

OFSAA Data Model Document Generation Guide

**Creating Data Dictionary for OFSAA or
OFSDF and Download Specifications for
OFSAA Staging from erwin**

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ORACLE
Financial Services

OFSAA Data Model Document Generation Guide

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Document Control

Version Number	Revision Date	Change Log
1.0	May 2020	Migrated the document to the new template and updated the document version number to 8.1.x.
2.0	July 2021	Added steps for the Report Generation Process .

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1 Introduction to Data Model Document Generation

This is a technical guide on how to generate the data dictionary documentation for Oracle Financial Services Analytical Applications (OFSAA) and Oracle Financial Services Data Foundation (OFSDF). The process of generating the download specifications for OFSAA Staging is also explained. Both these activities are performed in erwin.

2 Background on erwin

OFSAA Data Models are present in Erwin. Erwin also helps in the creation of data model documentation.

Topics:

- [OFSAA Data Models in erwin](#)
- [Impact of erwin use on the Data Model Documentation](#)
- [Purpose of this Guide](#)
- [Data Dictionary](#)
- [Download Specifications](#)
- [Report Generation Process](#)

2.1 OFSAA Data Models in erwin

Since OFSAA version 5, the data model has been defined and delivered as an Erwin file. erwin is a data modeling tool or environment on which, OFSAA currently depends. It is used to define all data model artifacts, both Logical and Physical data models, which are used by the OFSAA applications, as well as the Oracle Financial Services Data Foundation.

2.2 Impact of erwin use on the Data Model Documentation

In the prior versions of OFSAA, the data model was documented in PDF form, and shipped separately from the actual application artifacts. Starting from OFSAA 5, this has changed. The primary store of all data model related documentation will be the erwin data model file. The reasons for this are as follows:

- erwin permits complete definition of model-related documentation within the model itself. In other words, the model is now 'self-documenting'.
- In many cases, clients typically perform several customizations to the model. This causes any fixed model documentation to progressively become outdated or inaccurate, as additional fields or tables are added to the data model for client-specific needs.
- All OFSAA applications share a common physical data model, which is also shipped as part of the OFSDF. As clients may license independent OFSAA applications or OFSDF at different points in time, erwin permits these models to be merged in a controlled manner to account for site-specific changes as well as release-specific changes from Oracle.

Model documentation can then be generated for the combined, updated model, and therefore stays up-to-date with both the latest internal (client-specific) and external (product- driven) changes.

2.3 Purpose of this Guide

This guide explains the process of generating two important documentation artifacts from within erwin.

2.4 Data Dictionary

The data dictionary is a detailed listing of all tables/columns constituting a specific OFSAA application. Today, the erwin file containing the OFSAA Data Models provides the following information relevant to the creation of a data dictionary:

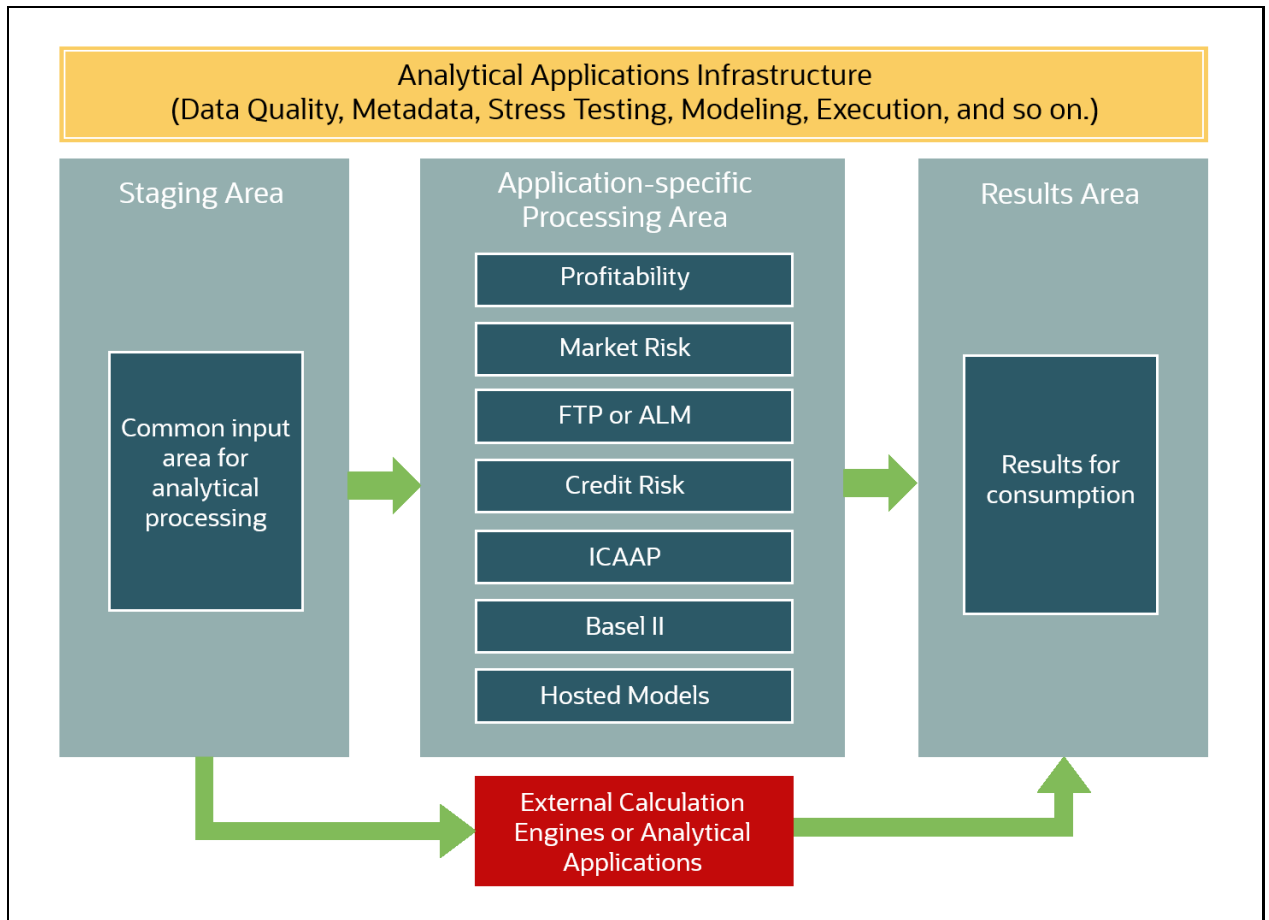
- Subject Areas in each part of the data model

