOAD_PROCEDURE_ SUBSTANCEADMINISTRATION _BRIDGE	MEDICATION_RELSHP_CODE	'PRE_INTERVENTION_ MEDICATION','INTRA_ INTERVENTION_ MEDICATION','POST_ INTERVENTION_MEDICATION'	NULL
LOAD_PROCEDURE_TYPE_ PROCEDURE_BRIDGE	PROCEDURE_CODE	PROCEDURE_CODE	NULL
LOAD_RACE_DIMENSION	RACE_CODE	RACE_CODE	NULL
LOAD_RESEARCH_PATIENT_D	ADDR_STATUS_CODE	A	NULL
LOAD_RESEARCH_PATIENT_D	HOME_ADDR_TYP	HOME	NULL
LOAD_RESEARCH_PATIENT_D	CITY	CITY	NULL

Table A–2   (Cont.) Configuring Code Types and Codes Used in ETL

PACKAGE_NAME	PARAM_NAME	PARAM_VALUE	DESCRIPTION
LOAD_SPECIMEN_DIMENSION	SPECIMEN_TYPE_CODE	SPECIMEN_TYPE_CODE	NULL
LOAD_SUBADMN_PATIENT_ BRIDGE	MEDICATION_CODE	MEDICATION_CODE	NULL
LOAD_UOM_DIMENSION	UOM_CODE	'SPECIMEN_QUANTITY_UOM_ CODE','FREQUENCY_UOM_ CODE','AGE_AT_FIRST_ONSET_ UOM_CODE','DOSE_UOM_ CODE','OBSERVATION_VALUE_ UOM_CODE'	NULL

C_LOAD_DE_IDENTIFY Table

Following table shows the configuration of de-identification:

Table A–3   C_LOAD_DE_IDENTIFY Table Seed Data

PACKAGE_NAME	TARGET_TABLE_ NAME	PARAM_NAME	PARAM_ DATA_ TYPE	DE_IDENTITY_ VALUE	DE_ IDENTITY_ FLG	INSERT_ DT
LOAD_CONSENT_ PATIENT_BRIDGE	W_EHA_CONSENT_ PATIENT_H	CNSNT_EFF_ STRT_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_CONSENT_ PATIENT_BRIDGE	W_EHA_CONSENT_ PATIENT_H	CNSNT_EFF_ END_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ DIAGNOSTIC_ TEST_PATIENT_ BRIDGE	W_EHA_DIAGTST_ PATIENT_H	DIAGTST_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ DIAGNOSTIC_ TEST_ PROCEDURE_ BRIDGE	W_EHA_DIAGTST_ PROC_DHL	PROCEDURE_ END_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ DIAGNOSTIC_ TEST_ PROCEDURE_ BRIDGE	W_EHA_DIAGTST_ PROC_DHL	DIAGTST_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ DIAGNOSTIC_ TEST_ PROCEDURE_ BRIDGE	W_EHA_DIAGTST_ PROC_DHL	PROCEDURE_ START_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ DIAGNOSTIC_ TEST_SPECIMEN_ BRIDGE	W_EHA_DIAGTST_ SPEC_DHL	SPECIMEN_ COLLECTION_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ DIAGNOSTIC_ TEST_SPECIMEN_ BRIDGE	W_EHA_DIAGTST_ SPEC_DHL	DIAGTST_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_DIAGTST_ SUBADM_BRIDGE	W_EHA_DIAGTST_ SUBADM_DHL	SUBADMN_END_ DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_DIAGTST_ SUBADM_BRIDGE	W_EHA_DIAGTST_ SUBADM_DHL	DIAGTST_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_DIAGTST_ SUBADM_BRIDGE	W_EHA_DIAGTST_ SUBADM_DHL	SUBADMN_ START_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_DX_ PATIENT_BRIDGE	W_EHA_DX_ PATIENT_H	AGE_AT_FIRST_ ONSET	NUMBE R	1111	NULL	NULL

