

**GUIDE**

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# erwin Data Modeler

Creating Custom Mart Reports 15.0



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# Introduction

erwin Data Modeler (DM) and erwin Mart Portal 15.0 support CURL commands and REST APIs that enable report generation based on predefined XML report definitions shipped with the Mart Portal. The predefined report definition, reports.xml, is available at C:\Program Files\erwin\Mart Portal\MartApp\config.

Using these reports, you can generate XML reports for the following objects that are stored in the Mart:

- Catalog Information
- Model objects and their properties
- Users
- Lock information
- Profiles
- Permissions

For more information on report types, refer to the [Types of Reports](#) topic.

You can generate REST reports only if you are a Server user.

This section contains the following topics

[Architecture](#)

[Generate Reports using a Reporting Tool](#)

# Workflow

When you generate a report, data is retrieved from the Mart Portal via CURL commands or REST APIs.

The components involved in reporting are as follows:

- CURL commands or REST APIs
- Predefined XML-based report definitions
- Mart Portal
- Mart database, which is the data source for the Mart Portal

The following steps describe the report generation process:

1. Authenticate yourself using your Mart Portal credentials and generate an access token.
2. Use CURL commands or REST API endpoints to connect to the Mart Portal using an access token.
3. Generate the required predefined report in the XML format.

# Generating Access Token

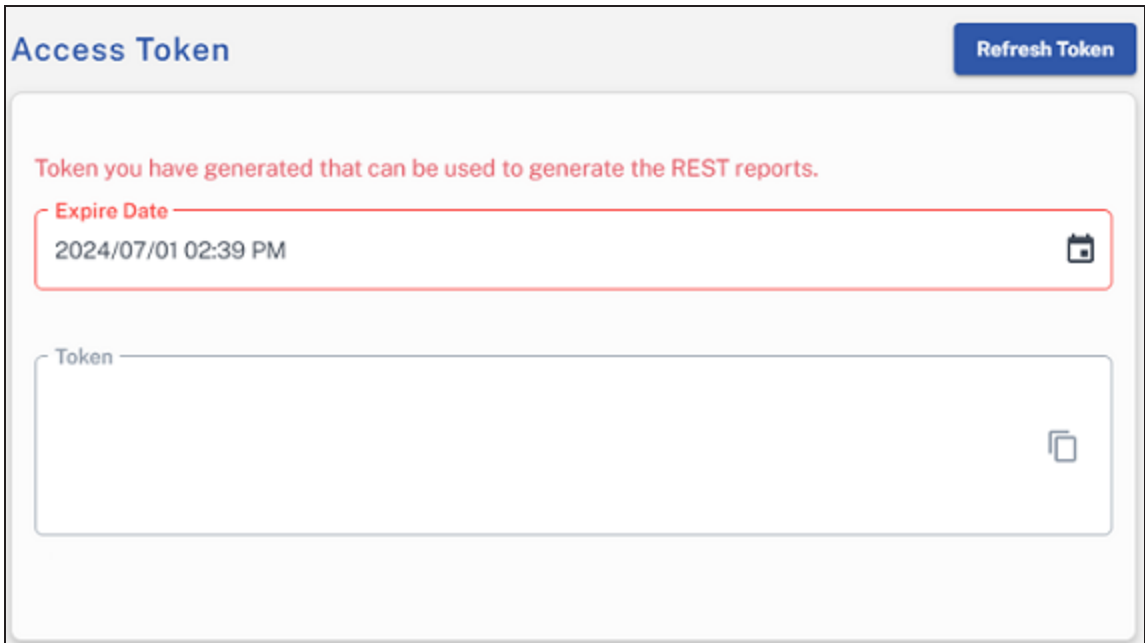
REST reports generation from Mart requires an access token in order to authenticate yourself. Once generated, you can reuse this token to generate multiple reports.

You can generate a bearer token in two ways:

- [Via access token feature](#)
- [Via API](#)

To generate an access token via the access token feature, follow these steps:

1. Log on to erwin Mart Portal and on the top pane, click .
2. Click **Access Token**.  
The Access Token page opens.



**Access Token** Refresh Token

Token you have generated that can be used to generate the REST reports.

Expire Date 2024/07/01 02:39 PM 

Token 

3. Click **Refresh Token**.  
This will generate a bearer token and display it in the Token field. You can edit the token expiry date.

### Access Token

Refresh Token

Token you have generated that can be used to generate the REST reports.

Expire Date

2024/09/09 02:39 PM

Invalid Schedule Job On date

Token

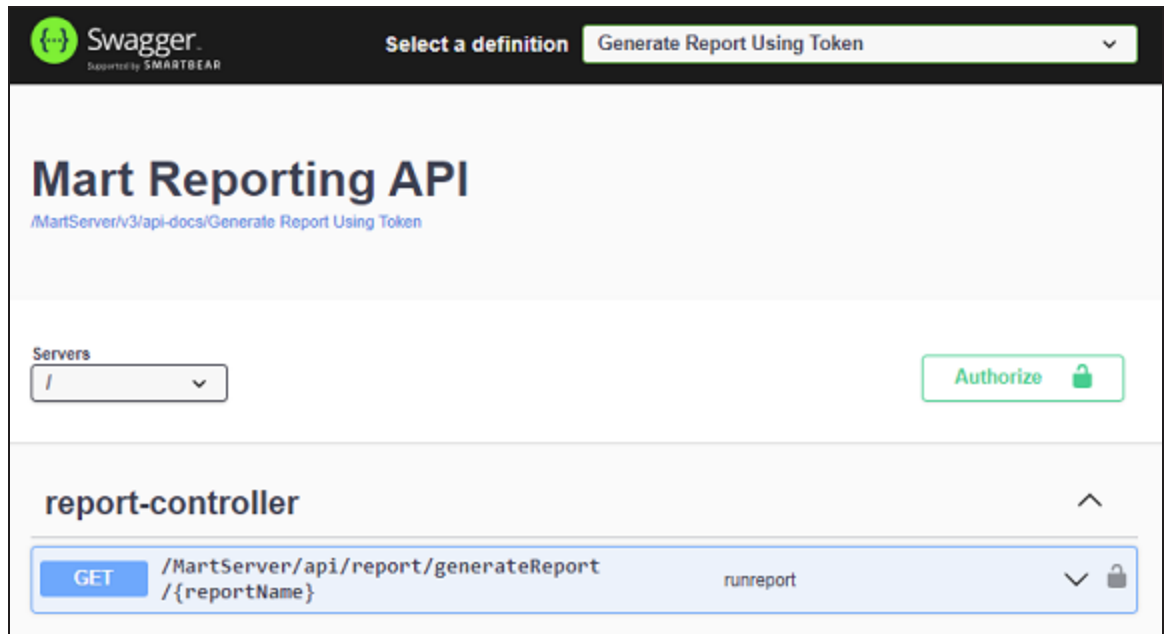
Token will be expired in 12 days.