A subject area is a specific grouping/organization of the data model content. It is a high-level categorization scheme that shows which application module or business analysis areas are served within the model. The tables and columns defined during the design process are grouped into these categories for easier navigation as well as comprehension of the model.
- Table/Entity definitions
 - Detailed definitions of all tables
 - Detailed, column level dictionary information including column specification, datatypes, as well as several User Defined Properties (UDPs) that provide additional metadata added during the design process to categorize a specific data model object.
- Data Model diagrams
 - Associated with each data model (either OFSAA or OFSDF) is a collection of data model diagrams (Entity Relationship diagrams). These are usually specific to a subject area, and provide a visual representation of the key entities, their relationships and keys.

2.5 Download Specifications

As indicated earlier, the OFSAA Data Model is a common data model supporting multiple OFSAA applications. The organization of the data model is split into 3 distinct areas.

Figure 1: OFSAA Data Model Organization



- Staging Area: This schema is the common data sourcing layer across all OFSAA applications, and also the OFSDF.
- Processing Area: This refers to application-specific schemas that are exclusive to each OFSAA application, and provide storage/structures for intermediate outputs and application-specific configuration and setup data.
- Results Area: This refers to the collection of star schemas with conformed dimensions that support BI/reporting from aggregated outputs from the processing area.

The use of the common sourcing layer means that a single table in the staging area can serve multiple and different analytical applications/processing engines within the OFSAA architecture.

Therefore, it is necessary to know how specific applications map to specific staging tables/columns, and what subset of the complete unified staging data model is actually used by each application.

The download specification is a supplemental document to the data dictionary that provides this listing. For each staging table/column, it provides key information such as definition, datatype, and so on. Additionally, it maps each column in a specific staging table to the OFSAA applications/components that use this column, and also indicates whether this column is mandatory or optional.

This provides implementers with a scoping documentation for data sourcing that specifies the data requirements applicable to a particular solution, for which the sourcing scripts need to be developed.

This is done by means of specialized metadata within erwin called User Defined Properties (UDPs), which are additional tags that a data model designer can attach to any data model object in erwin. For additional details on UDPs please refer to the erwin Data Modeler documentation.

2.6 Report Generation Process

To generate specific documentat described earlier, use erwin Model Reporting Capabilities, which allows Data Modelers to produce customized reports of various Data Model artifacts.

erwin allows the generation of model-documentation in various levels of detail, and various formats like HTML, Text, PDF, and so on.

The generation process involves installing erwin reporting templates for the Data Dictionary and Download Specification, and executing these templates, with customization of the outputs as required.

NOTE This guide is not an exhaustive User guide for erwin’s reporting capabilities, but only details the specific steps to apply them to generate OFSAA/OFSDF documentation. Please refer erwin documentation or Contextual Help within erwin for more details.

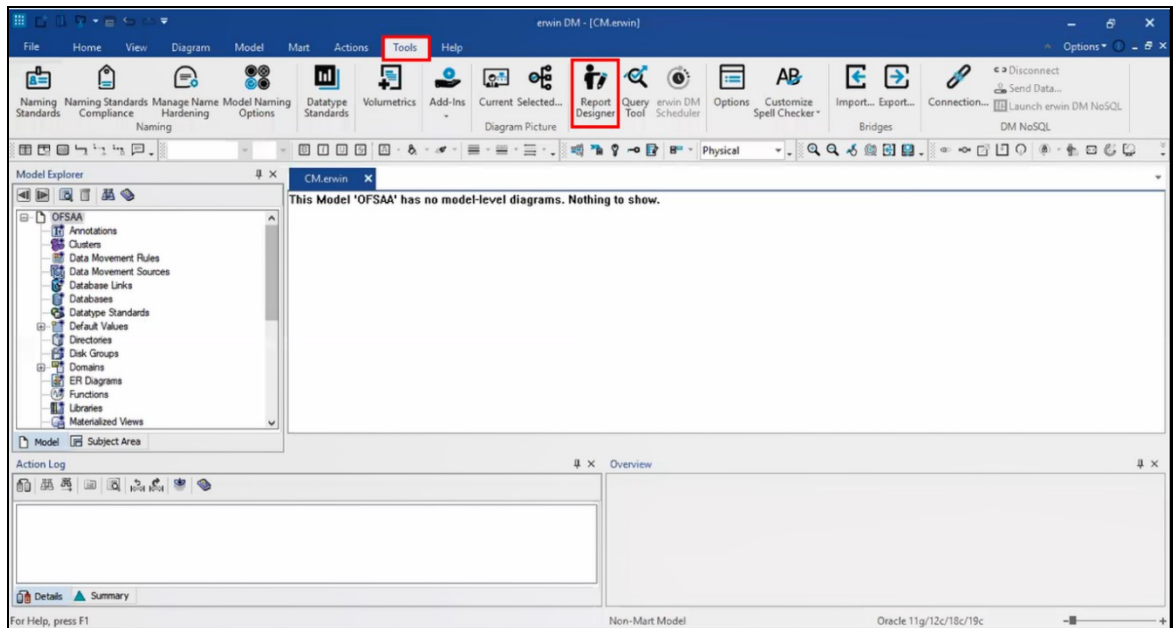
2.6.1 Generate a Report by Creating a New Template

This section provides the procedure to generate a report from the erwin Application by designing a new template. For illustration, generation of the PMG Report is mentioned.