Table A–3   (Cont.) C_LOAD_DE_IDENTIFY Table Seed Data

PACKAGE_NAME	TARGET_TABLE_ NAME	PARAM_NAME	PARAM_ DATA_ TYPE	DE_IDENTITY_ VALUE	DE_ IDENTITY_ FLG	INSERT_ DT
LOAD_DX_ PATIENT_BRIDGE	W_EHA_DX_ PATIENT_H	DIAGNOSIS_ REPORTED_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_DX_ PATIENT_BRIDGE	W_EHA_DX_ PATIENT_H	DIAGNOSIS_ ONSET_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_DX_ PATIENT_BRIDGE	W_EHA_DX_ PATIENT_H	DIAGNOSIS_ END_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_PATIENT_ HISTORY_ PATIENT_BRIDGE	W_EHA_PT_ HISTORY_PT_H	PATIENT_ HISTORY_START_ DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_PATIENT_ HISTORY_ PATIENT_BRIDGE	W_EHA_PROC_ PATIENT_H	PATIENT_ HISTORY_END_ DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ PROCEDURE_ PATIENT_BRIDGE	W_EHA_PROC_ PATIENT_H	PROCEDURE_ START_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ PROCEDURE_ PATIENT_BRIDGE	W_EHA_PROC_ PATIENT_H	PROCEDURE_ END_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ PROCEDURE_ SUBSTANCEADMI NISTRATION_ BRIDGE	W_EHA_PROC_ SUBADMN_DHL	SUBADMN_ START_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ PROCEDURE_ SUBSTANCEADMI NISTRATION_ BRIDGE	W_EHA_PROC_ SUBADMN_DHL	SUBADMN_END_ DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ PROCEDURE_ SUBSTANCEADMI NISTRATION_ BRIDGE	W_EHA_PROC_ SUBADMN_DHL	PROCEDURE_ END_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ PROCEDURE_ SUBSTANCEADMI NISTRATION_ BRIDGE	W_EHA_PROC_ SUBADMN_DHL	PROCEDURE_ START_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ RESEARCH_ PATIENT_D	W_EHA_RESEARCH_ PATIENT_D	DOB_DATE	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ RESEARCH_ PATIENT_D	W_EHA_RESEARCH_ PATIENT_D	DECEASED_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ RESEARCH_ PATIENT_D	W_EHA_RESEARCH_ PATIENT_D	CITY	STRING	Alaska	NULL	NULL
LOAD_ RESEARCH_ PATIENT_D	W_EHA_RESEARCH_ PATIENT_D	POSTAL_CODE	STRING	99506	NULL	NULL

Table A–3 (Cont.) C_LOAD_DE_IDENTIFY Table Seed Data

PACKAGE_NAME	TARGET_TABLE_ NAME	PARAM_NAME	PARAM_ DATA_ TYPE	DE_IDENTITY_ VALUE	DE_ IDENTITY_ FLG	INSERT_ DT
LOAD_ SPECIMEN_ PATIENT_BRIDGE	W_EHA_SPECIMEN_ PATIENT_H	SPECIMEN_ COLLECTION_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ SUBADMN_ PATIENT_BRIDGE	W_EHA_SUBADMN_ PATIENT_H	INTVN_STRT_DT	DATE	01/01/1900 00:00:00	NULL	NULL
LOAD_ SUBADMN_ PATIENT_BRIDGE	W_EHA_SUBADMN_ PATIENT_H	INTVN_END_DT	DATE	01/01/1900 00:00:00	NULL	NULL

B

Work Repository Artifacts

The appendix contains the following topics:

Variables

Following is the list of variables in ODI repository:

