CA ERwin Data Modeler

Guided Tour Document

Release 9.6.0

ca technologies

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Chapter 1: Introduction

This section is targeted for Data Architects, Data Administrators, Application Administrators, Database Administrators, and Partners who want to learn about the new features of Release r9.6.

CA ERwin Data Modeler Release r9.6 has many new features accompanied by changes to the user interface. Use the guided tours described in this guide to become familiar with these features and changes. This guide provides you with a framework of understanding to implement future releases, which will expand on the features introduced in this release.

While working in CA ERwin Data Modeler during a tour, if you need additional information about the feature, click the Help button on the toolbar or press F1 to open the online help.

Chapter 2: Mart Administrative Reports

Report Designer has been enhanced to generate reports on the models stored in a Mart. If you are connected to a Mart, you can generate the Mart administrative reports as well as reports on various model objects.

Note: You must have the Report, View permission to generate and view reports.

This section describes the steps to generate the following reports:

- The list of libraries, models and versions
- The list of mart users
- The list of models in mart, last modified date and modified user information
- The list of mart users and their permissions on various libraries and models

This section contains the following topics:

Report on Libraries, Models, and Versions (see page 9)
List of Mart Users (see page 11)
List of Mart Models (see page 12)
Report on Mart Users and Permissions (see page 13)

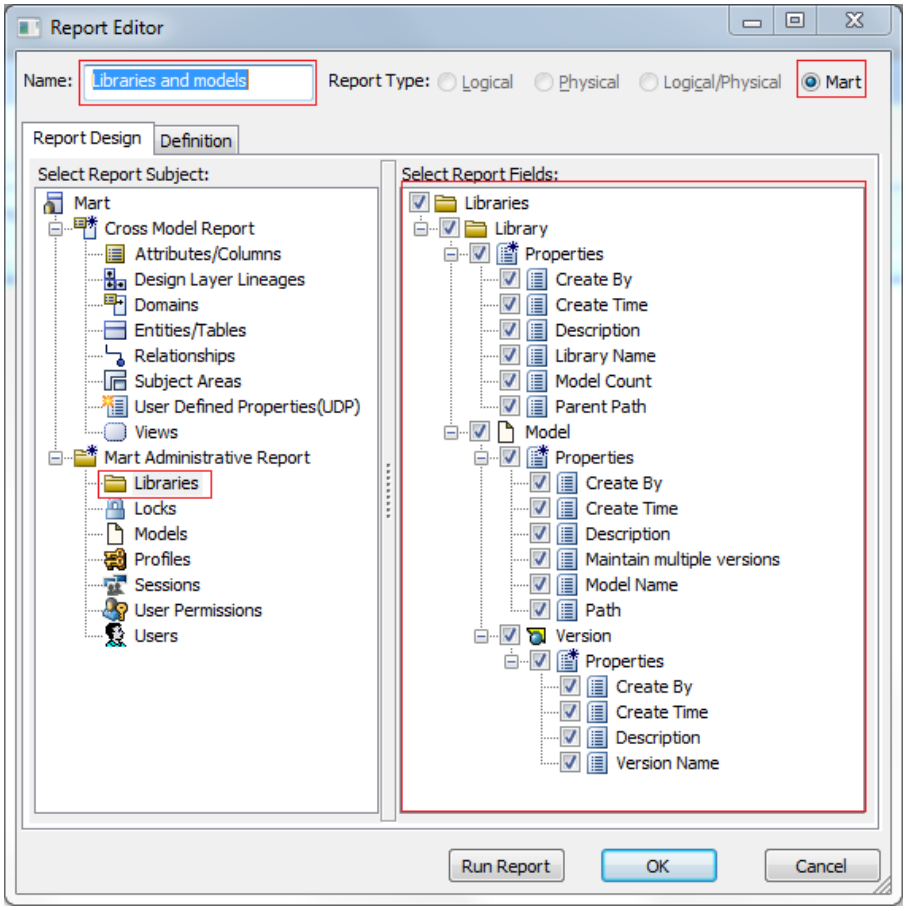
Report on Libraries, Models, and Versions

This report includes the list of libraries, models, and their versions available in a Mart.

Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Under Mart Administrative Report, select Libraries.
6. Select all the report fields on the right.



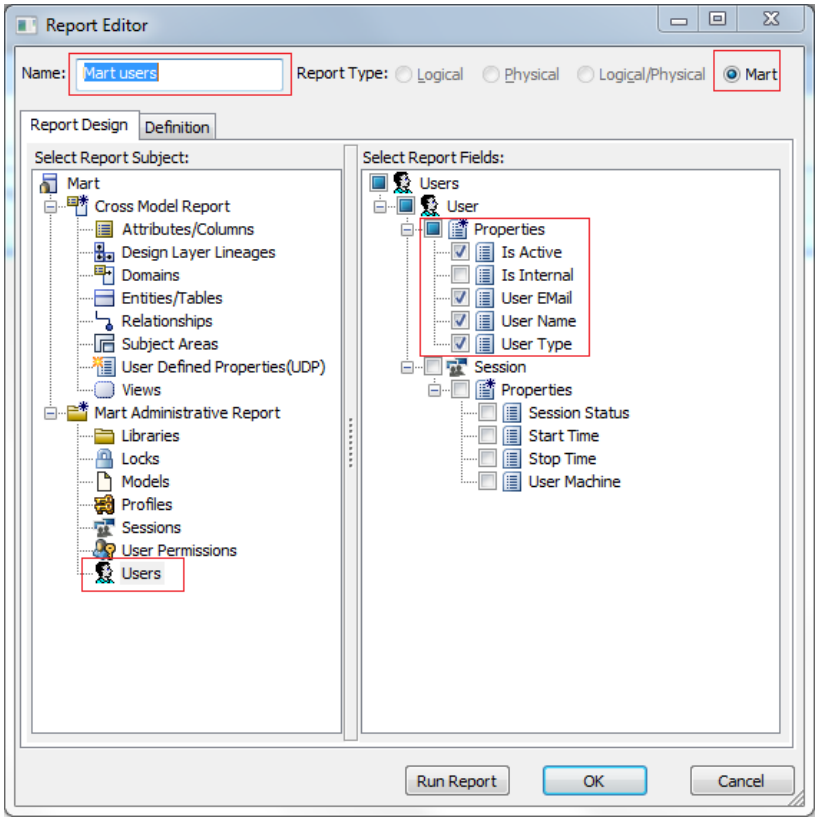
7. Click Run Report. The report is generated and displayed.
8. Verify that the report includes accurate information about all libraries, models, and versions.

List of Mart Users

This report includes the list of all Mart users.

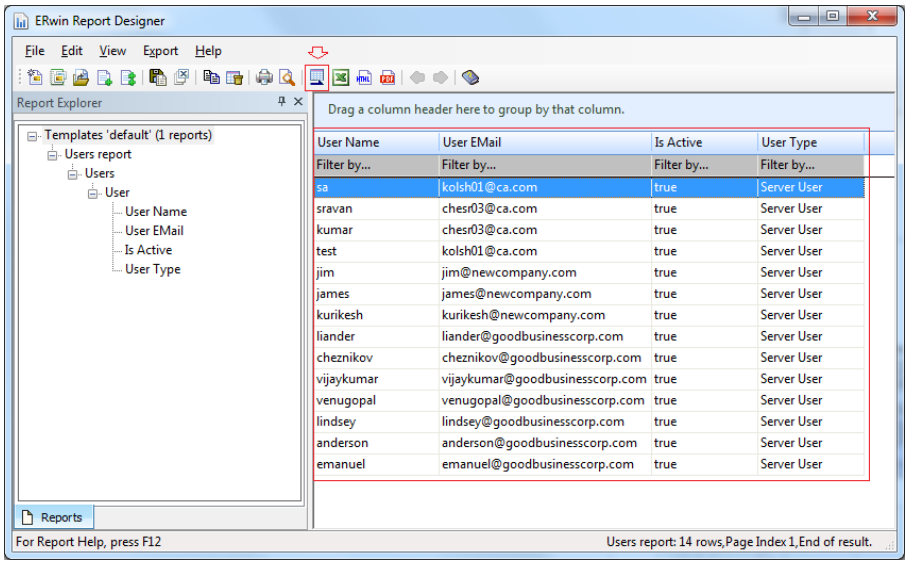
Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.
4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Under Mart Administrative Report, select Users.
6. Select Is Active, User Email, User Name, User Type, and then click OK.



7. In the Report Designer toolbar, click Run Report.

   The report is generated and displayed in the Report Grid.