To generate the PMG Report using the erwin Application, follow these steps:

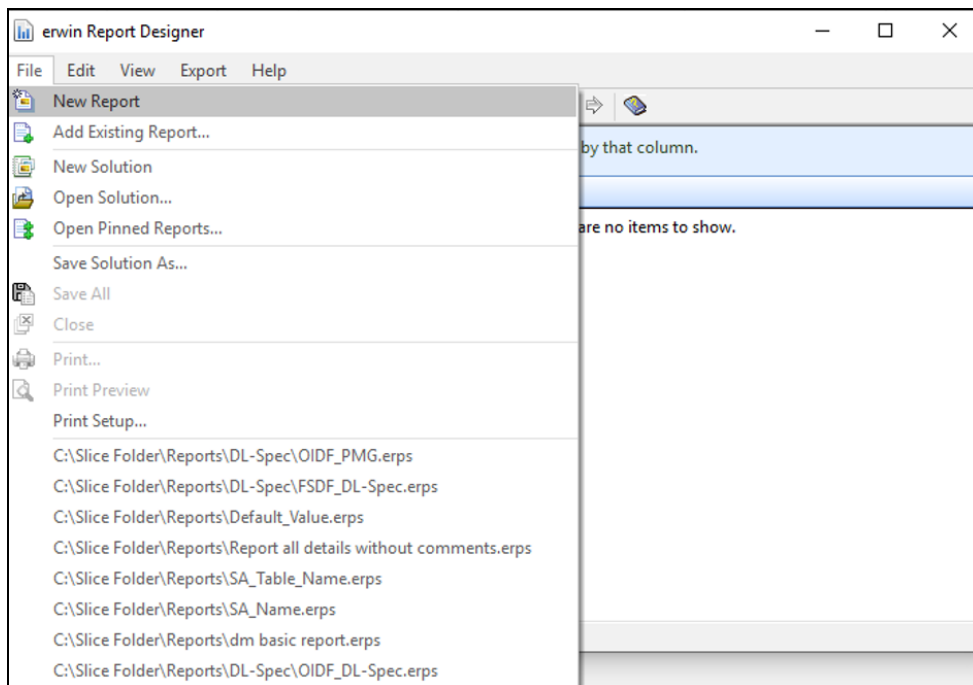
1. Open the erwin Application.
2. Select the **Tools** Menu and select **Report Designer**.
The **erwin Report Designer** Window is displayed.

Figure 2: Select Report Designer in the erwin Application



3. In the **erwin Report Designer** Window, select the **File** Menu, and select **New Report**.
The Report Editor Window is displayed.

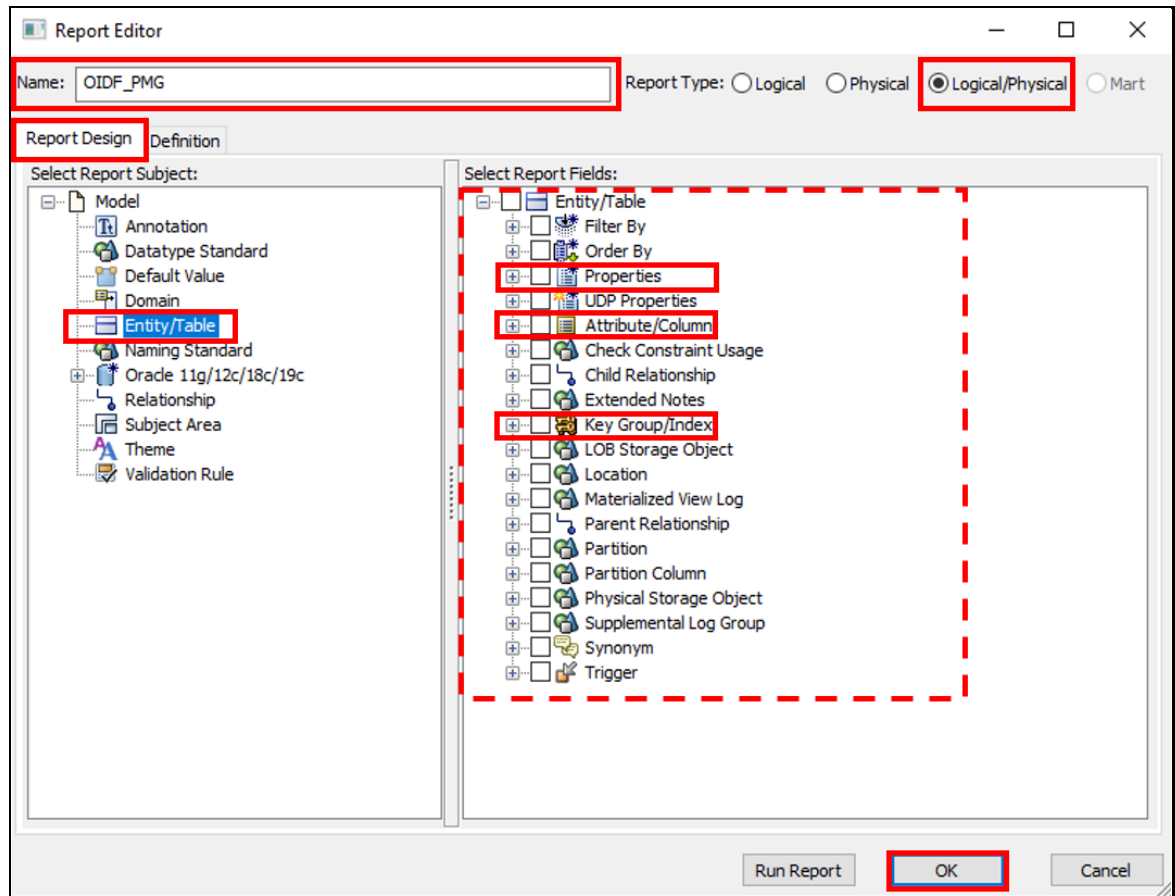
Figure 3: Select New Report in the erwin Report Designer Window



4. In the **Report Editor** Window, do the following:
 - a. In the **Name** Field, enter a name for the Report.
 - b. In the **Report Type** option, select **Logical/Physical**.

- c. In the **Report Design** Tab, in the Select Report Subject section, expand the **Model** Tree and select **Entity/Table**. The corresponding fields are listed in the Select Report Fields Section.
- d. For the PMG Report Type, in the Select Report Fields Section, select the following fields:
 - In the **Properties** Sub-tree, which consists of the table related fields, select the **Comments, Name, and Physical Name** Fields.
 - In the **Attribute/Column** Sub-tree, expand **Properties** and select the **Domain Parent, Comments, Name, Null Option, Physical Data Type, and Physical Name** Fields.
 - In the **Attribute/Column** Sub-tree, expand **Key Type** and select the **Is FK and Is PK** Fields.