4. To copy the token, click  and use it to generate REST reports.

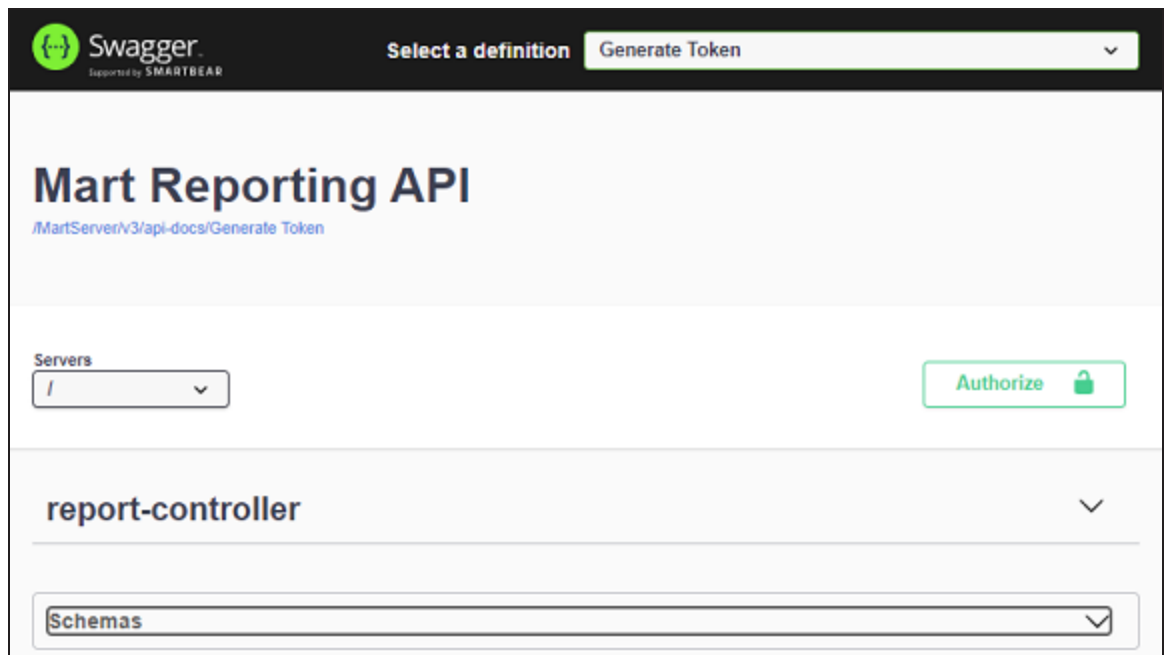
To generate an access token via API, follow these steps:

1. Log on to erwin Mart Portal and on the header, click .
2. Click  REST Reports.  
The Mart Reporting API page opens.

## Generating Access Tokens



3. In the **Select a definition** field, select **Generate Token**.



## Generating Access Tokens

- Expand the report-controller section.

The screenshot shows the Swagger UI for the **report-controller** section. The endpoint is a **POST** request to `/MartServerCloud/jwt/authenticate/login` with the operation name `login`. The **Parameters** section indicates "No parameters". The **Request body** is marked as **required** and the media type is set to `application/json`. An **Example Value** is provided as a JSON object: `{ "username": "string", "password": "string" }`. A **Try it out** button is visible in the top right corner.

- Click **Try it out**.

The screenshot shows the Swagger UI after clicking the **Try it out** button. The **Parameters** section now has a **Cancel** button. The **Request body** section shows the same JSON example value: `{ "username": "string", "password": "string" }`. A large blue **Execute** button is prominently displayed at the bottom of the interface.

- In the Request body section, enter your Mart username and password.
- Click **Execute**.  
The CURL command and access token are generated in the Responses section.