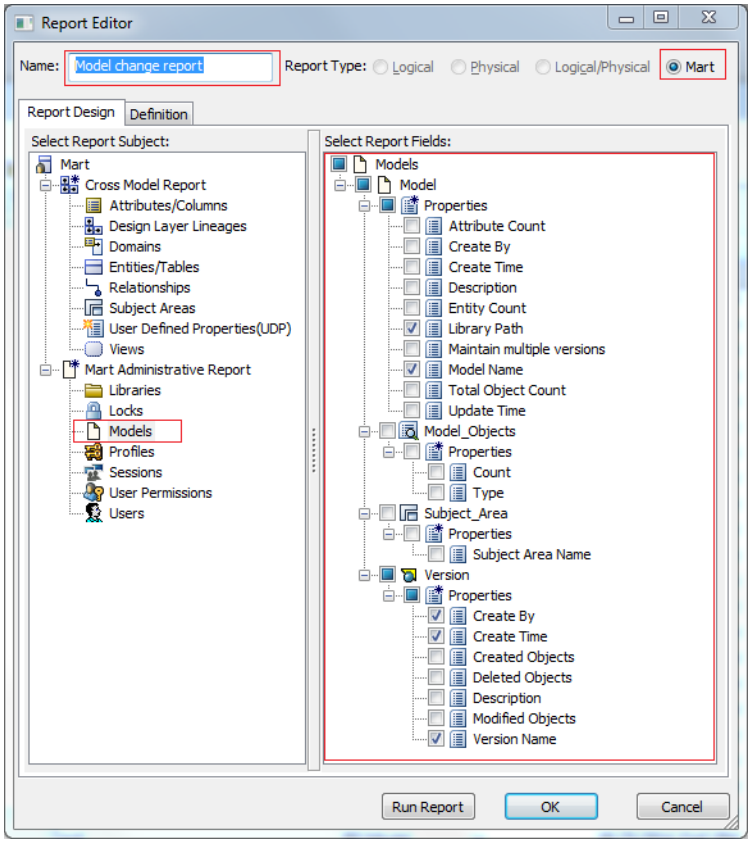
List of Mart Models

This report includes the list of models stored in a Mart, last modified date of the models, and the last modified user information.

Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Under Mart Administrative Report, select Models.
6. Select Model, Name, Library Path, Last Modified User, Last Modified Date, and then click OK.



7. In the Report Designer toolbar, click Run Report.

   The report is generated and displayed in the Report Grid.

Report on Mart Users and Permissions

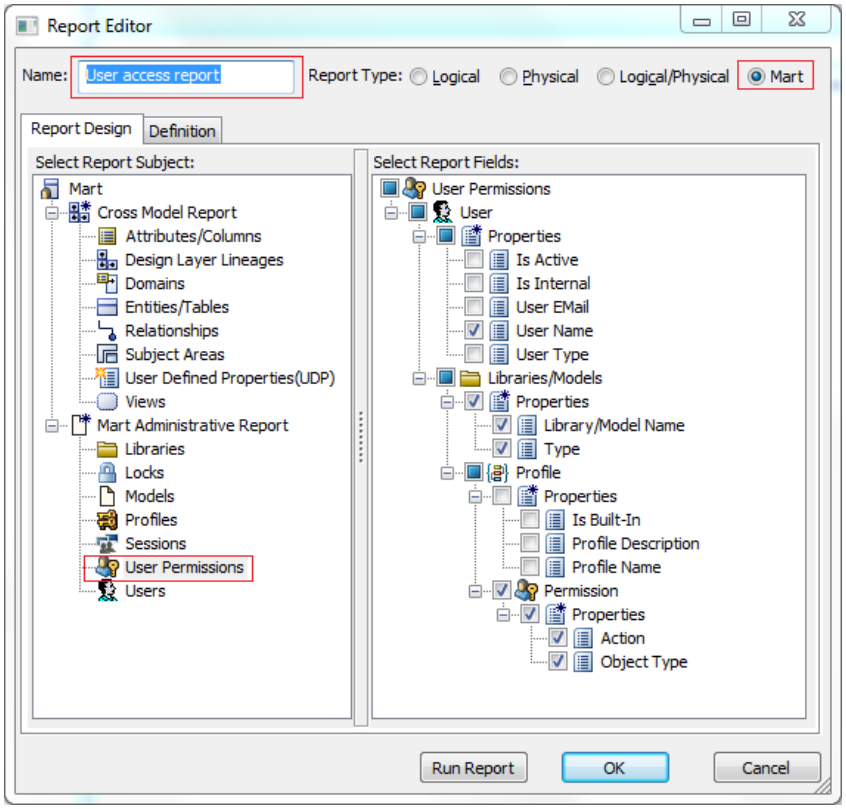
This report includes the list of all Mart users and their permissions.

Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

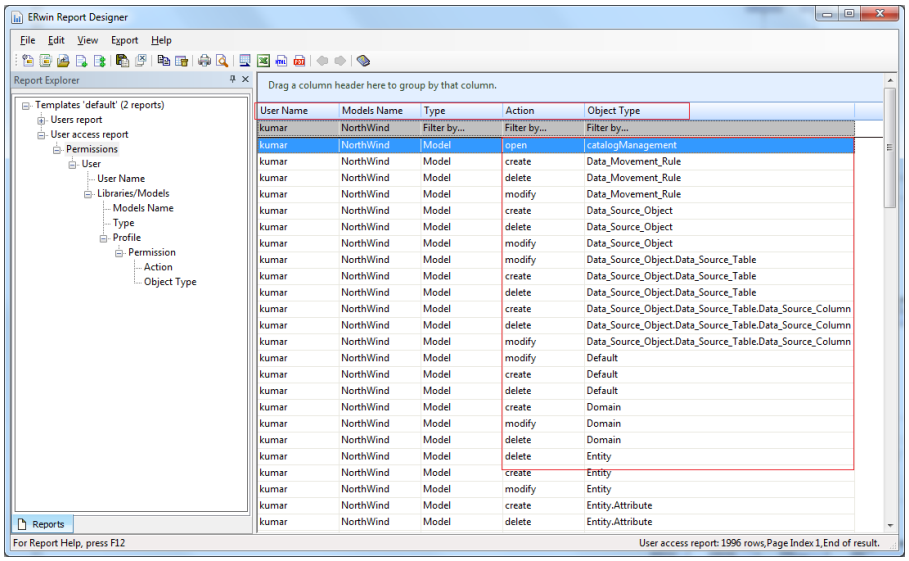
4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Under Mart Administrative Report, select Users.

6. Select User Name, Library/Model Name, Type, Action, Object Type, and then click OK.



7. In the Report Designer toolbar, click Run Report.

   The report is generated and displayed in the Report Grid. Verify the users, the models they have access to, and their permissions.



Chapter 3: Cross-Model Reports

The Report Designer has been enhanced to generate reports on the models stored in a Mart.

Note: You must have the Report, View permission to generate and view reports.

This section describes the steps to generate the following reports:

- The list of entity names and definitions from the models stored in the Mart.
- The list of entity names and attributes from the models stored in the Mart.
- The list of attributes that match a specific name pattern.
- The list of relationships from the models stored in the Mart.
- The list of domains from the models stored in the Mart.

This section contains the following topics:

Report on Entities and Definitions (see page 17)
Report on Entities and Attributes (see page 20)
Report on Attributes Across Models (see page 21)
List of Relationships (see page 22)
List of Domains (see page 24)

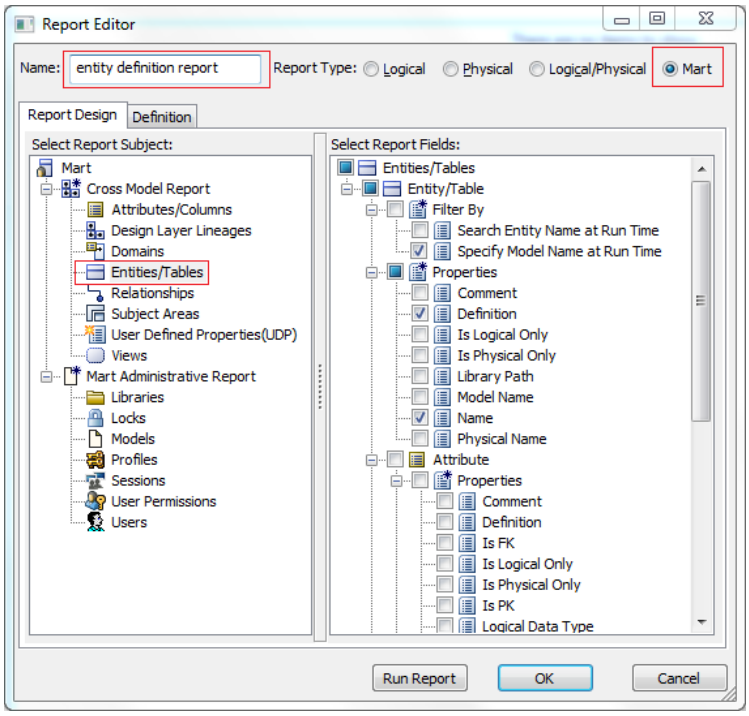
Report on Entities and Definitions

This report includes the details of entities and their definitions.