Figure 4: Report Editor Window




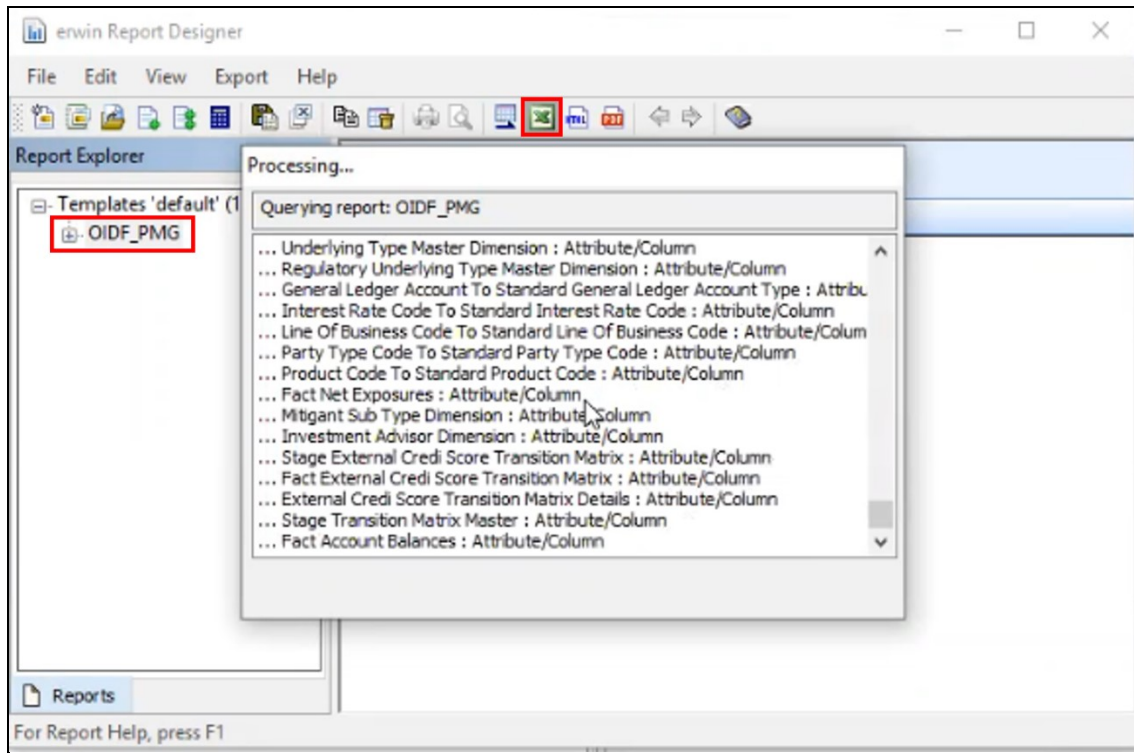
- e. After selecting all the required fields, click **OK**.
5. The Report is created and listed in the Report Explorer Section. To generate the selected fields in a CSV file format, select the created Report and then select  icon.

Figure 5: Report Generation Process



- The processing begins and in an Excel file, the Report is generated in the CSV format.

Figure 6: Sample PMG Report

The screenshot shows an Excel spreadsheet titled 'OIDF_PMG.csv'. The spreadsheet contains a table with the following columns: Entity/Table Name, Comment, Attribute, Domain, Is FK, Is PK, Null, and Physical Data Type. The table lists various data fields and their properties.

Entity/Table Name	Comment	Attribute	Domain	Is FK	Is PK	Null	Physical Data Type
General LrDim_GeneAttributesGl Account gl_accoun Leaf colun ID_NUMBI				FALSE	TRUE	Not Null	NUMBER(14)
General LrDim_GeneAttributesAttribute attribute_stores att				FALSE	TRUE	Not Null	NUMBER(22)
General LrDim_GeneAttributesNumber D dim_attrik This field				FALSE	FALSE	Null	NUMBER(22)
General LrDim_GeneAttributesVarchar Di dim_attrik This field				FALSE	FALSE	Null	VARCHAR2(30)
General LrDim_GeneAttributesNumber A number_a This field				FALSE	FALSE	Null	NUMBER(22)
General LrDim_GeneAttributesDate Assig date_assig Date valur				FALSE	FALSE	Null	DATE
General LrDim_GeneAttributesVarchar A: varchar_a: This field				FALSE	FALSE	Null	VARCHAR2(1000)
General LrDim_GeneBase tableGl Account gl_accoun Leaf colun ID_NUMBI				FALSE	TRUE	Not Null	NUMBER(14)
General LrDim_GeneBase tableGl Account gl_accoun Leaf colun				FALSE	FALSE	Not Null	NUMBER(22)
General LrDim_GeneBase table Enabled F enabled_f Store if th Indicator				FALSE	FALSE	Not Null	VARCHAR2(1)
General LrDim_GeneBase table Leaf Only leaf_only Indicates Indicator				FALSE	FALSE	Null	VARCHAR2(1)
General LrDim_GeneBase table Definition definition Language Code Alp				FALSE	FALSE	Not Null	VARCHAR2(10)
General LrDim_GeneBase table Created B created_b Indicates iText_Med				FALSE	FALSE	Not Null	VARCHAR2(40)
General LrDim_GeneBase table Creation C creation_c Indicates iTimestamp				FALSE	FALSE	Not Null	TIMESTAMP
General LrDim_GeneBase table Last Modifi last_modi Indicates iText_Shor				FALSE	FALSE	Not Null	VARCHAR2(30)
General LrDim_GeneBase table Last Modifi last_modi Indicates iTimestamp				FALSE	FALSE	Not Null	TIMESTAMP
General LrDim_GeneBase table General Lr gl_accoun This				FALSE	FALSE	Null	VARCHAR2(30)
General LrDim_GeneHierarchy Hierarchy hierarchy Unique Id Number_f				FALSE	TRUE	Not Null	NUMBER(10)
General LrDim_GeneHierarchy Parent De parent_de Stores par				FALSE	FALSE	Not Null	NUMBER(22)
General LrDim_GeneHierarchy Parent Ide parent_id Column th ID_NUMBI				FALSE	TRUE	Not Null	NUMBER(14)