Table B–1   Variables

Variable Name
ADDR_STATUS_CODE
AGE_AT_FIRST_ONSET_FLG
AGE_AT_FIRST_ONSET_VALUE
ANATOMICAL_SITE_CATEGORY
ANATOMICAL_SITE_CODE
CITY_FLG
CITY_VALUE
CNSNT_EFF_END_DT_FLG
CNSNT_EFF_END_DT_VALUE
CNSNT_EFF_STRT_DT_FLG
CNSNT_EFF_STRT_DT_VALUE
CONSENT_STATUS_CODE
CONSENT_TYPE_CODE
DECEASED_DT_FLG
DECEASED_DT_VALUE
DEFAULT_WID
DIAGNOSIS_CATEGORY
DIAGNOSIS_CODE
DIAGNOSIS_END_DT_FLG
DIAGNOSIS_END_DT_VALUE
DIAGNOSIS_ONSET_DT_FLG

Table B–1   (Cont.) Variables

Variable Name
DIAGNOSIS_ONSET_DT_VALUE
DIAGNOSIS_REPORTED_DT_FLG
DIAGNOSIS_REPORTED_DT_VALUE
DIAGNOSIS_STATUS_CODE
DIAGNOSTIC_TEST
DIAGNOSTIC_TEST_CODE
DIAGTST_DT_FLG
DIAGTST_DT_VALUE
DOB_DATE_FLG
DOB_DATE_VALUE
ETHNICITY_CODE
ETL_PROC_WID
HIERARCHY_NAME
HOME_ADDR_TYP
INTRA_INTERVENTION_DIAGNOSTIC_TEST_CODE
INTRA_INTERVENTION_MEDICATION
INTVN_END_DT_FLG
INTVN_END_DT_VALUE
INTVN_STRT_DT_FLG
INTVN_STRT_DT_VALUE
IS_INCREMENTAL
LAST_EXTRACT_DATE
MEDICATION_CODE
MEDICATION_RELSHP_CODE
PATIENT_HISTORY_CODE
PATIENT_HISTORY_END_DT_FLG
PATIENT_HISTORY_END_DT_VALUE
PATIENT_HISTORY_START_DT_FLG
PATIENT_HISTORY_START_DT_VALUE
POSTAL_CODE_FLG
POSTAL_CODE_VALUE
POST_INTERVENTION_DIAGNOSTIC_TEST_CODE
POST_INTERVENTION_MEDICATION
PRE_INTERVENTION_DIAGNOSTIC_TEST_CODE
PRE_INTERVENTION_MEDICATION
PROCEDURE_CODE
PROCEDURE_END_DT_FLG
PROCEDURE_END_DT_VALUE
PROCEDURE_START_DT_FLG

Table B–1   (Cont.) Variables

Variable Name
PROCEDURE_START_DT_VALUE
RACE_CODE
RESULTING_CODE
SEPERATOR
SPECIMEN_COLLECTION_DT_FLG
SPECIMEN_COLLECTION_DT_VALUE
SPECIMEN_TYPE_CODE
SUBADMN_END_DT_FLG
SUBADMN_END_DT_VALUE
SUBADMN_START_DT_FLG
SUBADMN_START_DT_VALUE
TENANT_ID
UOM_CODE

Sequences

Following is the list of sequences in ODI repository:

Table B–2   Sequences

Sequence Name
W_EHA_ANATOMICAL_SITE_D_S
W_EHA_CONSENT_D_S
W_EHA_CONSENT_PATIENT_H_S
W_EHA_CONSENT_STATUS_D_S
W_EHA_DIAGNOSIS_D_S
W_EHA_DIAGNOSIS_STATUS_D_S
W_EHA_DIAGNOSTIC_TEST_D_S
W_EHA_DIAGTST_PATIENT_H_S
W_EHA_DIAGTST_PROC_DHL_S
W_EHA_DIAGTST_SPEC_DHL_S
W_EHA_DIAGTST_SUBADM_DHL_S
W_EHA_DX_PATIENT_H_S
W_EHA_ETHNICITY_D_S
W_EHA_ETHN_PATIENT_H_S
W_EHA_MEDICATION_D_S
W_EHA_PATIENT_HISTORY_D_S
W_EHA_PROCEDURE_D_S
W_EHA_PROCEDURE_TYPE_D_S
W_EHA_PROC_PATIENT_H_S
W_EHA_PROC_SUBADMN_DHL_S