Follow these steps:

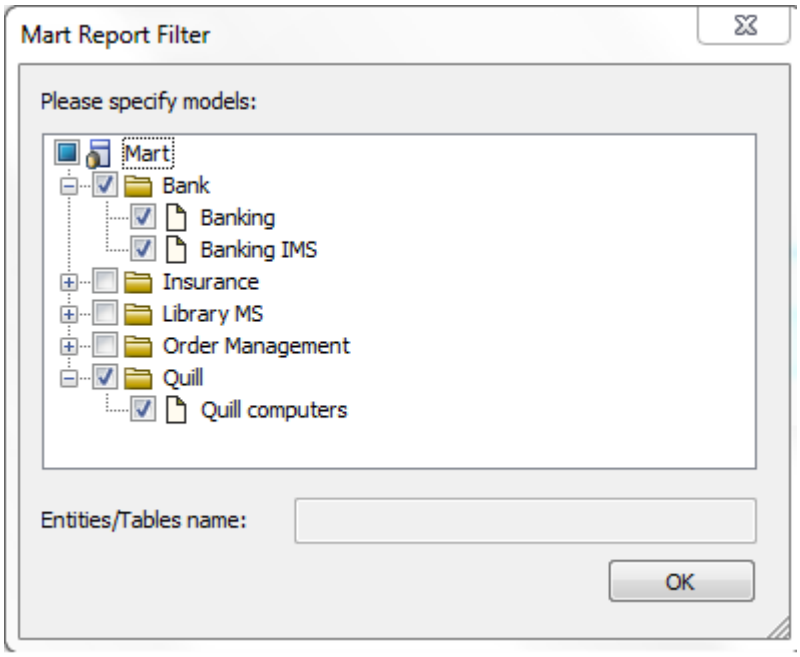
1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Select the Report Subject as Entities/Tables.
6. In the Select Report Fields pane, under Filter By, select Specify Model Name At Run Time.



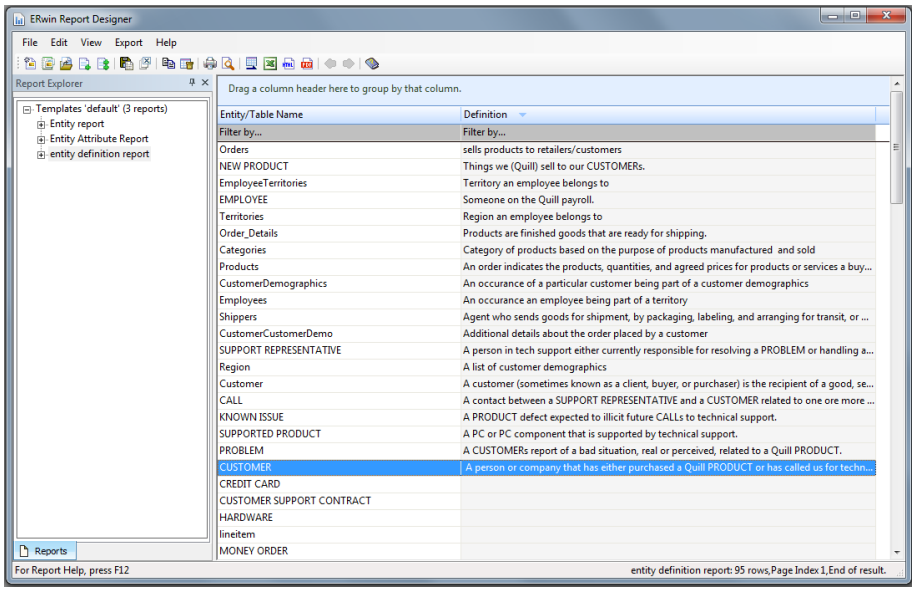
7. Select Name, Definition and then click Run Report.

8. Select the specific libraries and models that you want to retrieve entities from.



9. [Optional] Enter the filter expression. The Filter box is enabled only if the corresponding option is selected under Filter By.

   The report is generated and displayed.



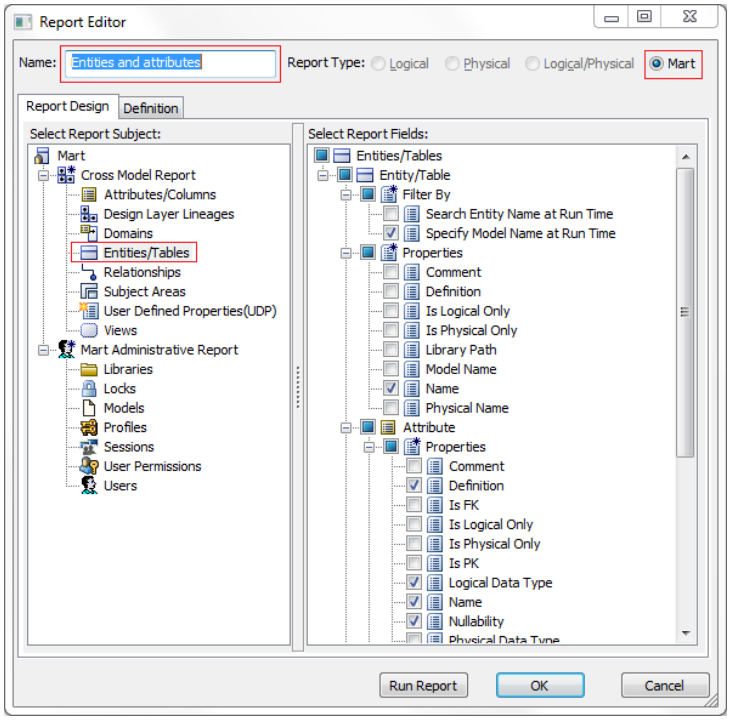
10. Verify that the report includes accurate information about all entities and their definitions.

Report on Entities and Attributes

This report includes the details of entities and their attributes.

Follow these steps:

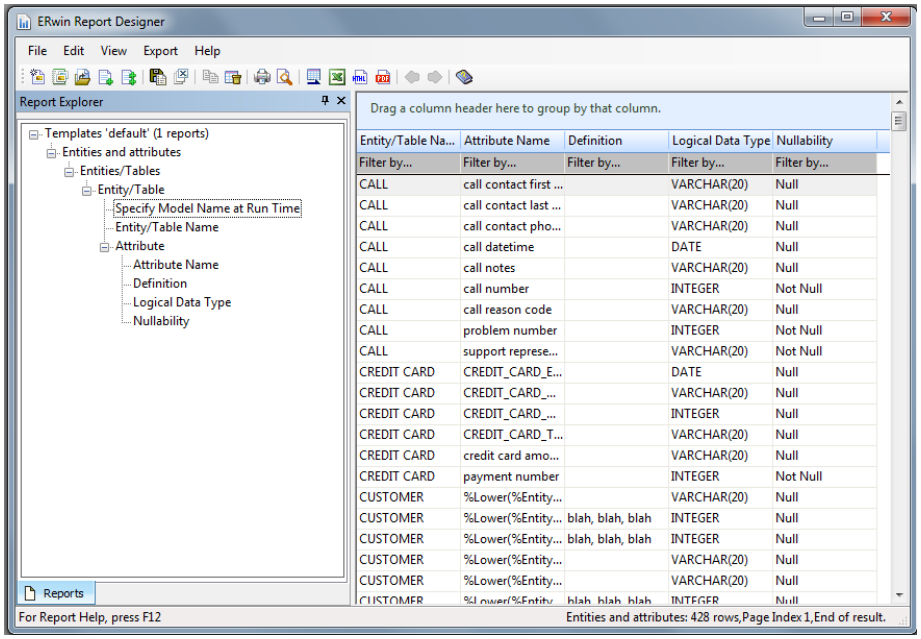
1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.
4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Select the Report Subject as Entities/Tables.
6. In the Select Report Fields pane, under Filter By, select Specify Model Name At Run Time.



7. Select Name, Definition and then click Run Report.

8. Select the specific libraries and models that you want to retrieve entities from.
9. [Optional] Enter the filter expression. The Filter box is enabled only if the corresponding option is selected under Filter By.

   The report is generated and displayed.



10. Verify that the report includes accurate information about all models and their attributes.

Report on Attributes Across Models

This report includes the details of attributes across models that match a specific name pattern.

Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Select the Report Subject as Attributes/Columns.
6. In the Select Report Fields pane, under Filter By, select Specify Attribute Name At Run Time and Specify Model Name At Run Time.
7. Under Attribute, select Name, Logical Data Type, and Definition. Under Entity, select Name. Cick Run Report.
8. Select the specific libraries and models that you want to retrieve entities from.
9. [Optional] Enter the filter expression. The Filter box is enabled only if the corresponding option is selected under Filter By.

   The report is generated and displayed.
10. Verify that the report includes accurate information about all models and their attributes.

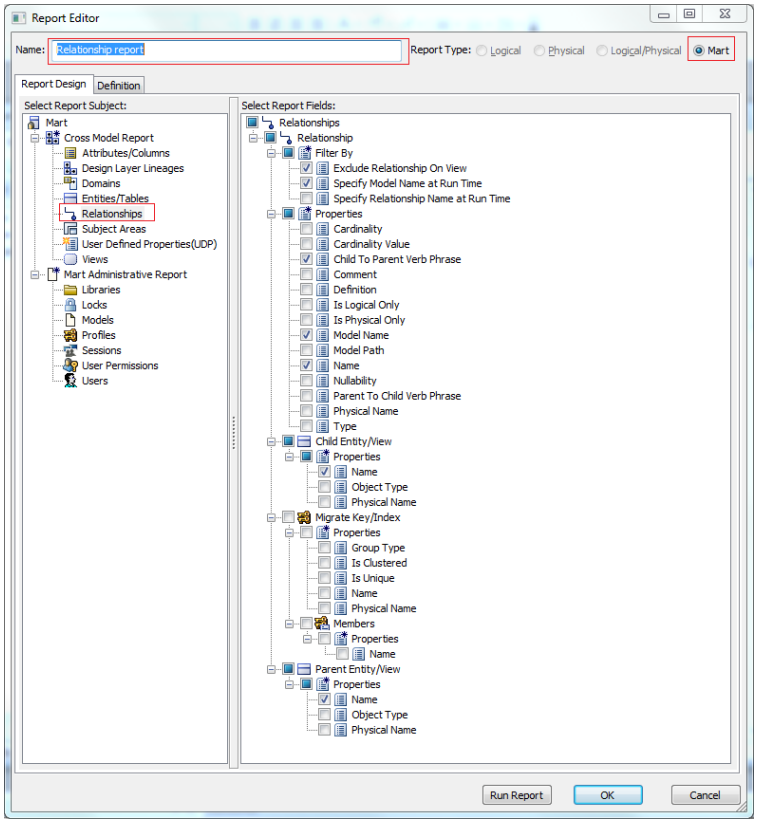
List of Relationships

This report includes the list of all relationships from the selected libraries and models.

Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

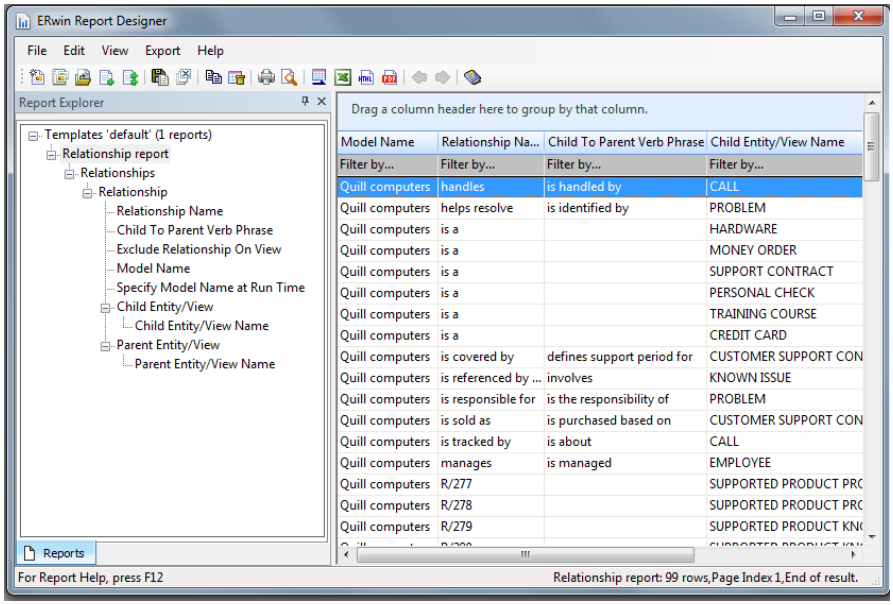
4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Select the Report Subject as Relationships.
6. In the Select Report Fields pane, under Filter By, select Exclude Relationship on View.
7. Expand Relationship, Properties and select Name, Child To Parent Verb Phrase, and Model Name.
8. Expand Child Entity and select Name.
9. Expand Parent Entity and select Name.



10. Cick Run Report.

11. Select the specific libraries and models that you want to retrieve entities from.
12. [Optional] Enter the filter expression. The Filter box is enabled only if the corresponding option is selected under Filter By.

    The report is generated and displayed.



13. Verify that the report includes accurate information about all relationships.

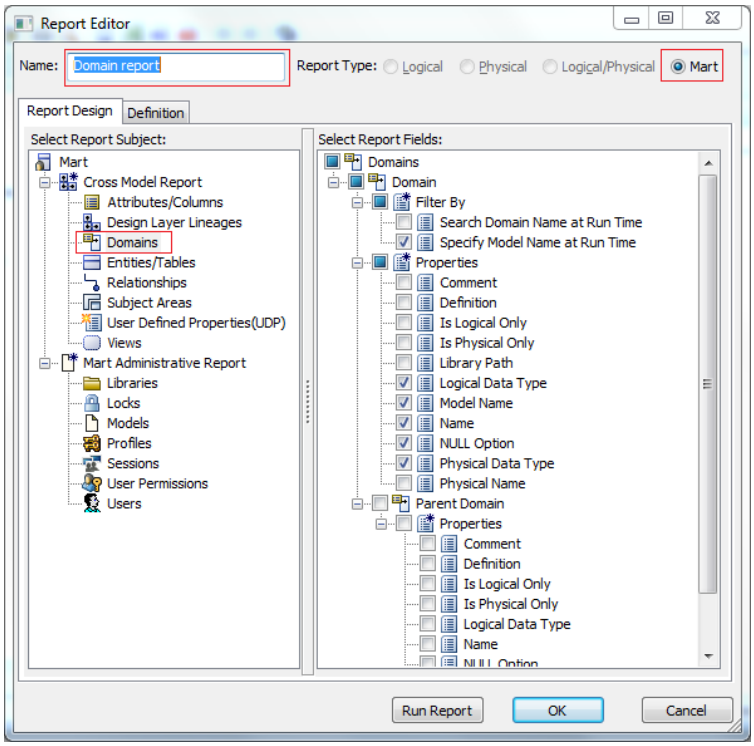
List of Domains

This report includes the list of all domains from the selected libraries and models.

Follow these steps:

1. Open CA ERwin Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

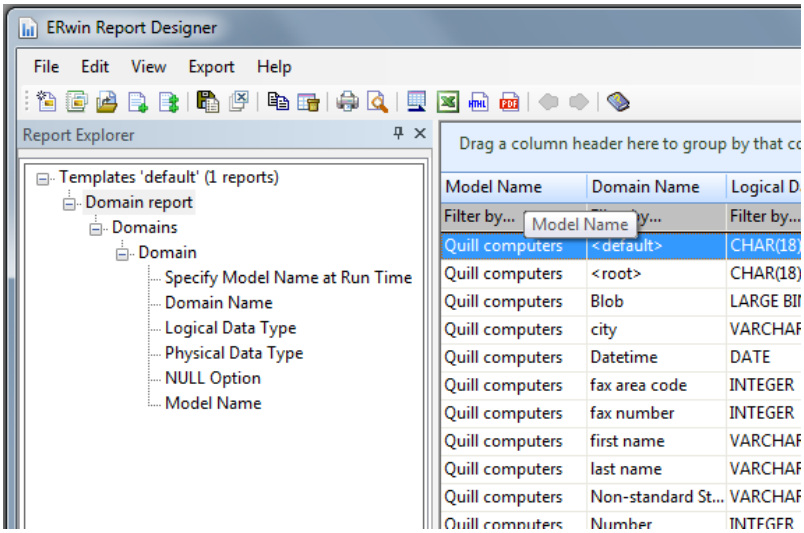
4. Enter a name for the report and select the Report Type as Mart. (If you are not connected to a Mart, the Mart option is disabled.)
5. Select the Report Subject as Domains.
6. In the Select Report Fields pane, under Filter By, select Specify Model at Run Time.
7. Expand Domain and select Name, Logical Data Type, Physical Data Type, Null Option, and Model Name.



8. Cick Run Report.

9. Select the specific libraries and models that you want to retrieve entities from.
10. [Optional] Enter the filter expression. The Filter box is enabled only if the corresponding option is selected under Filter By.

