



erwin Data Modeler

Workgroup Edition Implementation
and Administration Guide

Release 14.0

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erwin Product References

This document references the following products:

- erwin Data Modeler Workgroup Edition (erwin DM WE)
- erwin Data Modeler Standard Edition (erwin DM)
- erwin Data Modeler Navigator Edition (erwin DM NE)

Modeling in the Multiuser Environment

erwin Data Modeler Workgroup Edition coordinates the development and management of data models created with erwin Data Modeler.

This section contains the following topics

[erwin Data Modeler Workgroup Edition](#)

[Model Life Cycle Frameworks](#)

erwin Data Modeler Workgroup Edition

erwin Data Modeler Workgroup Edition provides a multiuser modeling environment that makes coordinated, large-scale modeling possible. It enables collaboration among project managers, data modeling team members, and standards administrators by providing workgroup modeling services, including conflict resolution, versioning, security, and standards management. You can coordinate the efforts of model teams to document existing systems, create new eBusiness systems, and drive data standardization. Model sharing encourages teamwork, so modelers can work together more efficiently to optimize model-based development. Your modelers get more work done in less time with better results.

Workgroup modeling operates in a three-tier architecture, where erwin Data Modeler connects to Mart Portal through a web server. The models are held in a database or Mart; you can use Microsoft SQL Server, Oracle, or PostgreSQL as the host database.

Workgroup modeling features are provided to help control updates to models when you are opening, closing, and saving models. The administrator installs the program and initializes the database on the DBMS server. The administrator also has the responsibility of setting up the library structure in which models are organized, and assigning security profiles to users. After a model is saved to the database, control of who can work on the model and how changes are saved to the model is handled by profiles, making it possible for workgroups to work on large models without confusion. erwin Data Modeler Workgroup Edition supports many security and administrative features related to its multiuser capabilities. For this reason, routine management is usually performed by a dedicated administrator. Administrators can find detailed information regarding their tasks and responsibilities in the *Administration Guide*.

You can also use erwin Data Modeler Navigator Edition with erwin Data Modeler Workgroup Edition. Read-only access is permitted to data models, so your workgroup can use this to share information with others without the risk that unauthorized changes might be saved to Mart.

Model Life Cycle Frameworks

Use one of the following model life cycle frameworks in your organization:

Model-Driven Development

Changes to the schema are made to the model first and then forward-engineered.

System-Driven Models

Changes are made directly to the schema and the schema is reverse-engineered into the model to reflect the changes.


Informational Models

Contains logical-only models, enterprise-wide models, or standards and sample models.

Each type of framework has different considerations that you must think about when configuring your database and developing its supporting policies. You are not required to choose a particular framework, however, it helps to know your development process before building a library structure.

Model-Driven Development Framework

In the model-driven framework, the model is always the source of all changes. You create a new database schema by forward engineering the model. The life cycle of a model in the model-driven Development framework can follow a path like this:

- Create the library structure (for example, Development, Test, and Production) and populate them with erwin  Data Modeler templates.
- Create the logical model in a development library.
- Promote the model to the test library when it is ready.
- Generate the schema from the test library.
- Modify the test model as required and synchronize it to the schema.
- Promote the model to the production library when it is ready.
- Publish the refreshed production model.
- Update the enterprise-wide model, if necessary.
- Incorporate changes into the development model for further changes, and repeat the process.

System-Driven Model Framework

In the system-driven framework, there is an established information system from which you can reverse engineer database tables. The life cycle of a model in the system-driven Development framework can follow a path as described below:

- Create the library structure (for example, Reverse Eng, Test, Production). You do not require erwin Data Modeler templates because you do not create models from scratch.
- Reverse engineer the model from the information system into the designated library.
- Enhance the model with logical information and input from analysts.
- Update the model to reflect changes in the physical schema.
- Create a version of the model.
- Synchronize the schema and the model using Complete Compare.
- Publish the model.
- Repeat the last three steps as the system is modified.

Informational Model Framework

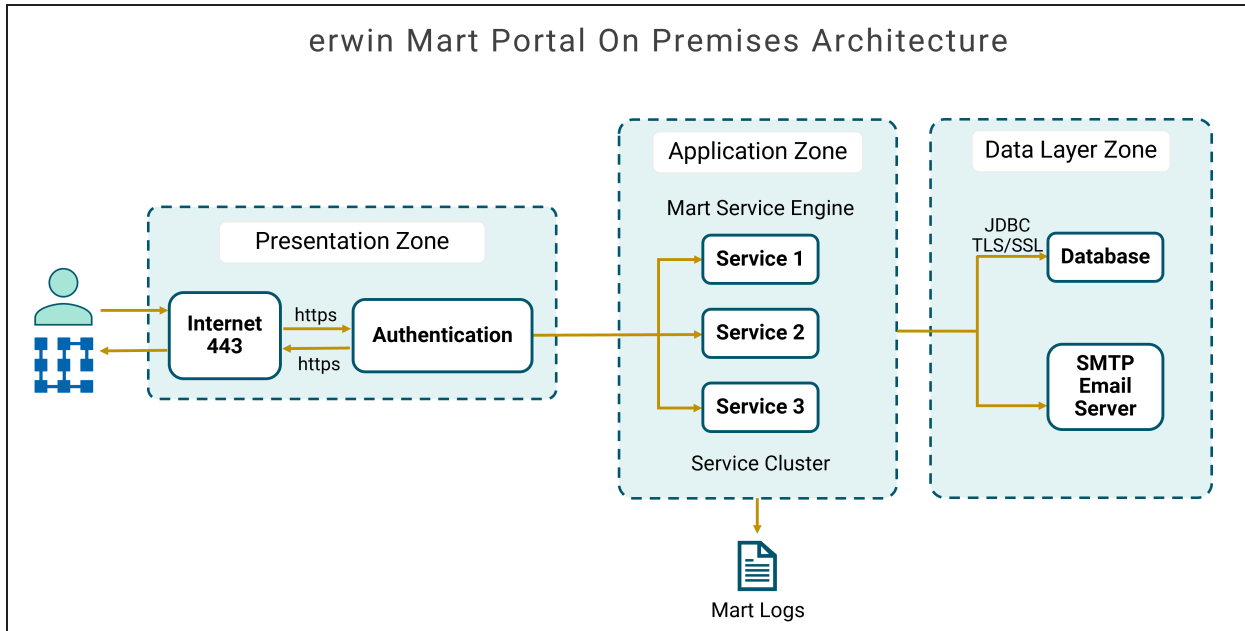
In the Informational Model framework, erwin Data Modeler Workgroup Edition contains logical-only models, enterprise-wide models, or standards and sample models. There is no forward engineering with the intent of using the schema. The life cycle of a model in the Informational Model framework can follow a path as described below:

- Create the library structure and populate them with templates.
- Develop the initial model. Use reverse engineering and model new components as required.
- Publish the initial model to the appropriate parties for modification and refinement.
- Get approval, and then version the model.
- Publish the approved model.
- Update and publish models as the enterprise model evolves.

erwin Mart Portal Architecture

erwin Mart Portal architecture follows a JAR-based, multi-product structure.

The following diagram explains erwin Mart Portal architecture:



The mart comprises the following components:

Database

Stores the user data for the Workgroup Edition.

Database	Versions	Additional Details
Oracle	18c, 19c, 21c, and Oracle Cloud	
PostgreSQL	12.x, 13.x, 14.x, 15.x, and 16.x	You can also use PostgreSQL for Amazon RDS.
SQL Server	Microsoft SQL Server 2017, 2019, and 2022	You can also use Microsoft SQL Azure and Amazon RDS SQL Server.

erwin Mart Portal Architecture

Applications

Includes the following web-based components, erwin Mart Portal and erwin ER360 that helps you manage the Mart and manage, review, and govern data models through a web console respectively.

Web server

Hosts erwin Mart Portal and erwin ER360. By default, erwin Mart Portal installation process installs Apache Webserver.

Setting up erwin Mart Portal

When you access the Mart database through erwin Mart Portal for the first time, you must choose the database. You can choose the database using a database authenticated user or a Windows-authenticated user.

Before you proceed, verify that you have installed a DBMS, created the mart database, and configured Mart Portal. If the Mart is already initialized, the Login page appears.

Upon selecting the database, it is necessary to ensure that the database requirements are met. Next, proceed with the installation and initialization of the erwin Mart Portal and erwin ER360.

To install and configure erwin Mart Portal and erwin ER360, follow these steps:

1. [Review prerequisites](#)
2. [Configure database](#)
3. [Install erwin Mart Portal and erwin ER360](#)
4. [Configure erwin Mart Portal](#)
5. [Initialize erwin Mart Portal and erwin ER360](#)
6. [Log in to erwin Mart Portal and configure settings](#)
7. [Log in to erwin Mart Portal and configure settings](#)

Reviewing Prerequisites

You can use any of the following combinations to install erwin Data Modeler (erwin DM), the Mart database, and erwin Mart Portal:

- Install erwin DM, the Mart database, and erwin Mart Portal on the same computer.
- Install erwin DM, the Mart database, and erwin Mart Portal on different computers.
- Install erwin DM and the Mart database on one computer, and install erwin Mart Portal on a different computer.
- Install erwin DM on one computer, and install the Mart database and erwin Mart Portal on a different computer.

Refer to the following tables for minimum system requirements.

Parameter	Requirement	Additional Information
Hardware/Workstation	<ul style="list-style-type: none">• VM or Dedicated Physical Server• Windows-based workstation• 100 GB of disk space or more as required to support your specific mart• Processor - 64-bit, minimum 4 cores• RAM:<ul style="list-style-type: none">• Only erwin Mart Portal: 16 GB• Both erwin Mart Portal and erwin ER360: 32 GB	
Operating System	<ul style="list-style-type: none">• Microsoft Windows Server 2016• Microsoft Windows Server 2019• Microsoft Windows Server 2022• All current Microsoft Windows critical updates	
Database	<ul style="list-style-type: none">• Microsoft SQL Server 2017, 2019, and 2022. You can also use Microsoft SQL Azure and Amazon RDS SQL Server.• Oracle 18c, 19c, 21c, and Oracle Cloud	SQL Server: <ul style="list-style-type: none">• The Mart Portal can use a stan-

Review the Prerequisites

Parameter	Requirement	Additional Information
	<ul style="list-style-type: none">• PostgreSQL 12.x, 13.x, 14.x, 15.x, and 16.x. You can also use PostgreSQL for Amazon RDS.• For DM Connect for DI, the minimum SQL Server version requirement is SQL Server 2016 SP2	<p>alone or can share an existing database server for a Microsoft SQL Server.</p> <ul style="list-style-type: none">• The SQL Server 2017 and 2019 TRUSTWORTHY database property is no longer required for the mart. After you install this product, you can optionally reset this property to OFF.• The database user account that is used to configure the Mart must have the dba_owner role assigned.• (Optional) To use the Korean language, use the Korean_wansung_CI_AS character set. Select

Review the Prerequisites

Parameter	Requirement	Additional Information
		<p>the character set while creating the Mart database (in the Collation field). For more information, see the SQL Server documentation.</p> <p>Oracle:</p> <ul style="list-style-type: none">• The Mart Portal can use a standalone or can share an existing database server for an Oracle database. You can also use a plugable database.• To create the Mart, you must be the database schema owner user and you must have the DBA role in the target database on the Oracle server. The DBA