**Responses**

Curl

```
curl -X 'POST' \
'http://localhost:18170/MartServerCloud/jwt/authenticate/login' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-H 'X-XSRF-TOKEN: 0e4f7c62-eb68-4895-abb4-99521dbaa3c5' \
-d '{
  "username": "skalgutkar",
  "password": "Erwin123"
}'
```

Request URL

<http://localhost:18170/MartServerCloud/jwt/authenticate/login>

Server response

| Code | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200  | <p>Response body</p> <pre>{   "id_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJza2FsZS3V0a2FyIiwiaXYwYXNjaCI6IiIsInVzZXI6eXB1IjowLCJncm91cHMlOjltLjCzZDkxZW9uaWQ1oicsInVzZXIpZCIGMSwidXNlcmlhbnU1OjIza2FsZS3V0a2FyIiwiaXNjaCI6Ijo1ZDkzYW5Nb2R1bE1hcnglILCjPvXQ1ojE3MDg0MjkYODBlbm0aSI6IjhlMTZTNTYtYTQwLWZjMzQtNDI3OC1lM2EzLTc5MTY1YzgZjdjNSIsImV4cCI6MTcwODQ0MzY4MjAwLjU1YbnyCXbdSP5C05d4PCT43HIAfznuYKEPumpGZlmjq3hucixIEKcB1qUoGkI4r-P4zkSCGyHyC4IDudRhJ5g",   "refresh_id": false,   "session_id": 7,   "refresh_token": "8be2ba40-fc34-4278-b3a3-79165c8327c5",   "new_device": false }</pre> |

- Copy the access token (highlighted in the image above, content between the quotes) and use it in for [report generation](#).

By default, access tokens generated via API are valid for four hours (14400 seconds) by default. To extend the validity, edit the Rest API Token Lifetime property on the Advanced tab of [erwin Mart Portal configuration screen](#).

## Generating REST Reports

To be able to generate REST reports, ensure that you have the View permissions to the Mart and a bearer token. You can generate REST Reports in two ways:

- [via CURL Command](#)
- [via API](#)

To generate REST reports via CURL command, run the following command:

```
curl -X GET "http://<server name>:<port number>  
/MartServer/api/report/generateReport/  
<predefined report name>?additionalProp1=string  
&additionalProp2=string  
&additionalProp3=string" -H "accept: */*" -H  
"Authorization: Bearer <access token>"
```

In the above command replace *<server name>*, *<predefined report name>*, and *<access token>* with your information.

An XML report based on the *<predefined report name>* parameter is generated. For example, if you replace this parameter with Models, the following report is generated, where the Mart had

## Generate Reports using a Reporting Tool

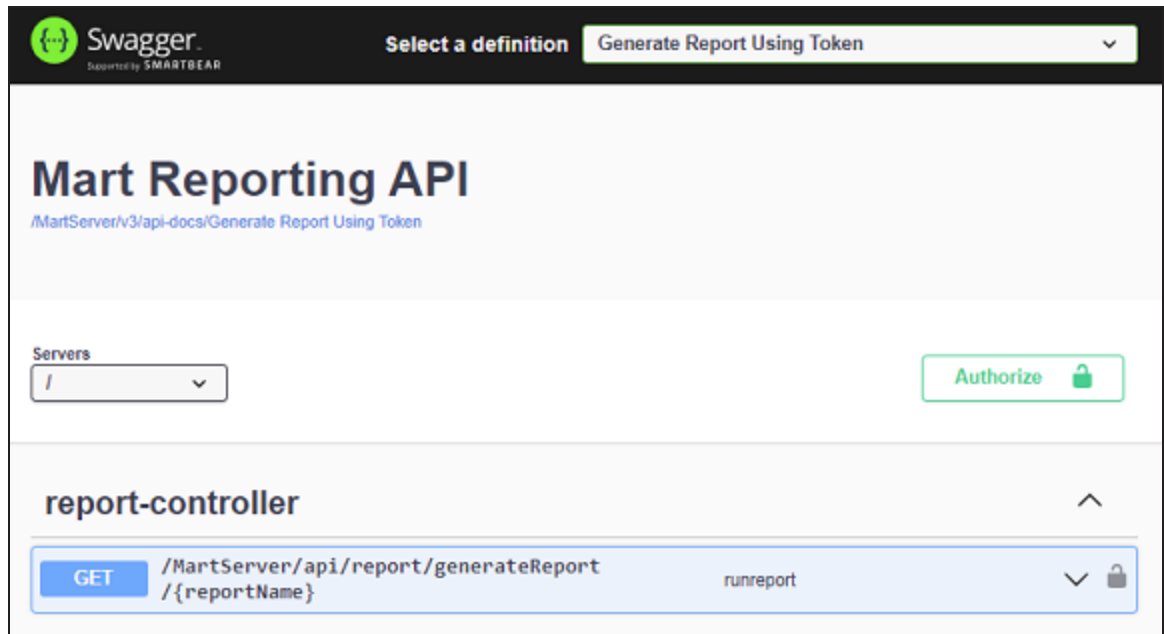
---

three models available in it:

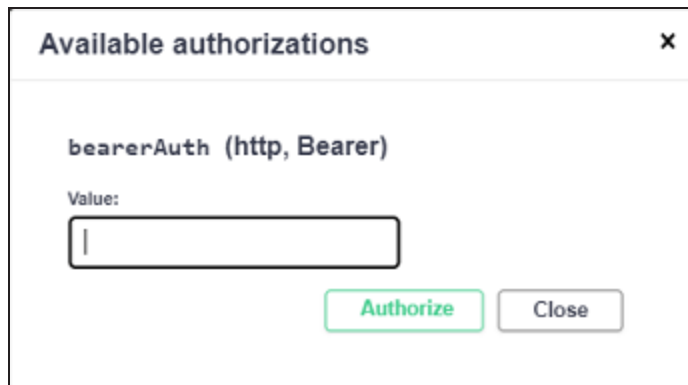
```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<report_root>
  <Model>
    <Id>65536</Id>
    <Catalog_Name>eMovies</Catalog_Name>
    <Catalog_Path>Mart</Catalog_Path>
    <CreatedOn>03/24/2021 14:05 PM</CreatedOn>
    <UpdatedOn>03/24/2021 14:07 PM</UpdatedOn>
  </Model>
  <Model>
    <Id>65539</Id>
    <Catalog_Name>PublicationSystemSample</Catalog_Name>
    <Catalog_Path>Mart</Catalog_Path>
    <CreatedOn>03/24/2021 14:31 PM</CreatedOn>
    <UpdatedOn>03/24/2021 14:31 PM</UpdatedOn>
  </Model>
  <Model>
    <Id>65541</Id>
    <Catalog_Name>ReverseEngdMongoDBAfterFE</Catalog_Name>
    <Catalog_Path>Mart</Catalog_Path>
    <CreatedOn>03/24/2021 14:32 PM</CreatedOn>
    <UpdatedOn>03/24/2021 14:32 PM</UpdatedOn>
  </Model>
</report_root>
```

To generate REST reports via API, follow these steps:

1. Log on to erwin Mart Portal and on the top pane, click .
2. Click  **REST Reports**.  
The Mart Reporting API page opens.