- Save the generated file in the default Excel file extension format (.xlsx).
- Save the generated new Report as a template. To save the generated new Report as a template, follow these steps:


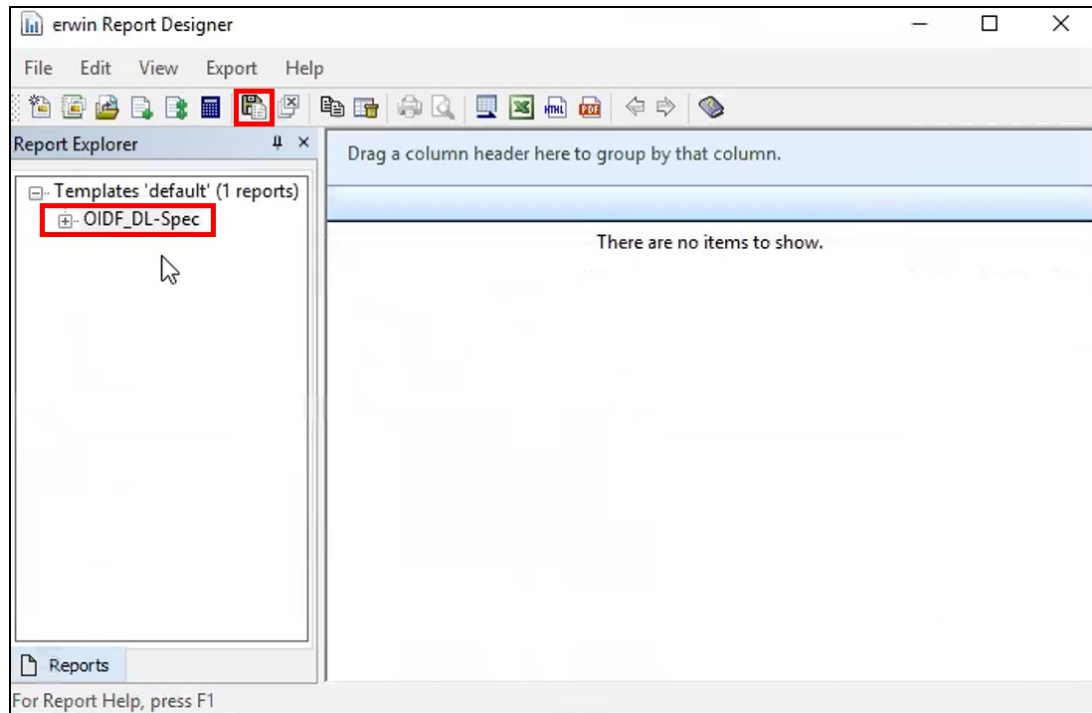
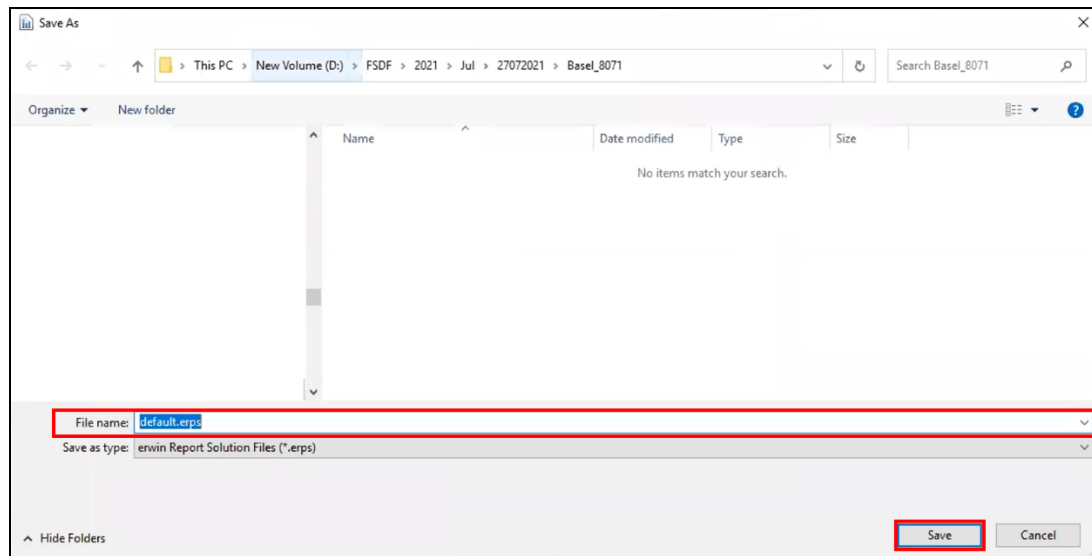
- a. After selecting all the required fields and before exporting the Report to the CSV file format, in the **erwin Report Designer** Window, select the Report and select the  icon.

Figure 7: Select Save Solution



- b. The **Save As** Dialog opens. In the **File name** Field, enter a name for the Report file. The file extension in the Save as type needs to be *erwin Report Solution Files (*.erps)*. To save the Report as a Solution (or template), click **Save**.

Figure 8: Save the template



To generate any type of Report, follow the same procedure. Select the required fields in the Select Report Fields section based on the Report type.