    The report is generated and displayed.



11. Verify that the report includes accurate information about all models and their domains.

Chapter 4: Model Validation Reports

Report Designer now includes a set of model validation reports that can help users to verify the quality and completeness of data models.

Note: You must have the Report, View permission to generate and view reports.

This section describes the steps to generate the following reports:

- The list of redundant indexes.
- The ready-to-use model validation reports.

This section contains the following topics:

List of Redundant Indexes (see page 27)
Ready-to-Use Model Validation Reports (see page 29)

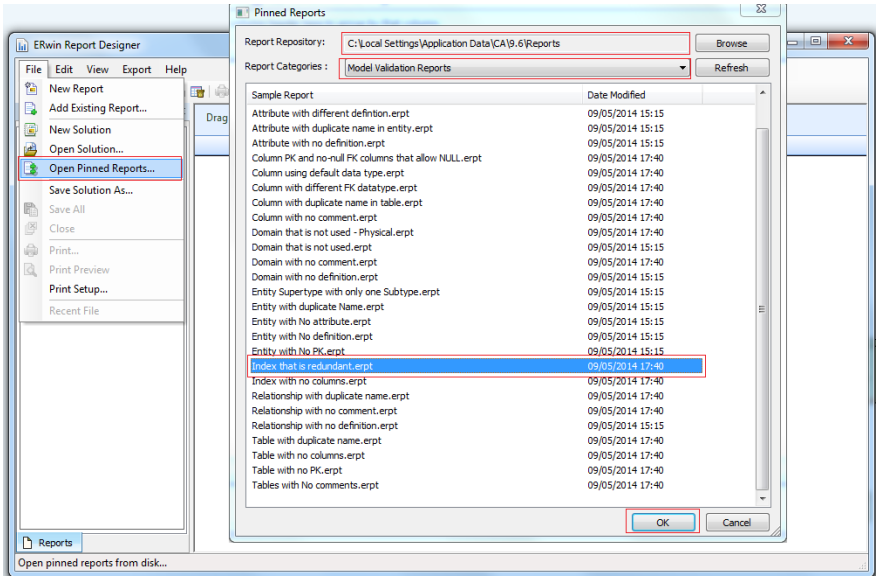
List of Redundant Indexes

This report includes the list of redundant indexes from an open model. Redundant indexes are indexes that are created on same set of columns in the same column order.

Follow these steps:

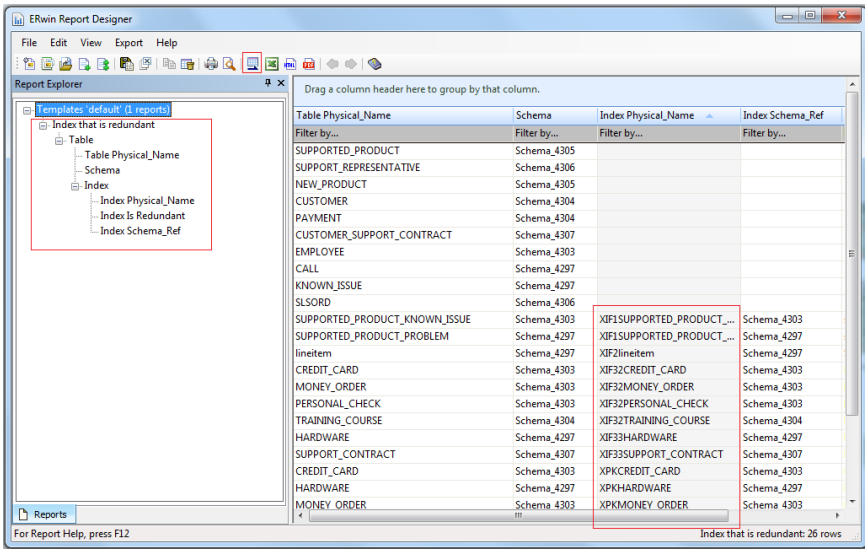
1. Open CA ERwin Data Modeler and open a model.
2. Click Tools, Report Designer.
3. Click File, Open Pinned Reports. The Pinned Reports dialog opens.

4. In the Report Categories drop-down list, select Model Validation Reports.
5. Select Index that is redundant.rpt and click OK. The report is added to Report Designer.



6. Right-click the report template and cick Run Report.

   The report is generated and displayed.



7. Verify that the report includes redundant indexes.

Note: CA ERwin Data Modeler release r9.6 provides a set of ready-to-use common model validation reports. The complete list of reports is available in the Ready-to-Use Reports topic. You may select other reports and verify whether the correct results are displayed or not.

Ready-to-Use Model Validation Reports

CA ERwin Data Modeler Release r9.6.0 provides the following ready-to-use reports:

Name	Description
Columns With Default Data Type	List the columns that have default data type set on the model.
Entity with No Definition	List of entities that have no definitions
Entity with No Attribute	List of entities that have no attributes
Entity with no PK	List of the entities without Primary Keys
Entity with Duplicate Name	List of duplicate entities
Entity Supertype with Only Subtype	Supertype and subtype entities with only one subtype
Attribute with No Definition	List of attributes that has no definitions
Attribute with Duplicate Name in Entity	Entities with duplicate attribute names
Attribute with Different Definition	List of attributes with the same name across entities, but different definitions
Domain with No Definition	List of domains that has no definition
Domain that is Not Used - Logical	User defined domains that are not used by any attributes
Relationship with No Definition	List of relationships that have no definition
Tables with No Comments	List of tables that have no comments
Table with No Columns	List of tables that have no columns
Table with No PK	List of tables that have no primary key
Table with Duplicate Name	List of duplicate tables
Column with No Comments	List of columns that have no comments
Column Using Default Data Type	List of columns that have default data type set at model
Column with Duplicate Name in Table	List of tables that have duplicate columns
Column with Different FK Data Type	List of foreign key columns that have a different data type than its parent key
Index with No Columns	Indexes that have no columns specified
Index that is Redundant	Indexes on the same set of attributes
Relationship with No Comment	List of relationships that have no comments
Relationship with Duplicate Name	List of relationships that have same name
Domain with No Comment	List of domains that have no comments
Domain that is Not Used - Physical	List of domains that are not used by any attribute or column

These reports are available in the <ERwin install folder>\Report\TLX folder.

The underlying method that implements validation reports is 'object filters' that are expressed using CA ERwin Template Language (TLX). You can implement customized model validation reports with some additional programming efforts. For a detailed tutorial on how to add custom TLX filters and TLX options in reporting, see the ERwin Online Help.

Chapter 5: Exporting Reports to PDF

CA ERwin Data Modeler Release 9.5 introduced a new reporting capability named Report Designer. This capability supported exporting reports to TEXT/CSV, and HTML formats. Report Designer is enhanced in CA ERwin Data Modeler Release 9.6 to export reports to PDF format.

This release supports exporting reports to TEXT/CSV, HTML, and PDF.

This section describes the steps to generate the following PDF reports:

- A report that contains entities, corresponding definitions, attributes, data types, and key indicators
- A report that contains diagrams with drill-down information about entities

This section contains the following topics:

Report on Entities, Definitions, and Attributes (see page 31)
Report on Diagrams with Entity Drill-down (see page 33)

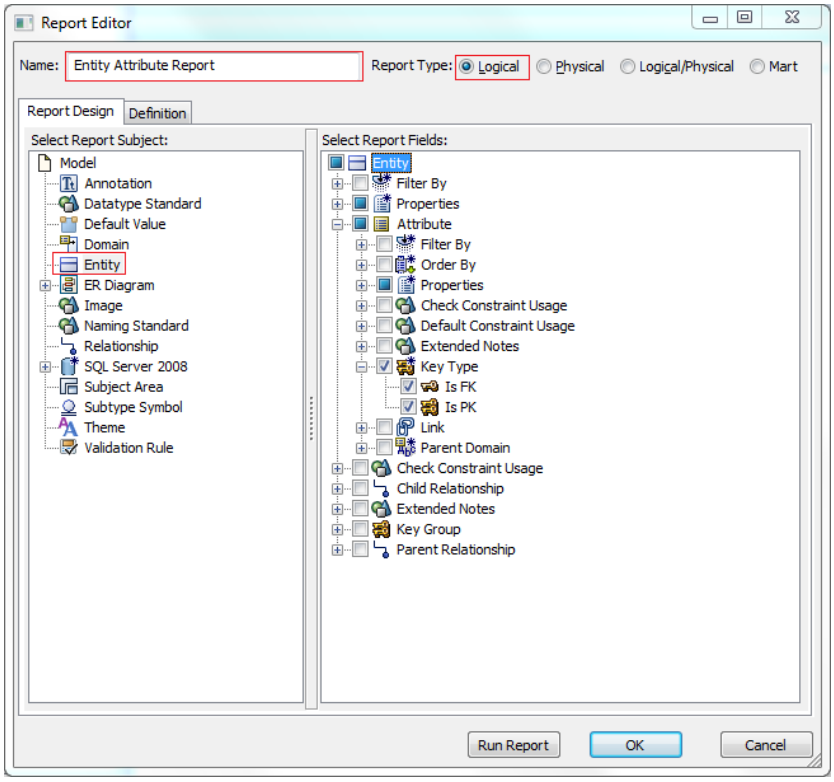
Report on Entities, Definitions, and Attributes

This report includes the list of entities, the corresponding definitions, attributes, data types and key indicators. This topic describes how to generate the report and export it to PDF.