3. Ensure the the **Select a definition** field is set to **Generate Report Using Token**.
4. In the report-controller section, click .



5. Enter your access token and click **Authorize**.  
Once authorization is done, click **Close**.

## Generate Reports using a Reporting Tool

- Expand the GET method and click **Try it out**.

The screenshot shows the 'report-controller' API interface. At the top, the GET method is selected for the endpoint `/MartServer/api/report/generateReport/{reportName}` with the operation name 'runreport'. Below this is the 'Parameters' section, which is currently expanded. It contains two parameters: 'reportName' (a required string path parameter) and 'params' (an object query parameter). The 'reportName' field has a text input with the value 'reportName'. The 'params' field has a text area containing an example JSON object: `{ "additionalProp1": "string", "additionalProp2": "string", "additionalProp3": "string" }`. A red 'Cancel' button is located in the top right corner of the parameters section. At the bottom of the interface is a large blue 'Execute' button.

- In the **reportName** field, enter Models and edit other parameters, if required.
- Click **Execute**.  
The requested report is generated in the in the Responses section. You can copy or download it in the XML format.

## Generate Reports using a Reporting Tool

Responses

Curl

```
curl -X 'GET' \
  'http://localhost:18170/WartServer/api/report/generateReport/Models?additionalProp1=string&additionalProp2=string' \
  -H 'accept: */*' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJza2FsZ3V0a2FyIiwiaXN0eCI6IiIsInVzZXI6eXB1IiwiaWF0Ijpmcm91' \
  -H 'X-XSRF-TOKEN: f2c1c58a-6689-4b13-991f-bce2ff161e47'
```

Request URL

```
http://localhost:18170/WartServer/api/report/generateReport/Models?
additionalProp1=string&additionalProp2=string&additionalProp3=string
```

Server response

| Code | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200  | <p>Response body</p> <pre>&lt;?xml version="1.0" encoding="UTF-8" standalone="no"?&gt; &lt;report_root&gt;   &lt;Model&gt;     &lt;Id&gt;65536&lt;/Id&gt;     &lt;Catalog_Name&gt;eMovies&lt;/Catalog_Name&gt;     &lt;Catalog_Path&gt;Mart&lt;/Catalog_Path&gt;     &lt;CreatedOn&gt;21/02/2024 06:17:12 pm&lt;/CreatedOn&gt;     &lt;UpdatedOn&gt;21/02/2024 06:17:12 pm&lt;/UpdatedOn&gt;   &lt;/Model&gt; &lt;/report_root&gt;</pre> <p> Download</p> |

# Creating a Custom Mart Report

This section contains the following topics

[Create Custom Mart Reports](#)

[Define a New Report](#)

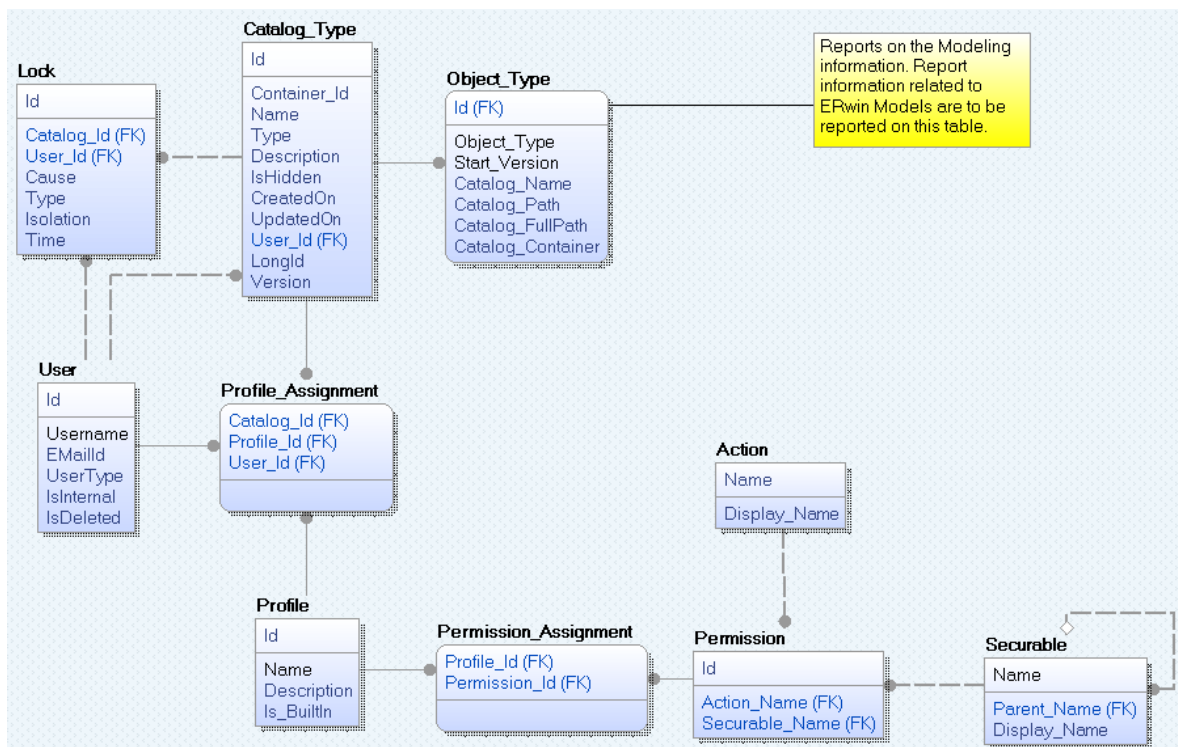
[Define the Report Schema](#)