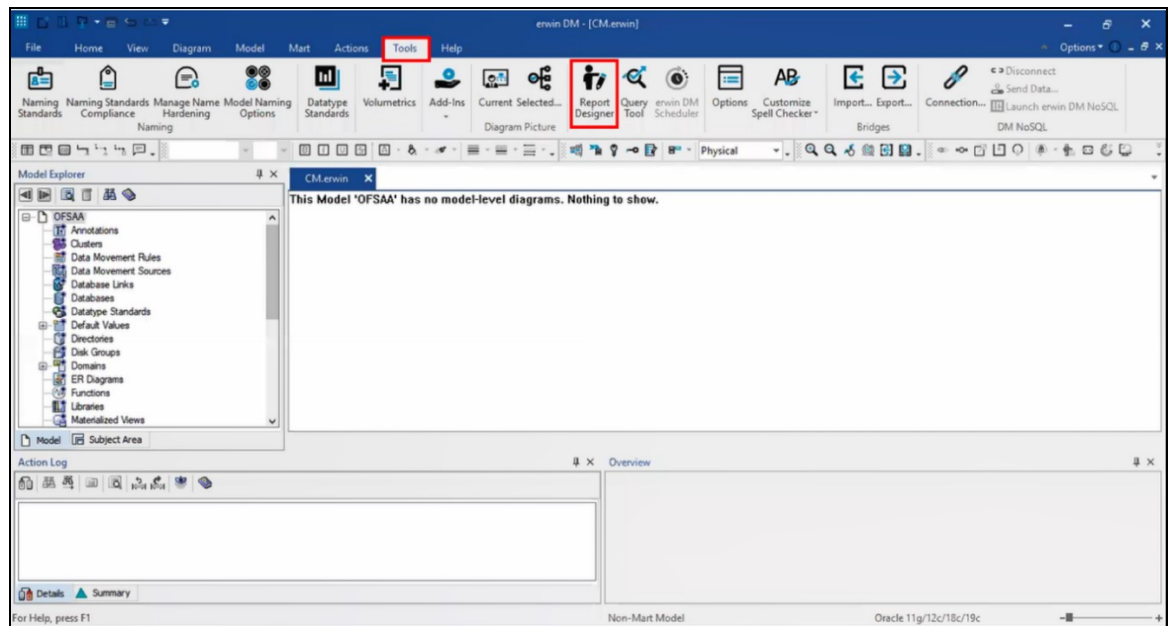
2.6.2 Generate a Report by Using an Existing Template

This section provides the procedure to generate a report from the erwin Application by using an existing report. For illustration, generation of the OIDF_DL-Spec is mentioned.

To generate the DL Specifications Report using the erwin Application, follow these steps:

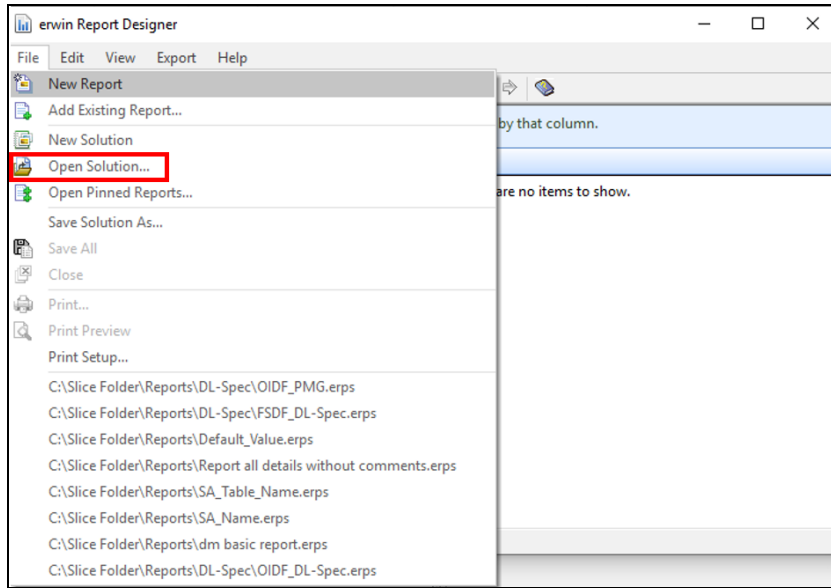
1. Open the erwin Application.
2. Select the **Tools** Menu and select **Report Designer**.
The **erwin Report Designer** Window is displayed.

Figure 9: Select Report Designer in the erwin Application



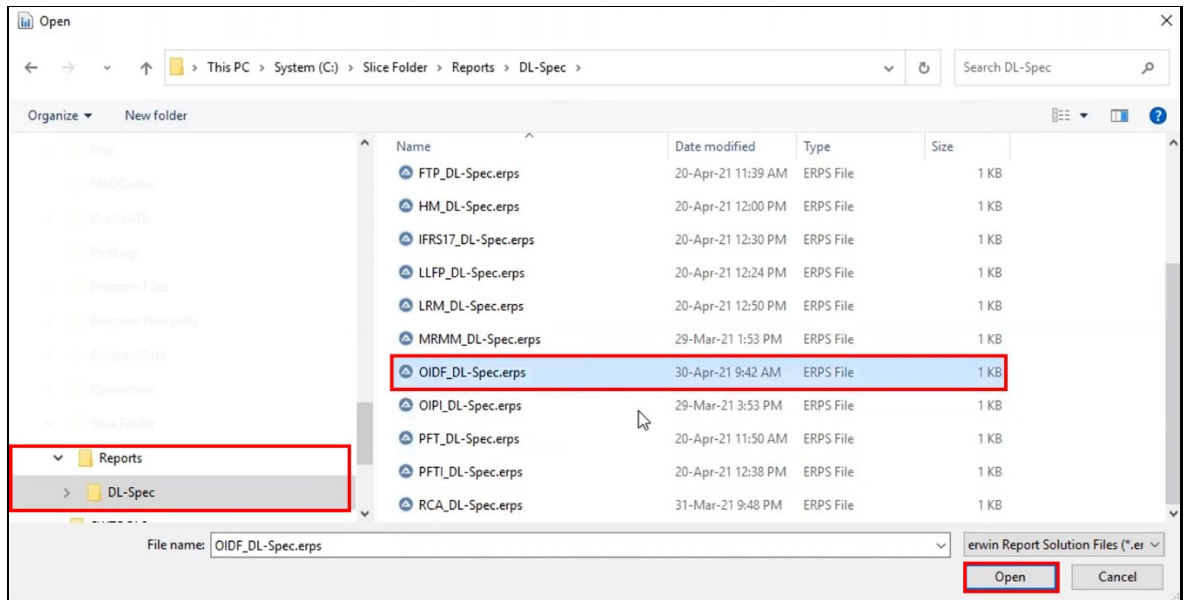
3. To open a designed Report, in the **erwin Report Designer** Window, select the **File** Menu, and select **Open solution**.

Figure 10: Select Open Solution in the erwin Report Designer Window



4. In the Open Dialog, navigate to the location containing Reports. Select the required Report, which is in the .erps file format and click **Open**.