Review the Prerequisites

Parameter	Requirement	Additional Information
		<p>role is required for the user who is specified in the Configure Mart Portal dialog. If the DBA privilege of this user is revoked, then erwin DM users will not be able to save model changes to the Mart.</p> <ul style="list-style-type: none">• (Optional) You have modified the following parameters in the initialization file (InitSID.ora): <pre>Remote_OS_Authent=T OS_Authent_Prefix=TRUE</pre>• (Optional) To use the Korean language with the Mart database, use KO16MSWIN949 or AL32UTF8 character set

Review the Prerequisites

Parameter	Requirement	Additional Information
		<p>depending on your operating system language pack. For more information, see the Oracle documentation.</p> <ul style="list-style-type: none">• If the Mart database is an Oracle database, the default tablespaces that were used for initializing any earlier release of r9 series Mart are available for the latest release. <p>PostgreSQL:</p> <ul style="list-style-type: none">• The Mart Portal can use a standalone or can share an existing database server for PostgreSQL.• The database user account

Review the Prerequisites

Parameter	Requirement	Additional Information
		that is used to configure the Mart must have super user permissions.
erwin Mart Portal Web Client - Browser	<p>Latest versions of the following browsers:</p> <ul style="list-style-type: none"> • Microsoft Edge • Mozilla Firefox • Google Chrome • Apple Safari 	
Web Client Workstation	<ul style="list-style-type: none"> • Processor - i3 or higher • RAM - 8 GB minimum • Minimum Free Space - 1-2 GB 	
Web Server	Apache Server 2.4.62	
JDK	17.0.12	
MartPortal Services	<p>In the C:\Program Files\erwin\Mart Portal\create_service.cmd, update the RAM size setting to increase the RAM in MBs:</p> <pre>reg add "HKLM\SYSTEM\CurrentControlSet\Services\erwinMartPortal\Parameters" /v Application /d "\"%JRE_HOME%\bin\java.exe" -Xms2048m -Xmx10240m -Dlogging.config=file:C:\Program Files\erwin\Mart Portal\MartApp\config\log4j2-portal.xml" -jar "C:\Program Files\erwin\Mart Portal\MartApp\MartPortal.jar" "" That is, (2GB -10GB)</pre>	
ER360 Services	In the C:\Program Files\erwin\Mart Portal\create_service.cmd, update the RAM	

Review the Prerequisites

Parameter	Requirement	Additional Information
	<p>size setting to increase the RAM in MBs as follows:</p> <pre>reg add "HKLM\SYSTEM\CurrentControlSet\Services\erwinER360\Parameters" /v Application /d "\"%JRE_HOME%\bin\java.exe" -Xms2048m -Xmx10240m -Dlogging.config=file:C:\Program Files\erwin\Mart Portal\MartApp\config\log4j2-er360.xml" -jar "C:\Program Files\erwin\Mart Portal\MartApp\ER360.jar" That is (2GB - 10GB)</pre>	
Vault Services	<p>In the C:\Program Files\erwin\Mart Portal\create_service.cmd, update the RAM size setting to increase the RAM in MBs:</p> <pre>reg add "HKLM\SYSTEM\CurrentControlSet\Services\erwinVaultService\Parameters" /v Application /d "\"%JRE_HOME%\bin\java.exe" -Xms2048m -Xmx4096m -Dlogging.config=file:C:\Program Files\erwin\Mart Portal\MartApp\config\log4j2-vaultservice.xml" -jar "C:\Program Files\erwin\Mart Portal\MartApp\vaultservice.jar" That is, (2GB -4GB)</pre>	

Ensure that you always install erwin Mart Portal on Windows operating system.

Other requirements

Ensure that the following additional requirements are met:

- The DBMS is installed and prepared for creating the Mart Database.
- The Mart database is created. At least one user with administrator privileges is present. You have run the initial queries on the Oracle database. For more information about the initial queries, see the Implementation Guide.
- If you want to add Windows Group users as Mart users, you have the Active Directory Server details.

Review the Prerequisites

You can add Windows Group users as normal Mart users, but not as Mart administrators. A Mart administrator must be a server or Windows user.

Important disclaimer notice on all requirements:

1. The requirements that are mentioned previously define the minimum requirements which permit the application to run with reasonable performance based on a small business use case scenario. The actual requirements for an enterprise-wide use case based on larger models and configurations require significantly greater resources to obtain acceptable performance.
2. These requirements are based on actual physical hardware (no virtual environment) and the following assumptions:
 - Minimal to no network overhead (both the database and application servers are locally installed)
 - Vendor's default install of the current version of their software (with all current service or fix packs)
 - No other applications sharing the defined hardware configuration (for example, a clean machine)

Any other hardware/software configurations are acceptable as long as they provide the same (or better) performance characteristics identified.

Install a Mart or Upgrade a Mart?

Use the following guidelines to determine if you must install or upgrade Mart Portal:

- If you are new to erwin Data Modeler and have purchased the current version of Workgroup Edition, then install the current version of the Mart. Use the How to Install and Configure a Mart procedure that is appropriate for your Mart database.
- If you have any earlier release of r9 series Mart, then upgrade the Mart to the current version. Use the How to Upgrade any r9 Series Mart to the Current Version procedure to upgrade your Mart. The models that are created in any earlier release of r9 series are upgraded when a user connects to the current version Mart and opens the models.
- If you have an existing Mart and the version is r7.3 through r8.2.9, install the current version Mart. Use the How to Install and Configure a Mart procedure that is appropriate for your Mart database. After installing the Mart, use the Upgrade Mart utility to upgrade the Mart models from r7.3 through r8.2.9 to the current version.