## Create Custom Mart Reports

erwin Data Modeler (DM) Mart, version 9 onward lets you create custom Mart reports. A custom Mart report requires two XML files, the report definition file and the report schema file. The report definition file includes names of the tables and columns that you want to include in the report. The report schema file includes how you want the tables and columns to appear in the report. Sample definition and schema files are included as part of the installation files.

This section describes how to edit the sample files to add new or modify existing reports.

The basic tables and columns to report are organized as shown below:



Follow these steps to generate a new report:

1. Define the report definition.
2. Define the report schema.
3. Execute it using a reporting tool.

# Define a New Report

The reports.xml file includes report definitions for all the Mart reports. This file is available in the \erwin\Mart Portal\MartApp\config folder. Edit this file to modify an existing report definition or add a new report definition.

Report definitions have the following characteristics:

- Report definitions are created in XML format.
- Reports have a unique name that identifies the report.
- Reports are defined using XML elements.

The basic XML elements and tags are shown in the example below.

### Follow these steps:

1. Open the erwin\Mart Portal\MartApp\config\Reports.xml file.
2. Enclose report definition within the <report> element.
3. Define a name for the report within the <Name> element.
4. Define each table that you want to include in the report. In the example below, the report is generated on the User table.
5. Enclose the properties or columns of the required table that you want to appear in the output within the <Report\_Output> element.
6. Include all properties to report on within the <Property> element.
7. Define each column to report on within the <Type> tag.
8. Close all the tags.
9. (Optional) execute this report in a web browser. Use the URL for reports described in the previous procedure.

An example of defining a report on Users is shown below:

```
<report>
  <Name> Users </Name>
  <User>
    <Report_Output>
      <Property>
```

## Define a New Report

---

```
<Type>ID</Type>
<Type>Username</Type>
<Type>EmailID</Type>
<Type>UserType</Type>
<Type>IsInternal</Type>
<Type>IsDeleted</Type>
</Property>
<Report_Output>
</User>
</report>
```

# Define the Report Schema

A schema defines the expected output. The report schema for all Mart reports is defined in the reports-schema.xml file. This file is available in the \erwin\Mart Portal\MartApp\config folder. Help ensure that the report data output always conforms to the schema definition.

Report schemas have the following characteristics:

- Report schemas are created in XML format.
- Report schemas have a unique name that identifies the schema. We recommend that you have this name same as that of the report name.
- Reports are defined using XML elements.

**Follow these steps:**

1. Open the erwin\Mart Portal\MartApp\config\Reports-schema.xml file.
2. Enclose report schema definition within the <report\_schema> element.
3. Define a name for the report schema within the <Name> element.
4. Define the Schema within the <schema> element in the CDATA section.
5. Defining a schema definition within the CDATA section helps XML accept the XML related information within an XML definition.

There are various tools to generate Schema Definition (that is, XSD) information from a XML. You can generate the schema definition using a tool of your choice and include it in the reports-schema.xml file.

An example of defining a report schema on Users is shown below.

```
<report_schema>

<Name> Users </Name>

<schema>

<Report_Output>

<![CDATA[<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">

<xs:element name="report_root">

<xs:complexType>
```

## Define the Report Schema

---

```
<xs:sequence>

<xs:element name = "User" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name = "Id" type="xs:string"/>

<xs:element name ="Username" type="xs:string"/>

<xs:element name ="EmailId" type="xs:string"/>

<xs:element name ="UserType" type="xs:string"/>

<xs:element name = "IsInternal" type="xs:string"/>

<xs:element name = "IsDeleted" type="xs:string"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>]]>

</schema>

</report_schema>
```

# Types of Reports

This section contains the following topics

[Report on Catalogs](#)

[Report on Model Objects](#)

[Report on Users](#)

[Report on Locks](#)

[Report on Profiles](#)

[Report on Profile Assignments](#)

[Report on Permissions](#)

[Report on Permission Assignment](#)

[Report on Actions](#)

[Report on Securables](#)

## Report on Catalogs

The following types of Catalog objects are present in Mart:

- Mart
- Library
- Model
- Version

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the Catalog objects and their properties that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following report definition script reports on the Catalog table that includes Model and Versions:

```
<report>
  <Name>Library Model Version</Name>
  <Catalog_Type>
    <Name>Model</Name>
    <Report_Output>
      <Property>
        <Type>Catalog_Name</Type>
        <Type>Catalog_Path</Type>
      </Property>
    </Report_Output>
  </Catalog_Type>
  <Name>Version</Name>
  <Report_Output>
    <Property>
```

## Report on Catalogs

---

```
<Type>Catalog_Name</Type>
</Property>
</Report_Output>
</Catalog_Type>
</Catalog_Type>
</report>
```