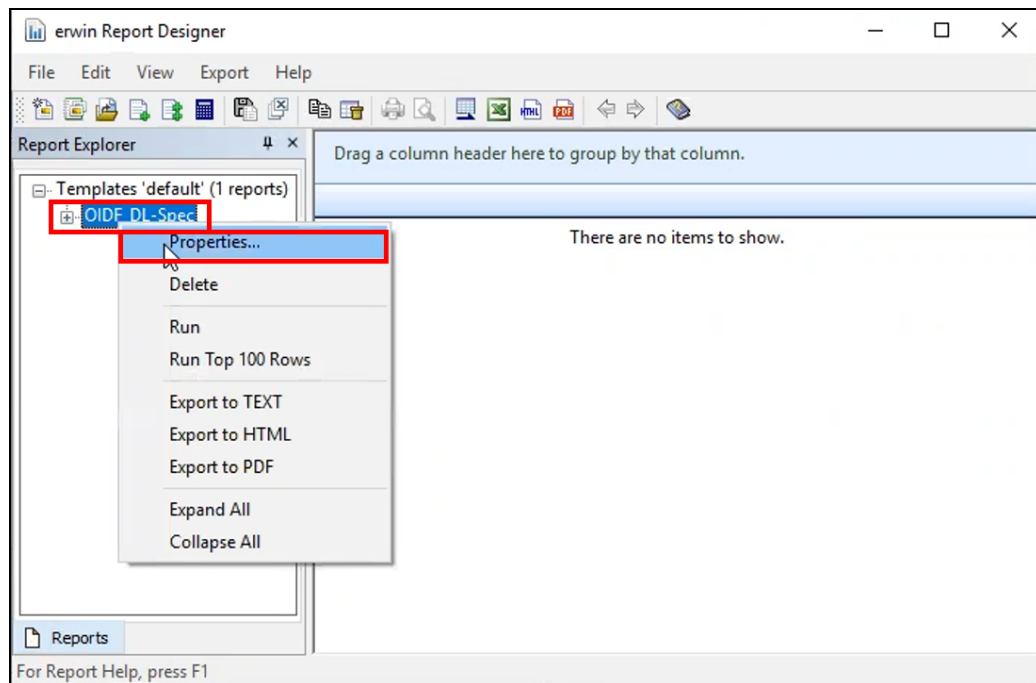
Figure 11: Select an existing Report



5. The selected Report is listed in the Report Explorer Section. You can select any new fields or remove any existing fields in the Report Editor Window. To make the changes, right-click on the Report and select **Properties**.

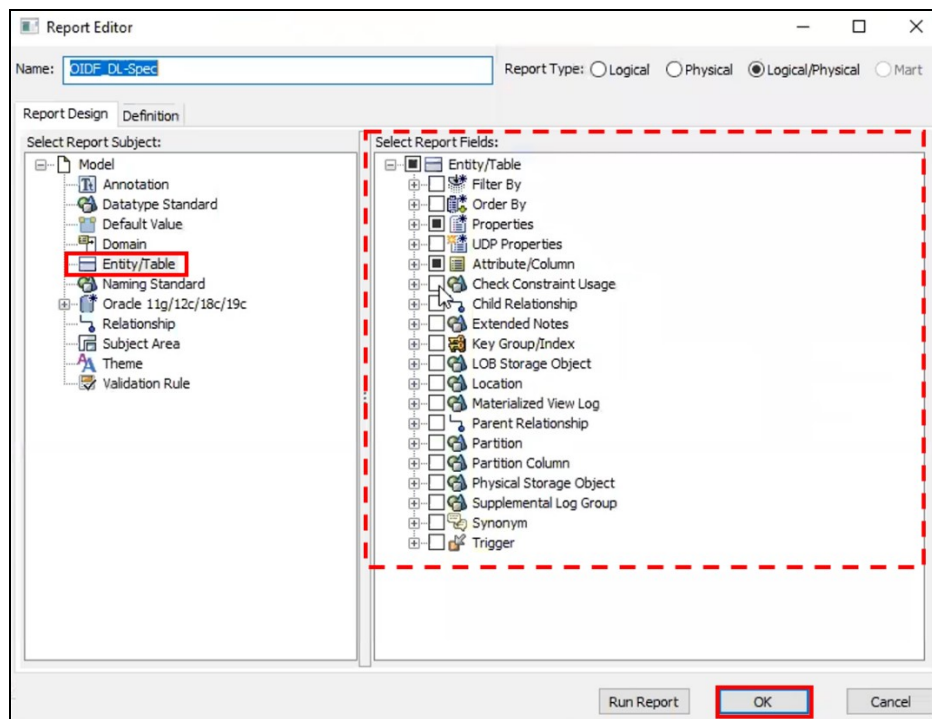
The **Report Editor** Window is displayed.

Figure 12: Select the Report Properties



6. In the **Report Design** Tab, in the Select Report Subject Section, expand the **Model** Tree and select **Entity/Table**. The corresponding fields of the Report are listed in the Select Report Fields Section. You can select any new fields or remove any existing fields. After making required modifications, click **OK**.