Character Limitations

There is a limitation on the number of characters you can use for certain Mart Portal parameters. The following table gives information about such parameters:

Parameter/Field	Character Limitations
Username	450 (Server User, Windows User, and Group) Also, refer to the special character limitations below. For international OS (I18N), if the character set being used is Double byte Character Set (DBCS) then the character limit is 225.
Password	130
Email Address	130 Also, refer to the special character limitations below.
Profile Name	130
Profile Description	2000
Catalog Name	255
Catalog Description	4000

Apart from the above character limits, for username and email address, following are the permitted special characters:

Parameter/Field	Permitted Special Characters	
Username	<p>Server User for Mart Portal: . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark), (back tick)</p> <p>Windows User for Mart</p>	<p>Server User for ER360: . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark), (back tick), (pipe), {} (flower brackets)</p>

Character Limitations

Parameter/Field	Permitted Special Characters	
	<p>Portal: \ (backslash), . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark), (back tick), (pipe), {}(flower brackets)</p> <p>Group User: . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark), + (plus), % (percent)</p>	<p>Windows User for ER360: \ (backslash), . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark), (back tick), (pipe), {}(flower brackets)</p>
Email Address	<p>Server User for Mart Portal: @ (at sign), - (hyphen), % (percent), _ (underscore), + (plus), . (dot), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark)</p> <p>Windows User for Mart Portal: @ (at sign), % (percent), + (plus), . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark)</p> <p>Group User for Mart Portal: . (dot), - (hyphen), %(percentage), _(underscore), + (plus), @(at the rate)</p>	<p>Server User for ER360: @ (at sign), - (hyphen), % (percent), _ (underscore), + (plus), . (dot), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark)</p> <p>Windows User for ER360: @ (at sign), % (percent), + (plus), . (dot), _ (underscore), - (hyphen), ~ (tilde), ^ (carat), # (hash), ! (exclamation mark)</p> <p>Group User for ER360: . (dot), - (hyphen), %(percentage), _(underscore), +(plus), @(at the rate)</p>

Mart Portal Version Validation

From erwin Data Modeler (DM) and erwin Mart Portal (MS) 2019R1 onward, while connecting to the erwin MS from erwin DM, version validation has been implemented as follows:

1. Connecting from erwin DM 2019R1 to erwin MS lower than 2019R1 is not allowed.
2. Connecting from erwin DM lower than 2019R1 to erwin MS 2019R1 is not allowed.

Configuring Database

Configure your DBMS environment before you can install and use erwin Mart Portal and erwin ER360.

- [Oracle](#)
- [PostgreSQL](#)
- [SQL Server](#)

Creating Oracle Database

Perform the following setup tasks in your DBMS environment before you can install and use the software:

1. Install the DBMS on the server where you plan to store the Mart.
Ensure that you can create tables, indexes, stored procedures, and public synonyms. For more information about memory and disk space requirements, see the system requirements for each DBMS (Microsoft SQL Server, PostgreSQL, and Oracle).
2. Create a database that you want to use as the Mart. To use a pluggable database, see the [Use a Pluggable Database](#) topic.
Use the DBMS features to create or identify the required storage objects and the mart. The specific requirements vary depending on your DBMS type.

To create, update, or delete a Mart in erwin Data Modeler Workgroup Edition, you must be the database schema owner and you must have the DBA role.

Additional Tasks

The DBA and the system administrator responsible for installing the software on an Oracle database management system performs these tasks.

Use graphical tools or SQL *Plus (all versions), SQL*DBA, or the Oracle Enterprise Management Console to perform these tasks. Some SQL commands are included where appropriate. The Data file paths, data file sizes, role names, and user names are included as examples only.

1. Check the SYSTEM tablespace.
The installation creates several stored procedures. All triggers, stored procedures, and packages are kept in the Oracle SYSTEM tablespace. The standard size of the SYSTEM tablespace assumes that you are not using procedural options, so the SYSTEM tablespace must be often expanded. If other Oracle applications are not using procedural code, then expand the SYSTEM tablespace to 32 MB. If other Oracle applications also use procedural code, expand the SYSTEM tablespace to at least 32 MB.
2. Check the Rollback Segment tablespace.
If your instance uses UNDO tablespace, do not create rollback segments.

Creating Oracle Database

Significant rollback space is required for installing and use. The rollback segments must be in their own separate tablespace and each have at least 16 MB of available space. There must be one rollback segment for every four concurrent users, with a maximum of 50 rollback segments. The available space must scale upward with increasing numbers of rollback segments. Finally, the rollback segment optimal parameter must be set to control rollback segment growth and space consumption.

For Steps 3, 4, and 5, use the Dictionary-managed tablespaces.

3. Create a data tablespace of at least 32 MB.

For example:

```
CREATE TABLESPACE MyMart
DATAFILE '/db01/oracle/rdbms9i/data/mymart.ora' SIZE 100M;
```

Or For Locally Managed extents:

```
CREATE TABLESPACE Mymart
DATAFILE '/db01/oracle/rdbms9i/data/mymart.ora' SIZE 100M
EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO;
```

4. Create an index tablespace of at least 32 MB.

For example:

```
CREATE TABLESPACE MMARTINDEX
DATAFILE '/db02/oracle/rdbms9i/data/mmartindex.ora' SIZE 75M;
```

Or For Locally Managed extents:

```
CREATE TABLESPACE MMARTINDEX
DATAFILE '/db02/oracle/rdbms9i/data/mmartindex.ora' SIZE 75M
EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO;
```

5. Create a temporary tablespace.

For example:

```
CREATE TEMPORARY TABLESPACE MMTEMP TEMPFILE '/db03/or-
acle/rdbms9i/data/mmarttemp.ora' SIZE 50M;
```

Or For Locally Managed extents:

Creating Oracle Database

```
CREATE TEMPORARY TABLESPACE MMTEMP TEMPFILE '/db03/oracle/rdbms9i/data/mmarttemp.ora' SIZE 50M  
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 1M;
```

For more details about syntax and options regarding tablespace creation, see the appropriate Oracle documentation.