The list of Type tags or valid column values are listed below:

| Column Name       | Description                                                                              |
|-------------------|------------------------------------------------------------------------------------------|
| Id                | Unique identifier for the catalog                                                        |
| Name              | Name of the catalog item                                                                 |
| Type              | Type of the catalog                                                                      |
| Container_Id      | Owner of the catalog item                                                                |
| Catalog_Name      | Name of the catalog item                                                                 |
| Catalog_Path      | Complete path for the catalog item not including the name of the catalog item in context |
| Catalog_FullPath  | Complete path for the catalog item including the name of the catalog item in context     |
| Catalog_Container | Name of the owner of the catalog item                                                    |
| Description       | Description of the catalog                                                               |
| CreatedOn         | Date and time identifying the catalog creation                                           |
| UpdatedOn         | Date and time identifying the catalog latest update                                      |
| User_Id           | User identifier responsible for creating the catalog item                                |
| LongId            | Identifier for the catalog                                                               |
| Version           | Version number for the catalog item                                                      |



## Report on Model Objects

You can report on modeling objects using the object names and property names. The list of object names is available in the file `\erwin\MartPortal\BOOT-INF\classes\Metadata\EMX_ObjectTypecodeList.csv`. The list of property names is available in the file `\erwin\MartPortal\BOOT-INF\classes\Metadata\EMX_PropertyTypecodeList.csv`.

To access these files, follow these steps:

1. Go to `C:\Program Files\erwin\Mart Portal\MartApp\`
2. Copy `MartPortal.jar` to another folder
3. Extract `MartPortal.jar`.
4. Navigate to `MartPortal\BOOT-INF\classes\Metadata`

The mentioned CSV files are available in this folder.

After accessing CSV files and identifying object and property names, the next step is configuring reporting definitions by updating report configuration files to include required model objects and properties.

To configure report files, follow these steps:

1. Edit the `reports.xml` file and include the report definition for the Model objects and their properties that you want to report on.
2. Edit the `reports-schema.xml` file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the `reports-schema.xml` file.

The following report definition script reports on the Object table that includes Entity and Attributes:

```
<report>

  <Name>Entity Attributes</Name>

  <Object_Type>
    <Name>Entity</Name>

    <Report_Output>
      <Property>
        <Type>Name</Type>
```

## Report on Model Objects

---

```
<Type>Physical_Name</Type>

<Type>Catalog_Name</Type>

<Type>Catalog_Path</Type>

</Property>
</Report_Output>
<Object_Type>
  <Name>Attribute</Name>
  <Report_Output>
    <Property>
      <Type>Name</Type>
      <Type>Physical_Name</Type>
      <Type>Logical_Data_Type</Type>
      <Type>Physical_Data_Type</Type>
    </Property>
  </Report_Output>
</Object_Type>
</Object_Type>
</report>
```

The list of Type tags or valid column values are listed below.

| Column Name       | Description                                                  |
|-------------------|--------------------------------------------------------------|
| Catalog_Container | Identifier for the catalog item mapped into the object table |
| Id                | GDM identifier for the object                                |

## Report on Model Objects

---

| Column Name       | Description                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------------------|
| Object_Type       | Type of the object                                                                                        |
| Property          | Here we mention the property name to report on for example to report on GDMTypes::pName mention Name here |
| Catalog_Name      | Name of the catalog item                                                                                  |
| Catalog_Path      | Complete path for the catalog item not including the name of the catalog item in context                  |
| Catalog_FullPath  | Complete path for the catalog item including the name of the catalog item in context                      |
| Catalog_Container | Name of the owner of the catalog item                                                                     |
| Start_Version     | The version that the object was created on                                                                |

## Additional Support for Object Type Reporting

Apart from reporting on Objects and Properties, you may need to generate other reports that need different XML elements. This section describes how you can generate reports for special requirements.

# Alias

When generating report data in XML, the element name is the same as that defined in the <Name> element. There may be cases when you require a different name for the element name. In such cases, use the <Alias>Alias\_Name</Alias> tag to set the name of the element as that defined in the Alias in the output XML. Use this name when you refer to the element in the schema and not the name defined within the <Name> element.

Syntax:

```
<Alias>Alias_Name</Alias>
```

## All Objects Support

To report on an object type, use that object type within the <Name> element. To report on all objects in Mart, do not define the <Name> element.

In the example script given below, the type of object for which the report is generated is not mentioned. This script generates a report on all objects returning the object type, name, and definition. Remember to add the Alias tag.

Syntax:

```
<report>
  <Name>Definitions</Name>
    <Object_Type>
      <Alias>Objects</Alias>
      <Report_Output>
        <Property>
          <Type>Object_Type</Type>
          <Type>Name</Type>
          <Type>Definition</Type>
        </Property>
      </Report_Output>
    </Object_Type>
  </report>
```

# Sub Object Type Support

For reporting on a specific object type in a specific context, we include the <Object\_Type> tag within the parent <Object\_Type> element. The supports within the sub object type support are as follows:

## Child

When you define an object type within an existing object type, the child items of that specific type are reported. For example, if you report on an object type that reports an entity that defines an object type of Attribute, then the report includes all attributes within that entity. This is the default way in which Mart reporting is implemented.

Syntax:

```
<report>
  <Name>Entity Attributes</Name>
    <Object_Type>
      <Name>Entity</Name>
      <Report_Output>
        <Property>
          <Type>Name</Type>
        </Property>
      </Report_Output>
    <Object_Type>
      <Name>Attribute</Name>
      <Report_Output>
        <Property>
          <Type>Name</Type>
        </Property>
```

## Sub Object Type Support

---

```
        </Report_Output>

    </Object_Type>

</Object_Type>

</report>
```

### Owner

To refer to the Owner object in the context of an object type, use the Relationship attribute that refers to "Owner". For example, when you report on an object type that includes a domain and defines an object type of Model with relationship attribute as "Owner," then the report is generated on the Model owning the Domain.