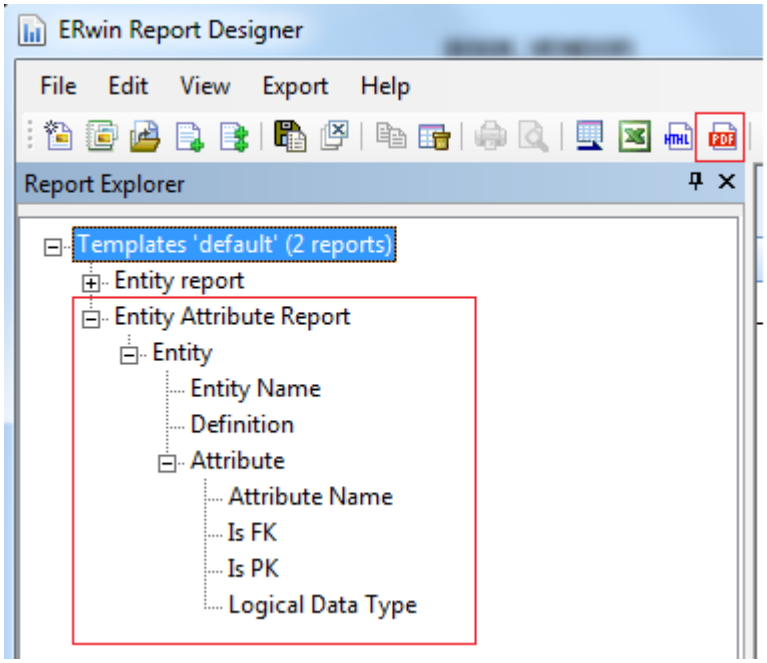
Follow these steps:

1. Open CA ERwin Data Modeler and open a Logical Only or Logical/Physical model.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.
4. Enter a name for the report and select the Report Type as Logical.
5. Select the Report Subject as Entity.
6. In the Select Report Fields pane, expand Entity, Properties, and select Name, Definition.

7. Expand Attribute, Properties, and select Name, Logical Data Type. Expand Key Type and select Is PK, Is FK.

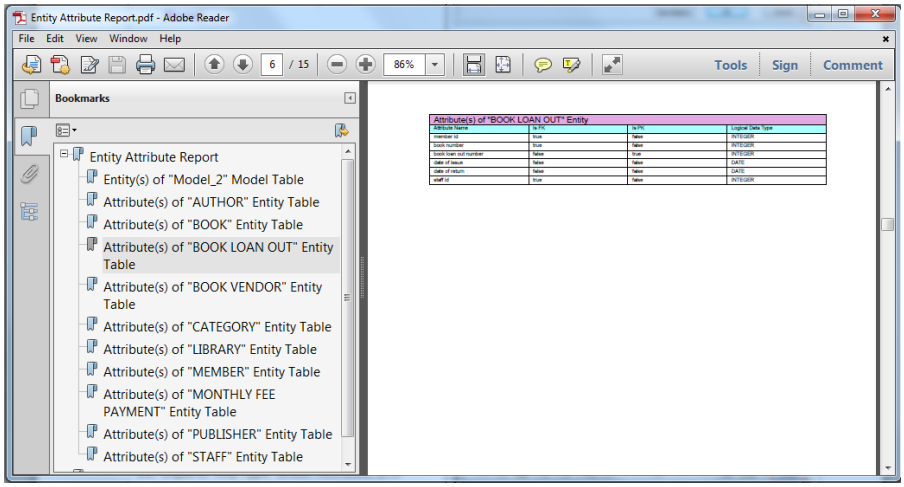


8. Cick OK. The report template is added to ERwin Report Designer.



9. In ERwin Report Designer, right-click the template and click Export to PDF.

   The report is generated and displayed.



10. Verify whether the report is generated properly and it includes the appropriate information.

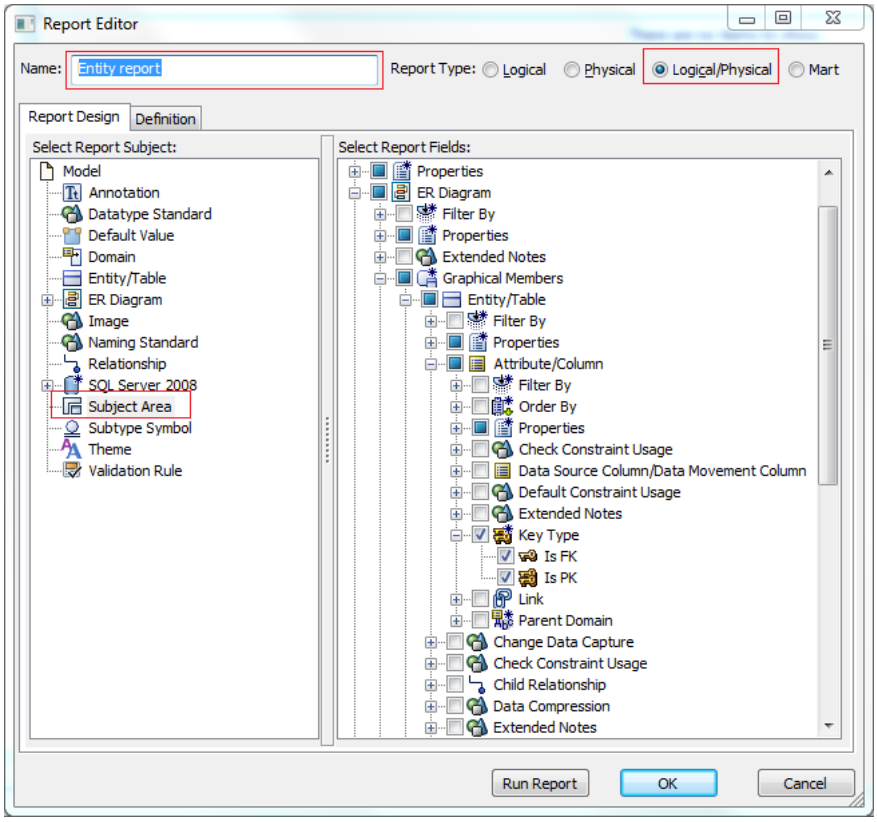
Report on Diagrams with Entity Drill-down

This report includes the list of entities, the corresponding definitions, attributes, data types and key indicators. This topic describes how to generate the report and export it to PDF.

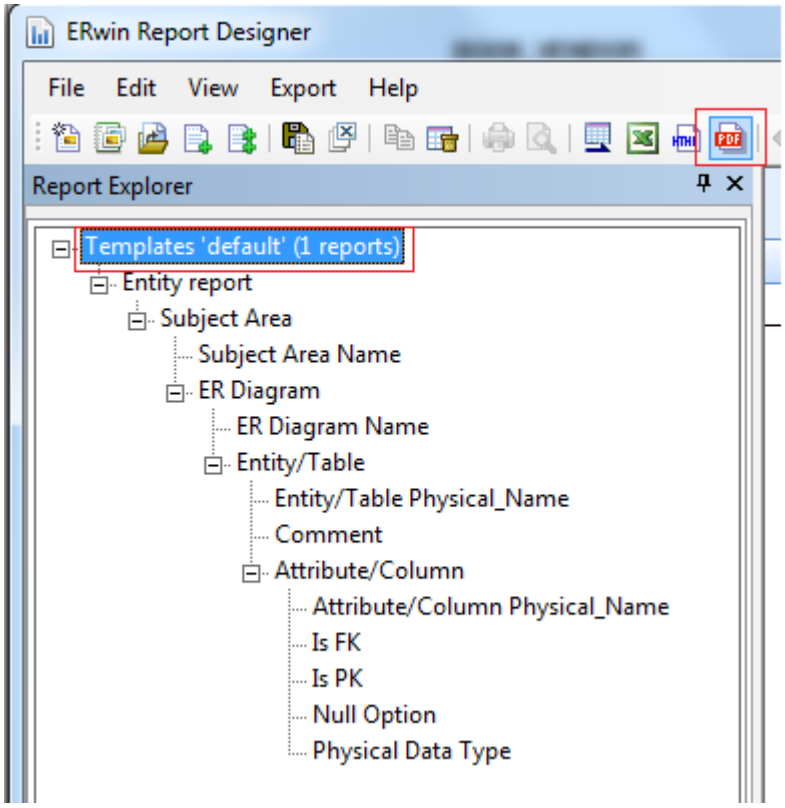
Follow these steps:

1. Open CA ERwin Data Modeler and open a Physical Only or a Logical/Physical model.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.
4. Enter a name for the report and select the Report Type as Logical/Physical.
5. Select the Report Subject as Subject Area.
6. In the Select Report Fields pane, expand Entity, Properties, and select Name, Definition.