Table B–2   (Cont.) Sequences

Sequence Name
W_EHA_PROC_TYPE_PROC_DHL_S
W_EHA_PT_HISTORY_PT_H_S
W_EHA_RACE_D_S
W_EHA_RACE_PATIENT_H_S
W_EHA_RESEARCH_PATIENT_D_S
W_EHA_RESEARCH_PATIENT_F_S
W_EHA_SPECIMEN_D_S
W_EHA_SPECIMEN_PATIENT_H_S
W_EHA_SUBADMN_PATIENT_H_S
W_EHA_UOM_D_S
W_USER_D_S

Interfaces

The following table lists ODI repository interfaces and the folder or package containing the interface.

Table B–3   Interfaces

Interface Name	Folder or Package Containing the Interface
INT_TMPAPPS_Research_Patient_F	Load_Research_Patient_Fact
INT_TMPAPPS_Research_Patient_F_Full	Load_Research_Patient_Fact
INT_TMPAPPS_Patient_History_D	Load_Patient_History_Dimension
INT_TMPAPPS_Patient_History_D_Full	Load_Patient_History_Dimension
INT_TMPAPPS_Consent_Patient_H_Full	Load_Consent_Patient_Bridge
INT_TMPAPPS_Consent_Patient_H	Load_Consent_Patient_Bridge
INT_TMPAPPS_Subadmn_Patient_H	Load_Subadmn_Patient_Bridge
INT_TMPAPPS_Subadmn_Patient_H_Full	Load_Subadmn_Patient_Bridge
INT_TMPAPPS_Diagnosis_Status_D	Load_Diagnosis_Status_Dimension
INT_TMPAPPS_Diagnosis_Status_D_Full	Load_Diagnosis_Status_Dimension
INT_TMPAPPS_Race_D	Load_Race_Dimension
INT_TMPAPPS_Race_D_Full	Load_Race_Dimension
INT_TMPAPPS_Specimen_D	Load_Specimen_Dimension
INT_TMPAPPS_Specimen_D_Full	Load_Specimen_Dimension
INT_TMPAPPS_Diagtst_Proc_DHL_Full	Load_Diagnostic_Test_Procedure_Bridge
INT_TMPAPPS_Diagtst_Proc_DHL	Load_Diagnostic_Test_Procedure_Bridge
INT_TMPAPPS_Ethnicity_Patient_H_Full	Load_Ethnicity_Patient_Bridge
INT_TMPAPPS_Ethnicity_Patient_H	Load_Ethnicity_Patient_Bridge
INT_TMPAPPS_W_EHA_DIAGTST_SUBADM_DHL	Load_Diagtst_Subadm_Bridge
INT_TMPAPPS_W_EHA_DIAGTST_SUBADM_DHL_Full	Load_Diagtst_Subadm_Bridge
INT_TMPAPPS_Procedure_D	Load_Procedure_Dimension