Syntax:

```
<report>

    <Name>Domains</Name>

    <Object_Type>

        <Name>Domain</Name>

        <Report_Output>

            <Property>

                <Type>Name</Type>

            </Property>

        </Report_Output>

    <Object_Type Relationship = "Owner">

        <Name>Model</Name>

        <Report_Output>

            <Property>

                <Type>Name</Type>

            </Property>
```

## Sub Object Type Support

---

```
<Report_Output>

</Object_Type>

</Object_Type>

</report>
```

### Referenced Object

To refer to an object that is referenced using a reference property within the object in context, use the Relationship attribute as "Ref" and define another attribute Reference that indicates the reference property to consider on the object while retrieving the object type defined within the current object type element. For example, within an object type reporting on Attribute defining an object type of Domain with relationship attribute as "Ref" and the Reference attribute defined as "Parent\_Domain\_Ref" would report on the Attribute and the Domain referenced by the property "Parent\_Domain\_Ref" on the Attribute in context.

Syntax:

```
<report>

  <Name>Attribute Domains</Name>

  <Object_Type>

    <Name>Attribute</Name>

    <Report_Output>

      <Property>

        <Type>Name</Type>

      </Property>

    <Report_Output>

      <Object_Type Relationship = "Ref" Reference = "Parent_Domain_
Ref">

        <Name>Domain</Name>

        <Report_Output>

          <Property>
```

## Sub Object Type Support

---

```
<Type>Name</Type>
</Property>
<Report_Output>
</Object_Type>
</Object_Type>
</report>
```

# Applying Conditions

Sometimes, you apply conditions to filter data. When you apply conditions, the efficiency of reports is improved, as conditions remove the invalid objects in context in the output XML. The conditions are applied on the object in context. As given in the example below, the `<Condition Compare="Comparison_Strategy">` tag is defined within the `<Object_Type>` tag. The "Compare" attribute defines the comparison strategy.

The comparison strategy defines the following strategies:

- Exact: Compares with the exact value defined in the `<Value>` tag.
- BeginsWith: Value begins with the value defined in the `<Value>` tag.
- EndsWith: Value ends with the value defined in the `<Value>` tag.
- Contains: Value contains with the value defined in the `<Value>` tag.
- NotEqual: Value does not match the value defined in the `<Value>` tag.
- Null: Property value is NULL. The `<Value>` tag is not required in this strategy.
- NotNull: Property value exists. The `<Value>` tag is not required in this strategy.

Syntax:

```
<Object_Type>
  <Name>Attribute</Name>
    <Condition Compare = "Exact">
      <Property>
        <Type>Tpye</Type>
        <Value>0</Value>          <!--0 = PK Attribute Type-->
      </Property>
    </Condition>
  <Report_Output>
    <Property>
      <Type>ID</Type>
```

## Applying Conditions

---

```
        <Type>Parent_Relationship_Ref</Type>
    </Property>
</Report_Output>
</Object_Type>
```

# Property Type Alias

When generating report data in XML, the element name for a property is the same as that defined in the <Type> element. There may be cases when you require a different name for the element name; in such cases, use the <Type Alias ="Alias\_Name" >Logical\_Data\_Type<Type> tag to set the name of the element as that defined in the Alias in the output XML. Use this name to refer to the element in the schema and not the name defined within the <Type> element.

Syntax:

```
<Type Alias = "Datatype">Logical_Data_Type</Type>
```

## Property Inheritance Value

There may be a scenario when the property on an object is inherited. You can retrieve the inherited property value using the code example given below. The Reference attribute within the <Type> element defines the reference property to look into. The Object\_Type attribute defines the corresponding object, whereas the Property attribute defines the property in the object to probe. The inheritance is drilled down until the property value is not null. For example, to retrieve the Name for Domain or Attributes where the Name property on the current domain or attribute is NULL then it gets the "Parent\_Domain\_Ref" on the current object, on that id it looks into for an object of type "Domain" with the id associated with "Parent\_Domain\_Ref" property and gets its property "Name". If it is NULL, it further looks into the "Parent\_Domain\_Ref" property on that object and likewise looks further up till the property is retrieved.

Syntax:

```
<Type Reference = "Parent_Domain_Ref" Object_Type = "Domain" Property = "Name">Name</Type>
```

# UDP Reports

To generate a report on User Defined Properties (UDP) in Mart, use UDP in the <Name> element within the <Object\_Type> attribute.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of UDPs that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on UDPs and their properties:

Syntax:

```
<report>

  <Name>User-Defined Properties</Name>

  <Object_Type>

    <Name>Udp</Name>

    <Report_Output>

      <Property>

        <Type>Name</Type>

        <Type>tag_Udp_Default_Value</Type>

        <Type>tag_Udp_Owner_Type</Type>

        <Type>Catalog_Path</Type>

        <Type>Catalog_Name</Type>

      </Property>

    </Report_Output>

  </Object_Type>
```

</report>

## Report on Actions

This section describes how to create the report definition for actions. The Action table stores the actions for a particular securable. For example, actions are View, Open, Save, and so on.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the Action table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Action table:

```
<report>

  <Name>Actions</Name>

  <Action>

    <Report_Output>

      <Property>

        <Type>Name</Type>

        <Type>Display_Name</Type>

      </Property>

    </Report_Output>

  </Action>

</report>
```

| Column Name  | Description                            |
|--------------|----------------------------------------|
| Name         | Action identifier                      |
| Display_Name | Display name for the action identifier |



## Report on Locks

This section describes how you can create the report definition for locks.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the Lock table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Lock table:

```
<report>

  <Name>Locks</Name>

  <Lock>

    <Report_Output>

      <Property>

        <Type>ID</Type>

        <Type>Catalog_ID</Type>

        <Type>Type</Type>

        <Type>Time</Type>

        <Type>User_ID</Type>

      </Property>

    </Report_Output>

  </Lock>

</report>
```