6. Create an Oracle user with DBA privileges for use by the erwin Data Modeler Workgroup Edition Installer or designated schema owner.

Assign the data tablespace to this user as the default tablespace, and the temporary tablespace as the temporary tablespace to the user.

For example:

```
CREATE USER STEVE IDENTIFIED BY STEVE  
DEFAULT TABLESPACE MyMart  
TEMPORARY TABLESPACE MMTEMP  
QUOTA UNLIMITED ON MyMart  
QUOTA UNLIMITED ON MMARTINDEX;  
GRANT DBA TO STEVE;
```

7. Create the erwin Data Modeler Workgroup Edition Installer role.

The following example is the role that the Oracle user requires to install erwin Data Modeler Workgroup Edition.

```
CREATE ROLE MMINSTALL;
```

8. Grant the Oracle privileges to the Installer role.

The following example shows the Oracle privileges that the erwin Data Modeler Workgroup Edition Installer must install on Oracle. For the last command, log in as sys with the sysdba role in the user-name or the command will fail.

```
grant create sequence to MMINSTALL;  
grant create table to MMINSTALL;  
grant create view to MMINSTALL;  
grant create materialized view to MMINSTALL;  
grant drop public synonym to MMINSTALL;
```

Creating Oracle Database

```
grant create public synonym to MMINSTALL;  
grant create procedure to MMINSTALL;  
grant select on dba_data_files to MMINSTALL;  
grant create session to MMINSTALL;
```

To use the database, an Oracle user needs only the create session privilege.

9. Select the erwin Data Modeler Workgroup Edition tablespaces and Installer role.

When prompted for tablespace and role information, select the Workgroup Edition data tablespace, the Workgroup Edition index tablespace, and the Workgroup Edition Installer role.

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Creating PostgreSQL Database

If you are a DBA or a system administrator responsible for installing the software on a PostgreSQL database management system, perform the following tasks:

Use a graphical user interface (GUI) tool, such as pgAdmin or a similar tool, to create the erwin Data Modeler Workgroup Edition database. If a GUI tool is not available, you can use SQL Shell to type in the appropriate commands manually.

Configure PostgreSQL:

You can configure PostgreSQL database to accept any IP address.

Follow these steps:

1. Set the IP address to 0.0.0.0/0
2. Select the server.
3. Click Tools, Server Configuration, pg_hba.conf. Alternately, you can find the file at C:\Program Files\PostgreSQL\\data.
4. Double-click the last empty column.
5. Complete the following fields:

Type

host

Database

all

User

all

Ip_Address

0.0.0.0/0

Method

md5

6. Select Enable and click Ok.
7. Click Save.
8. Click Reload Server.

Creating PostgreSQL Database

The PostgreSQL database configuration is complete.

[▲ Back to Top](#)

Creating SQL Server Database

If you are a DBA or a system administrator responsible for installing the software on a Microsoft SQL Server database management system, perform the following tasks:

1. Use a graphical user interface (GUI) tool, ISQL (all versions), SQL Administrator, or Enterprise Manager to create the Mart database. If a GUI tool is not available, you can use ISQL to type in the appropriate commands manually.

Your database should meet the following criteria:

- The initial size of the database file should be set to 60 MB.
- The initial size of the transaction log file should be set to 50 MB.
- Set the maximum file size to unrestricted file growth for both files (recommended, but not required).
- Increase the Set Auto grow file by 10 percent (recommended, but not required).

The new database is *owned* by the user who created it.

Set the Truncate Log on Checkpoint option and have the server generate checkpoints frequently. By selecting this option, the log is emptied periodically and should not fill up and cause rollbacks.

For best performance ensure that separate devices are used to store the data and the transaction log.

2. Verify tempdb size.

Significant temporary space is required for installation and use. The temporary segments need at least 16 MB of available space. You should also increase available space as the number of concurrent users increase.

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Specify Use of Foreign Characters With Microsoft SQL Server

For Microsoft SQL Server modify your registry settings to have certain foreign language characters in your models recognized.

Follow these steps:

1. Click Run on the Start menu.
2. Enter *regedit*.

The Registry Editor opens.

3. Verify or add the following registry entry:

[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Client\DB-Lib]

"AutoAnsiToOem"="ON"

"UseIntlSettings"="ON"

4. Click File, Exit.

Your configuration is set to recognize foreign language characters in your models.

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Installing erwin Mart Portal and erwin ER360

The erwin Mart Portal installer contains and installs three microservice JAR files, vault-service.jar, MartPortal.jar, and ER360.jar. Along with mart, it also installs erwin ER360 by default. You can either use an existing web server or use the default web server through the installation wizard.

You must install and configure erwin Mart Portal regardless of whether you use Mart Portal as a server or a Windows service.