7. Expand Subject Area, Properties, and select Name. Expand ER Diagram, Properties, and select Name.
8. Expand Graphical Members, Entity/Table, Properties and select Physical Name and Comment.
9. Expand Attribute/Column, Properties and select Physical Name, Physical Data Type, and Null Option.
10. Expand Attribute, Key Type and select Is PK, Is FK.

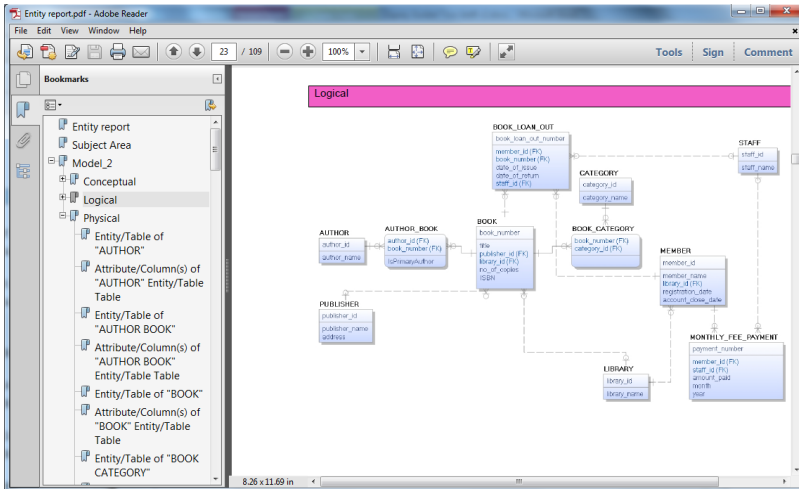


11. Cick OK. The report template is added to ERwin Report Designer.



12. In ERwin Report Designer, right-click the template and click Export to PDF.

    The report is generated and displayed.



13. Verify the following information:

    - The report is generated in PDF format with diagrams.
    - Entities on the diagram are clickable and clicking an entity opens the corresponding drill-down information.

- Information produced in PDF is accurate and easy to navigate.

Chapter 6: Dimensional Modeling

The ability to produce reports on data source mapping is added to Report Designer in CA ERwin Data Modeler Release 9.5.2. In the data warehouse environment, it is important to track the following information:

- Source of the data.
- The method by which the source data is extracted and cleansed before it is imported into the data warehouse.
- The frequency and timing of data warehouse updates.

You may have a data warehouse that combines information from several online transaction processing (OLTP) systems and archived data into a single decision support system. Your data may also come from relational and non-relational sources. To support regular updates and data quality checks, you must know the source for each column in your data warehouse. You must also know when and how the data is updated. You can document all of this information using CA ERwin Data Modeler. This information can also be produced as reports in various formats using Report Designer.

This section contains the following topics:

Report on Data Sources, Target Columns, and Transformations (see page 37)
Report on Data Lineage with Diagrams (see page 40)

Report on Data Sources, Target Columns, and Transformations

This report includes the list of data sources, target columns, and the corresponding transformation details.

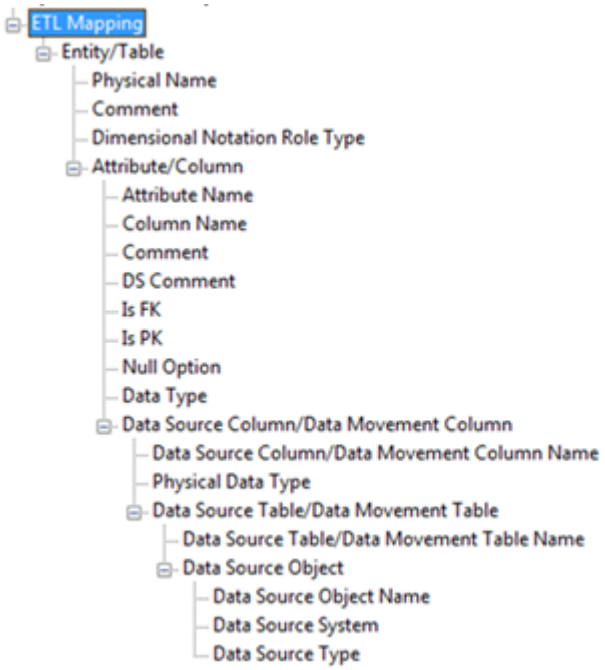
Note: To generate this report, you must have a model that documents data movement sources and has the column level mappings defined.

Follow these steps:

1. Open CA ERwin Data Modeler and open a model in which data movement sources and column level mappings are defined.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.

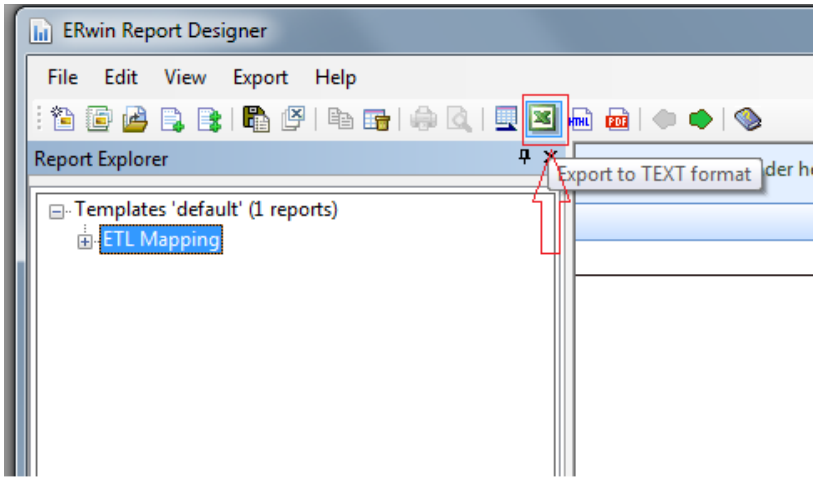
4. Enter the title of the report as ETL Mapping.
5. Enter a name for the report and select the Report Type as Logical/Physical.
6. Select the Report Subject as Entity/Table.
7. In the Select Report Fields pane, expand Entity, Properties, and select Name, Definition.
8. Expand Entity/Table, Properties, and select Comment, Dimensional Notation Role Type, and Physical Name.
9. Expand Attribute/Column, Properties, and select Comment, DS Comment, Name, Null Option, and Physical Data Type.
10. Expand Data Source Column/Data Movement Column, Properties, and select Name, Physical Data Type.
11. Expand Data Source Table/Data Movement Table, and select Name.
12. Expand Data Source Object, Properties, and select Name, Data Source System, Data Source Type.
13. Expand Attribute, Key Type and select Is PK, Is FK.

14. Cick OK. The report template is added to ERwin Report Designer.

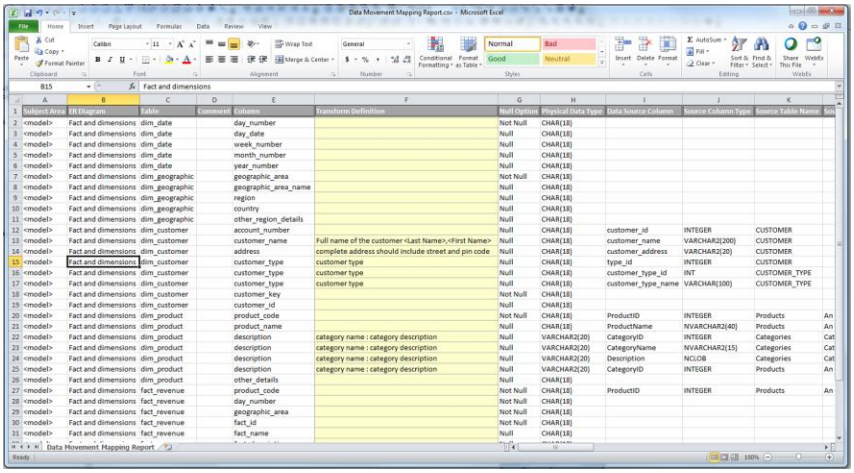


15. In ERwin Report Designer, right-click the template and click Export to TEXT.

    The report is generated and displayed.