Table B–3   (Cont.) Interfaces

Interface Name	Folder or Package Containing the Interface
INT_TMPAPPS_Procedure_D_Full	Load_Procedure_Dimension
INT_TMPAPPS_Diagtst_Patient_H	Load_Diagnostic_Test_Patient_Bridge
INT_TMPAPPS_Diagtst_Patient_H_Full	Load_Diagnostic_Test_Patient_Bridge
INT_TMPAPPS_DX_PATIENT_H_Full	Load_Dx_Patient_Bridge
INT_TMPAPPS_DX_PATIENT_H	Load_Dx_Patient_Bridge
INT_TMPAPPS_W_EHA_RESEARCH_PATIENT_D	Load_Research_Patient_Dimension
INT_TMPAPPS_GET_LATEST_PRTY_ADDR_Tmp_1	Load_Research_Patient_Dimension
INT_TMPAPPS_W_EHA_RESEARCH_PATIENT_D_Full	Load_Research_Patient_Dimension
INT_TMPAPPS_GET_LATEST_PRTY_ADDR_Tmp_2	Load_Research_Patient_Dimension
INT_TMPAPPS_Consent_D_Full	Load_Consent_Dimension
INT_TMPAPPS_Consent_D	Load_Consent_Dimension
INT_TMPAPPS_Diagnostic_Test_D	Load_Diagnostic_Test_Dimension
INT_TMPAPPS_Diagnostic_Test_D_Full	Load_Diagnostic_Test_Dimension
INT_TMPAPPS_Ethnicity_D	Load_Ethnicity_Dimension
INT_TMPAPPS_Ethnicity_D_Full	Load_Ethnicity_Dimension
INT_TMPAPPS_Diagtst_Spec_DHL	Load_Diagnostic_Test_Specimen_Bridge
INT_TMPAPPS_Diagtst_Spec_DHL_Full	Load_Diagnostic_Test_Specimen_Bridge
INT_TMPAPPS_Pt_History_Pt_H	Load_Patient_History_Patient_Bridge
INT_TMPAPPS_Pt_History_Pt_H_Full	Load_Patient_History_Patient_Bridge
INT_TMPAPPS_Proc_Patient_H	Load_Procedure_Patient_Bridge
INT_TMPAPPS_Proc_Patient_H_Full	Load_Procedure_Patient_Bridge
INT_TMPAPPS_Anatomical_Site_D_Temp	Load_Anatomical_Site_Dimension
INT_TMPAPPS_Anatomical_Site_D_Full	Load_Anatomical_Site_Dimension
INT_TMPAPPS_Anatomical_Site_D	Load_Anatomical_Site_Dimension
INT_TMPAPPS_Diagnosis_D	Load_Diagnosis_Dimension
INT_TMPAPPS_Diagnosis_D_Full	Load_Diagnosis_Dimension
INT_TMPAPPS_Diagnosis_D_Temp	Load_Diagnosis_Dimension
INT_TMPAPPS_Procedure_SubstanceAdministration_DHL	Load_Procedure_SubstanceAdministration_Bridge
INT_TMPAPPS_Procedure_SubstanceAdministration_DHL_Full	Load_Procedure_SubstanceAdministration_Bridge
INT_TMPAPPS_Consent_Status_D_Full	Load_Consent_Status_Dimension
INT_TMPAPPS_Consent_Status_D	Load_Consent_Status_Dimension
INT_TMPAPPS_Procedure_Type_Procedure_DHL_Full	Load_Procedure_Type_Procedure_Bridge
INT_TMPAPPS_Procedure_Type_Procedure_DHL	Load_Procedure_Type_Procedure_Bridge
INT_TMPAPPS_Medication_D_Full	Load_Medication_Dimension
INT_TMPAPPS_Medication_D	Load_Medication_Dimension
INT_TMPAPPS_Race_patient_H	Load_Race_Patient_Bridge
INT_TMPAPPS_Race_patient_H_Full	Load_Race_Patient_Bridge

Table B–3   (Cont.) Interfaces

Interface Name	Folder or Package Containing the Interface
INT_TMPAPPS_Procedure_Type_D_Full	Load_Procedure_Type_Dimension
INT_TMPAPPS_Procedure_Type_D	Load_Procedure_Type_Dimension
INT_TMPAPPS_Specimen_Patient_H	Load_Specimen_Patient_Bridge
INT_TMPAPPS_Specimen_Patient_H_Full	Load_Specimen_Patient_Bridge
INT_TMPAPPS_UOM_D	Load_UOM_Dimension
INT_TMPAPPS_UOM_D_Full	Load_UOM_Dimension
INT_TMPAPPS_UOM_Tmp	Load_UOM_Dimension
INT_TMPAPPS_User_D_Full	Load_User_Dimension
INT_TMPAPPS_User_D	Load_User_Dimension

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