To install erwin Mart Portal and erwin ER360, follow these steps:

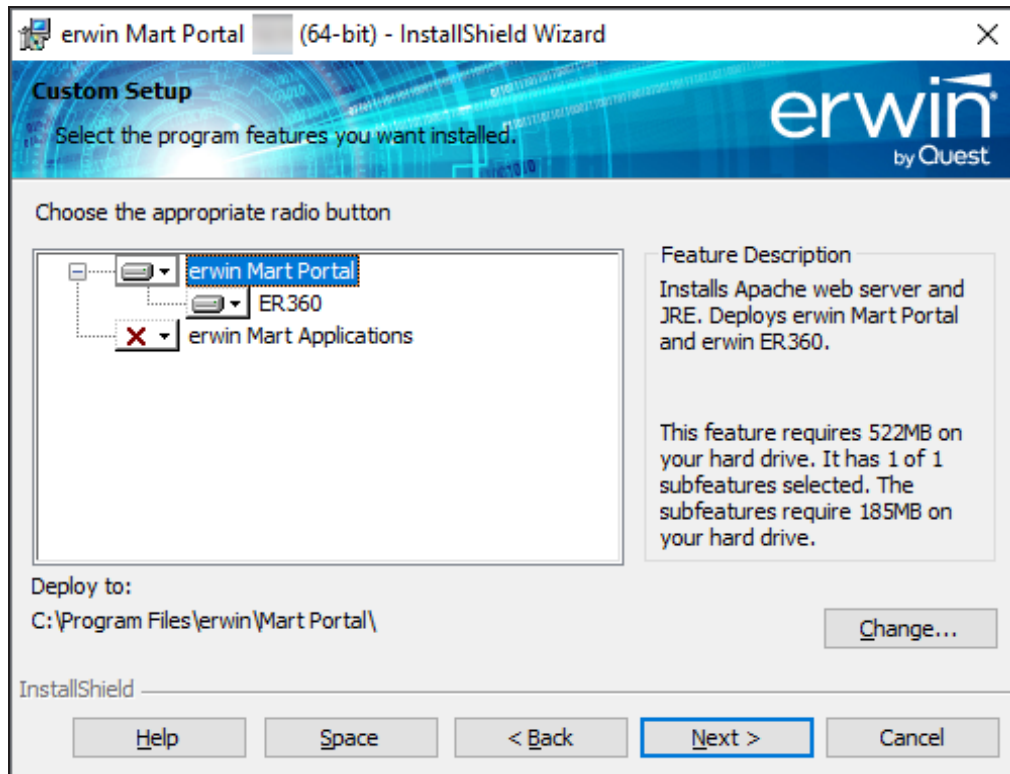
1. Download the erwin Mart Portal installer file from the [product page](#).
2. Start the installer.
The erwin Mart Portal Installation Wizard appears.



3. Click **Next** and accept the Software Transaction Agreement.

Install erwin Mart Portal

4. Click **Next** and enter your name and organization.
5. Click **Next**.
The applications and components list appears. Observe that under erwin Mart Portal, ER360 is available by default as a component.
Although erwin ER360 is installed by default, you need a license to use it. Contact your license administrator for a license.



6. Click **Next** and then click **Install**.
The installation process starts.
7. On process completion, click **Finish** to complete the installation process.
Depending on the options you select, erwin Mart Portal and/or erwin ER360 are installed.

If you want to connect to an SSL enabled Mart through API, you must first install the security certificate on the corresponding computer. Install the certificate through erwin DM. Without the security certificate, the API cannot connect to the SSL enabled Mart.

Create a Pluggable Database

You can use the pluggable database concept in Oracle 12c and create multiple Marts of the same Mart release.

Follow these steps:

1. Create a pluggable database in Oracle 12c.

For example, provide the Global Database Name as erwin and the Pluggable Database Name as erwin_test.

For more information on how to create a pluggable database, see the Oracle documentation.

2. Run the following script on the computer where Oracle 12c is installed:

```
DROP TABLESPACE MMDATA INCLUDING CONTENTS AND DATAFILES CASCADE
CONSTRAINTS;

DROP TABLESPACE MMINDEX INCLUDING CONTENTS AND DATAFILES CASCADE
CONSTRAINTS;

DROP TABLESPACE marttemp INCLUDING CONTENTS AND DATAFILES CASCADE
CONSTRAINTS;

ALTER SESSION SET CONTAINER=erwin_test;

CREATE TABLESPACE MMDATA datafile 'c:\r9mart2\MMDATA.dbf' size 300m
autoextend on;

CREATE TABLESPACE MMINDEX datafile 'c:\r9mart2\MMINDEX.dbf' size 300m
autoextend on;

CREATE TEMPORARY TABLESPACE marttemp tempfile 'c:\r9-
mart2\tempdata.dbf' size 300m autoextend on;

DROP USER MMADMIN CASCADE;

CREATE USER MMADMIN IDENTIFIED BY MMADMIN DEFAULT TABLESPACE MMDATA
TEMPORARY TABLESPACE MARTTEMP QUOTA UNLIMITED ON MMDATA QUOTA
UNLIMITED ON MMINDEX;

DROP ROLE MMINSTALL;

CREATE ROLE MMINSTALL;

GRANT CREATE SEQUENCE TO MMINSTALL;
```

Create a Pluggable Database

```
GRANT CREATE TABLE TO MMINSTALL;  
GRANT CREATE VIEW TO MMINSTALL;  
GRANT CREATE MATERIALIZED VIEW TO MMINSTALL;  
GRANT DROP PUBLIC SYNONYM TO MMINSTALL;  
GRANT CREATE PUBLIC SYNONYM TO MMINSTALL;  
GRANT CREATE PROCEDURE TO MMINSTALL;  
GRANT CREATE SESSION TO MMINSTALL;  
  
GRANT MMINSTALL TO MMADMIN;  
GRANT DBA TO MMADMIN;
```

Install erwin Mart Portal with a Pluggable Database

The procedure to install erwin Mart Portal for a pluggable database is same as the procedure for a normal database. This topic describes only those fields that need different values for a pluggable database. For more information on how to configure the erwin Mart Portal, see the Install erwin Mart Portal topic.

The following fields on the Configure the erwin Mart Portal dialog need different values:

Server Name

Specifies the name of the database server where you have installed the Mart database. Enter the name of the computer where Oracle 12c is installed and the pluggable database erwin_test is created.