16. Verify that the report contains data source mapping information for each target column.



Report on Data Lineage with Diagrams

This report includes the data lineage (data source mapping) with diagrams.

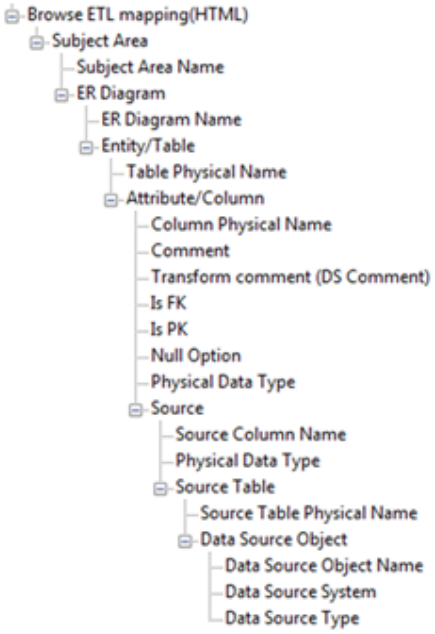
Note: To generate this report, you must have a model that documents data movement sources and has the column level mappings defined.

Follow these steps:

1. Open CA ERwin Data Modeler and open a model in which data movement sources and column level mappings are defined.
2. Click Tools, Report Designer.
3. Click Create New Report. The ERwin Report Editor dialog opens.
4. Enter the title of the report as Browse ETL Mapping.
5. Enter a name for the report and select the Report Type as Logical/Physical.
6. Select the Report Subject as Entity/Table.
7. In the Select Report Fields pane, expand Entity, Properties, and select Name, Definition.

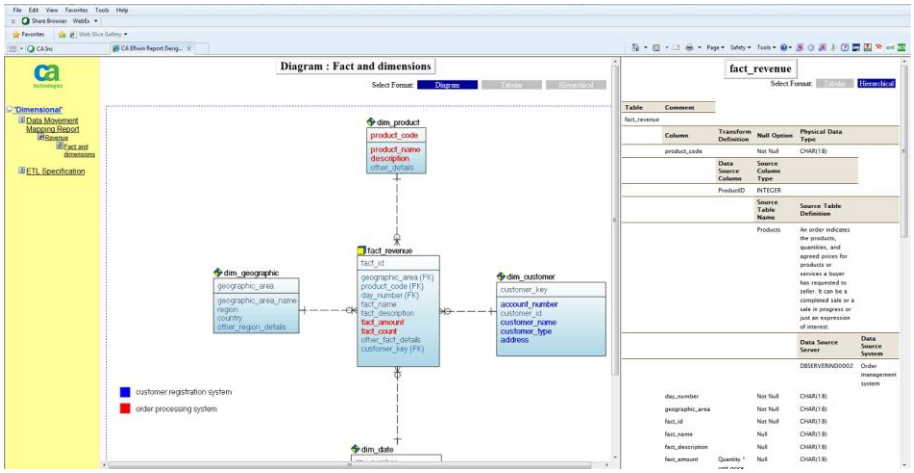
8. Expand Subject Area, Properties, and select Name.
9. Expand ER Diagram, Properties, and select Name.
10. Expand Members, Table/Entity, Properties, and select Table Physical Name.
11. Expand Attribute/Column, Properties, and select Comment, Physical Name, Null Option, Physical Data Type, DS Comment.
12. Expand Data Movement Column, Properties, and select Name, Physical Data Type.
13. Expand Data Source Table/Data Movement Table, and select Name.
14. Expand Data Source Object, Properties, and select Name, Data Source System, Data Source Type.
15. Expand Attribute, Key Type and select Is PK, Is FK.

16. Cick OK. The report template is added to ERwin Report Designer.



17. In ERwin Report Designer, right-click the template and click Export to HTML.

    The report is generated and displayed.



18. Open the HTML report and verify the data mappings. Verify that the report contains diagrams and clickable entities through which you can navigate to the data source mapping information.

Click here to view a video demonstration of this report.

Chapter 7: Other Changes

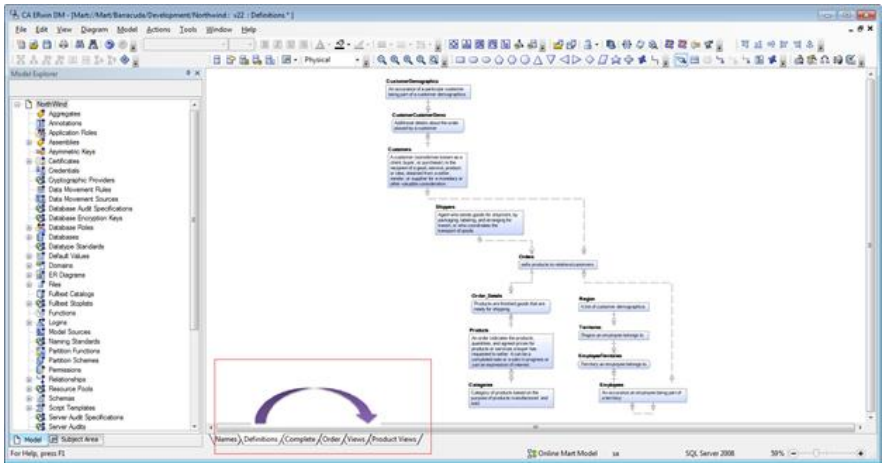
This section includes the changes other than reports.

This section contains the following topics:

Reorder Diagrams (see page 43)
Extended Notes (see page 44)

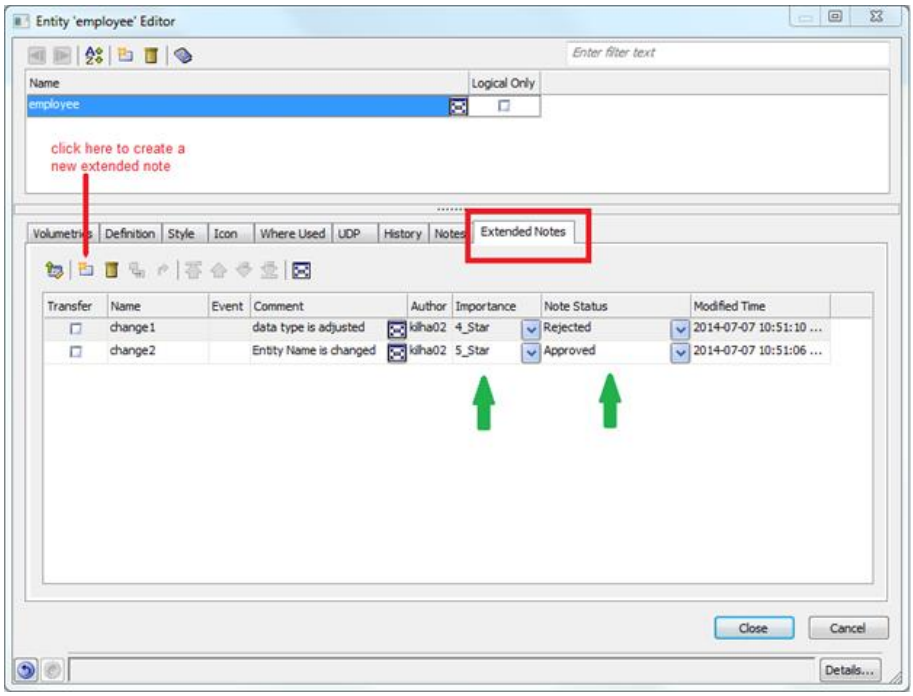
Reorder Diagrams

In the previous releases reordering diagrams was not supported. The order of creation of diagrams was final and it could not be changed. CA ERwin Data Modeler Release 9.6.0 supports changing the order of diagrams by dragging and dropping the diagrams. To change the order, select the diagram, drag and drop it to the new position.



Extended Notes

A new documentation feature named *Extended Notes* is added to all model objects. You can add extended notes through the new tab on the respective editors. Extended Notes are an enhanced version of the existing Notes. You can associate an Extended Note with a 'level of importance' and a 'status' indicator. This association enables better review and collaboration across modelers and reviewers.



You can perform the following tasks with Extended Notes:

- Search using the Find and Replace dialog
- Compare using Complete Compare
- Edit using Bulk Editor
- Transfer to Notes

  Note: When you transfer Extended Notes to Notes, the Importance and Note Status information is deleted permanently.

Extended Notes also support bidirectional communication between CA ERwin Web Portal and CA ERwin Data Modeler (review comments collaboration).