## Report on Locks

---

| Column Name | Description                                                                                                                                                                                         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Id          | Unique identifier for the lock                                                                                                                                                                      |
| Catalog_Id  | Catalog identifier for which the lock is applicable                                                                                                                                                 |
| User_Id     | User identifier that has acquired the lock                                                                                                                                                          |
| Cause       | The identifier of the lock that has caused this lock                                                                                                                                                |
| Type        | Type of the current lock.<br>The values:<br>E: Existence<br>S: Shared<br>U: Update<br>X: Exclusive                                                                                                  |
| Isolation   | Isolation level of the current lock.<br>The values:<br>C: This lock not only affects the current catalog but also all child entries of the catalog<br>L: This lock only affects the current catalog |
| Time        | Date and time when the lock was applied                                                                                                                                                             |

## Report on Permission Assignment

This section describes how you can create the report definition for permission assignments.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the Permission Assignment table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Permission Assignment table:

```
<report>

  <Name>Permission Assignments</Name>

  <Permission_Assignment>

    <Report_Output>

      <Property>

        <Type>Profile_ID</Type>

        <Type>Permission_ID</Type>

      </Property>

    </Report_Output>

  </Permission_Assignment>

</report>
```

| Column Name   | Description                                                      |
|---------------|------------------------------------------------------------------|
| Profile_Id    | Profile identifier for the profile                               |
| Permission_Id | Permission identifier for the permission assigned on the profile |

## Report on Permissions

This section describes how you can create the report definition for permissions.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the Permission table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Permission table:

```
<report>
  <Name>Permissions</Name>
  <Permission>
    <Report_Output>
      <Property>
        <Type>ID</Type>
        <Type>Action_Name</Type>
        <Type>Securable_Name</Type>
      </Property>
    </Report_Output>
  </Permission>
</report>
```

| Column Name | Description                   |
|-------------|-------------------------------|
| Id          | Identifier for the permission |

## Report on Permissions

---

| Column Name    | Description                              |
|----------------|------------------------------------------|
| Action_Name    | Action associated with the permission    |
| Securable_Name | Securable associated with the permission |

## Report on Profile Assignments

This section describes how you can create the report definition for profile assignment.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the Profile Assignment table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Profile Assignment table:

```
<report>

  <Name>Profile Assignments</Name>

  <Profile_Assignment>

    <Report_Output>

      <Property>

        <Type>Catalog_ID</Type>

        <Type>Profile_ID</Type>

        <Type>User_ID</Type>

      </Property>

    </Report_Output>

  </Profile_Assignment>

</report>
```

| Column Name | Description                                              |
|-------------|----------------------------------------------------------|
| Catalog_Id  | Identifier for the catalog for which profile is assigned |

## Report on Profile Assignments

---

| Column Name | Description                                               |
|-------------|-----------------------------------------------------------|
| Profile_Id  | Identifier for the profile assigned                       |
| User_Id     | Identifier for the User for which the profile is assigned |

# Report on Profiles

This section describes how you can create the report definition for profiles.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the Profile table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Profile table:

```
<report>

  <Name>Profiles</Name>

  <Profile>

    <Report_Output>

      <Property>

        <Type>ID</Type>

        <Type>Name</Type>

        <Type>Description</Type>

        <Type>Is_BuiltIn</Type>

      </Property>

    </Report_Output>

  </Profile>

</report>
```

Report on Profiles

---

| Column Name | Description                                                  |
|-------------|--------------------------------------------------------------|
| Id          | Unique identifier for the profile                            |
| Name        | Name of the profile                                          |
| Description | Description associated with the profile                      |
| Is_BuiltIn  | Integer "1" indicating if the profile is a built-in profile. |



# Report on Securables

This section describes how to create the report definition for securables. The Actions table stores the securables for a particular action. For example, actions are Mart, Model, Entity, User Management, and so on.

### Follow these steps:

1. Edit the reports.xml file and include the report definition for the properties of the Securable table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the Securable table.

```
<report>
  <Name>Actions</Name>
  <Securable>
    <Report_Output>
      <Property>
        <Type>Name</Type>
        <Type>Parent_Name</Type>
        <Type>Display_Name</Type>
      </Property>
    </Report_Output>
  </Securable>
</report>
```

## Report on Securables

---

| Column Name  | Description                               |
|--------------|-------------------------------------------|
| Name         | Securable identifier                      |
| Parent_Name  | Parent securable item if any              |
| Display_Name | Display name for the securable identifier |

# Report on Users

This section describes how you can create the report definition for users.

**Follow these steps:**

1. Edit the reports.xml file and include the report definition for the properties of the User table that you want to report on.
2. Edit the reports\_schema.xml file and include the schema definition for the report. You can also generate the schema definition using a tool of your choice and include it in the reports\_schema.xml file.

The following example shows the report definition to report on the User table:

```
<report>

  <Name>Users</Name>

  <User>

    <Report_Output>

      <Property>

        <Type>ID</Type>

        <Type>Username</Type>

        <Type>EMailId</Type>

        <Type>UserType</Type>

        <Type>IsInternal</Type>

        <Type>IsDeleted</Type>

      </Property>

    </Report_Output>

  </User>

</report>
```

## Report on Users

---

| Column Name | Description                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------------------------------------------------|
| Id          | Unique identifier for the user                                                                                                   |
| Username    | Username                                                                                                                         |
| EMailId     | Email address for the corresponding user                                                                                         |
| UserType    | Type of the User. The types basically are<br>Server User<br>Windows User<br>Group User                                           |
| IsInternal  | Integer "1" indicating if the user is an internal user i.e. a windows user which was authenticated on being part of a group user |
| IsDeleted   | Integer "1" indicating if the user is deleted and no long a valid Mart user                                                      |