Database Name

Specifies the name of the pluggable Mart database. For example, erwin_test.

User Name

Specifies the user name to connect to the Mart database. Enter mmadmin or any other user account that you have created when you ran the script.

Password

Specifies the password to connect to the Mart database. Enter mmadmin or any other password that you have created when you ran the script.

Configuring erwin Mart Portal

The next step after installing erwin Mart Portal is to configure using either of the two ways:

- [via erwin Mart Portal configuration](#)
- [via command line interface \(CLI\)](#)

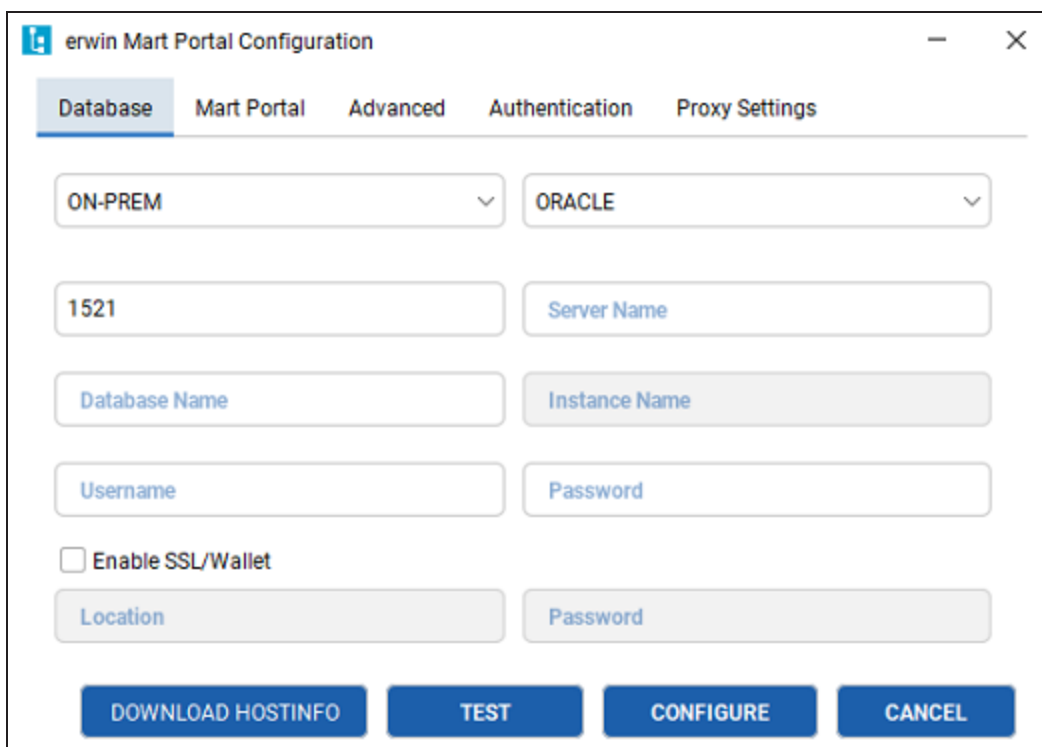
Configuration via CLI is available erwin Mart Portal 12.5.2 onwards.

To use the same database that you have used for the r9.0.0 Mart (or any earlier release of r9 series Mart), upgrade your mart. Refer to the [Upgrading Mart](#) topic before proceeding.

Configuring via erwin Configuration

To configure erwin Mart Portal, follow these steps:

1. On the Windows Start menu, click **erwin > Configure Mart Portal**.



The screenshot shows the 'erwin Mart Portal Configuration' dialog box with the following fields and controls:

- Database: ON-PREM (dropdown)
- Mart Portal: ORACLE (dropdown)
- Port: 1521
- Server Name: (text input)
- Database Name: (text input)
- Instance Name: (text input)
- Username: (text input)
- Password: (text input)
- Enable SSL/Wallet
- Location: (text input)
- Password: (text input)
- Buttons: DOWNLOAD HOSTINFO, TEST, CONFIGURE, CANCEL

2. [Configure database settings.](#)
3. [Configure mart portal settings.](#)

Configure the Mart Portal

4. [Configure advanced settings.](#)
5. [Configure authentication settings.](#)
6. [Configure proxy settings](#) (only applicable to erwin ER360).
7. Click Test to validate the configuration.
8. On successful validation, click **Configure**.

Configuring Database Settings

On the Database tab, configure the following settings:

Field	Description	Additional Information
Database Connection Method	Specifies whether the mart connects to an on-premise database or to a database via a JDBC connection string.	
JDBC Connection String	Specifies the JDBC connection string to connect to a database	This option is available only when the Database Connection Type is set to Custom JDBC URL.
Database	Specifies the mart database provider	Available options are: <ul style="list-style-type: none">• Oracle• PostgreSQL• SQL Server
Port No	Specifies the port number of the database server	
Server Name	Specifies the name of the database server where you have installed the Mart database. For example, suppose that you are using SQL Server as the Mart database. Enter the name of the computer where SQL Server is	

Configure the Mart Portal

Field	Description	Additional Information
	installed.	
Database Name	Specifies the database to which the mart must connect	<p>If you are installing the Mart for the first time, use a new database. Do not use an existing database.</p> <p>If you are upgrading the Mart from any earlier release of r9 series to the latest release, use the corresponding Mart database.</p> <p>For an Oracle mart, ensure that appropriate permissions for a materialized view are assigned to the installer role (GRANT CREATE MATERIALIZED VIEW TO MMINSTALL;). For more information, refer to the Creating Oracle Database topic.</p>
Instance Name	Specifies the name of the database instance	This option is enabled only when the Database is set to SQLServer.
Authentication	Specifies whether user authentication is done via database or Windows authentication	<p>This option is enabled only when the Database is set to SQLServer.</p> <p>Windows authentication works only for on premises SQL Server database.</p>
Schema Name	Specifies the database schema that you want to use for mart	This option is enabled only when the Database is set to POSTGRESQL. By default, it is set to use public schema.
Username	Specifies the user name to connect to the Mart database	<p>This username must be is authenticated by the Mart database.</p> <p>Windows authentication (User</p>