Figure 13: Select or remove the fields




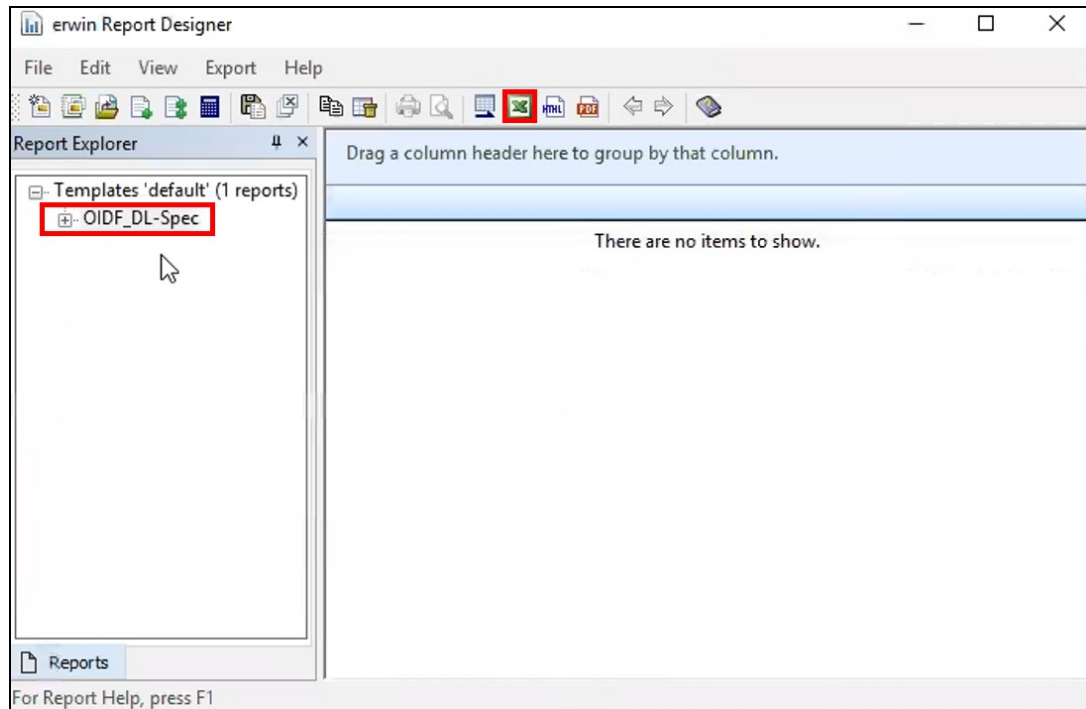
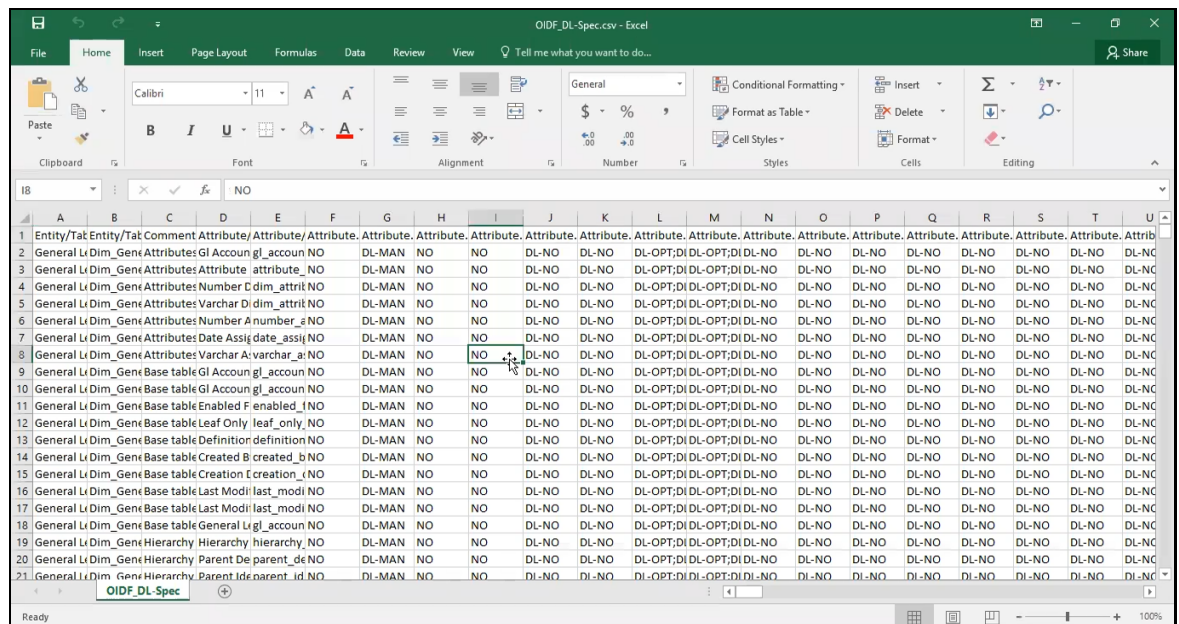
- To generate the selected fields in a CSV file format, select the Report and then select  icon.

Figure 14: Export Report



- The processing begins and in an Excel file, the Report is generated in the CSV format.

Figure 15: Sample DL Specifications Report



The screenshot shows an Excel spreadsheet titled 'OIDF_DL-Spec.csv - Excel'. The spreadsheet contains a table with 21 rows and 26 columns. The columns are labeled with letters A through U. The first column (A) contains entity names, and the subsequent columns (B-U) contain various attributes and values. The data is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Entity\Ta	Entity\Ta	Comment	Attribute\Attribute\Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.	Attribute.
2	General L	Dim_Gen	Attributes	GI	Accoun	gl_accoun	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
3	General L	Dim_Gen	Attributes	Attribute	attribute	_NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
4	General L	Dim_Gen	Attributes	Number	D	dim_attrit	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
5	General L	Dim_Gen	Attributes	Varchar	D	dim_attrit	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
6	General L	Dim_Gen	Attributes	Number	A	number_a	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
7	General L	Dim_Gen	Attributes	Date	Assij	date_assij	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
8	General L	Dim_Gen	Attributes	Varchar	A	vchar_a	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
9	General L	Dim_Gen	Base table	GI	Accoun	gl_accoun	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
10	General L	Dim_Gen	Base table	GI	Accoun	gl_accoun	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
11	General L	Dim_Gen	Base table	Enabled	F	enabled_f	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
12	General L	Dim_Gen	Base table	Leaf	Only	leaf_only	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
13	General L	Dim_Gen	Base table	Definition	definition	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
14	General L	Dim_Gen	Base table	Created	B	created_b	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
15	General L	Dim_Gen	Base table	Creation	C	creation_c	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
16	General L	Dim_Gen	Base table	Last	Modi	last_modi	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
17	General L	Dim_Gen	Base table	Last	Modi	last_modi	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
18	General L	Dim_Gen	Base table	General	L	gl_accoun	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
19	General L	Dim_Gen	Hierarchy	Hierarchy	hierarchy	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
20	General L	Dim_Gen	Hierarchy	Parent	De	parent_de	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO
21	General L	Dim_Gen	Hierarchy	Parent	Id	parent_id	NO	DL-MAN	NO	NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO	DL-NO

- You can save the generated file in the default Excel file extension format (.xlsx).

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