Configure the Mart Portal

Field	Description	Additional Information
		Name field) is not supported for connecting to the Mart database from the Configure Mart Portal window. Ensure that the user is server authenticated.
Password	Specifies the password to connect to the Mart database	
Enable SSL/Wallet	Specifies whether SSL or Wallet (in case of Oracle database) is enabled	
Location	Specifies the location of the wallet file	This option is enabled only when you select the Enable SSL/Wallet check box.
Password (For SSL/Wallet)	Specifies the password that you set for the wallet	This option is enabled only when you select the Enable SSL/Wallet check box.
Download Hostinfo	Downloads the host machine's information for erwin ER360 offline license.	<p>This feature downloads the following information in the JSON format.</p> <ul style="list-style-type: none"> • OS Name • OS Version • Time Zone • System Locale • IP • System Type • NIC • Host Name

Configure the Mart Portal

Field	Description	Additional Information
		<ul style="list-style-type: none">• MAC• Input Locale <p>The erwin licensing team uses this information to configure an offline license for erwin ER360. For more information on offline licenses, contact license support.</p>

Configuring Mart Portal Settings

The Mart Portal tab specifies the erwin Mart Portal application settings.

The screenshot shows the 'erwin Mart Portal Configuration' dialog box with the 'Mart Portal' tab selected. The dialog has a title bar with a close button and a minus sign. Below the title bar are five tabs: 'Database', 'Mart Portal', 'Advanced', 'Authentication', and 'Proxy Settings'. The 'Mart Portal' tab is active and contains the following settings:

- A text input field containing 'localhost'.
- A text input field containing '18170'.
- A text input field containing 'MartServer'.
- A checkbox labeled 'Secure Sockets Layer(SSL) Enabled' which is currently unchecked.
- A text input field for 'SSL File Location' which is currently empty.
- A text input field for 'SSL Key File Location' which is currently empty.
- A text input field containing '300'.

At the bottom of the dialog are four buttons: 'DOWNLOAD HOSTINFO', 'TEST', 'CONFIGURE', and 'CANCEL'.

Configure the Mart Portal

On the Mart Portal tab, configure the following settings:

Field	Description	Additional Information
Server Name	Specifies the name of the computer where the Web Server is present. For example, if you are using Tomcat, enter the name of the computer where Tomcat is installed. Default: localhost	
Port Number	Specifies the port number on which the Web Server is running.	You can now configure erwin Mart Portal on any port except 18172, 18174, and 18176 (These ports are used as proxy ports.). If you use SSO, ensure that you configure the correct port number here according to your SSO configuration. If you select the Secure Sockets Layer (SSL) Enabled check box, Port Number is set to 443 by default.
Secure Sockets Layer (SSL) Enabled	Specifies whether you want to connect to the Mart through a secured connection (SSL)	Using a self-signed SSL certificate may result in an error about certificate authority while connecting to erwin Mart. In that case, click OK to continue connecting to erwin Mart
SSL Certificate	Specifies the location of SSL certificate file	This option is enabled only when the Secure Sockets Layer (SSL) Enabled option is selected. The certificate is available at C:\Program Files\erwin\Mart Portal\Apache\myerwin.mart.crt.

Configure the Mart Portal

Field	Description	Additional Information
SSL Key	Specifies the location of the SSL Key file	This option is enabled only when the Secure Sockets Layer (SSL) Enabled option is selected. The key is available at C:\Program Files\erwin\Mart Portal\Apache\my-erwin.mart.key.
Account Lockout Duration (in seconds)	Specifies the duration (in seconds) for which an account should be locked whenever an incorrect password is entered five consecutive times	By default, it is set to five minutes (300 seconds). At the most, you can set it to 30 days (2592000 seconds).

Configuring Advanced Settings

The Advanced tab specifies mart upgrade settings.

Configure the Mart Portal

erwin Mart Portal Configuration

Database Mart Portal **Advanced** Authentication Proxy Settings

Rerun Count Upgrade

Rerun Report Upgrade

Rerun Report Upgrade For All Models

Is GitHub Enterprise

8

64

14400

Ensure that the mart database has the following: m9ReportUpgrade and m9ReportListData tables. m9Catalog with entcnt, attcnt, relcnt and countblob columns. For more information about the advanced tab kindly refer the documentation.

DOWNLOAD HOSTINFO TEST CONFIGURE CANCEL

In case of failures in upgrade, before you rerun the upgrade, on the Advanced tab, configure the following settings:

Field	Description	Additional Information
Rerun Count Upgrade	Specifies that the model count upgrade should run while running the Mart database upgrade	
Rerun Report Upgrade	Specifies that the report upgrade should run while running the Mart database upgrade.	
Rerun Report Upgrade For All	Specifies that the report upgrade should run for all models while running the Mart database	

Configure the Mart Portal

Field	Description	Additional Information
Models	upgrade	
Is GitHub Enterprise	Specifies whether your GitHub account is an enterprise account	
Database Initial Size	Specifies the initial mart database size in MB By default, this is set to 8 MB	
Database Max Size	Specifies the maximum size the mart database can take in MB By default, this is set to 64 MB	
Rest API Token Lifetime(in seconds)	Specifies the duration (in seconds) for which your REST API token will be valid By default, this is set to 14400 seconds (four hours)	

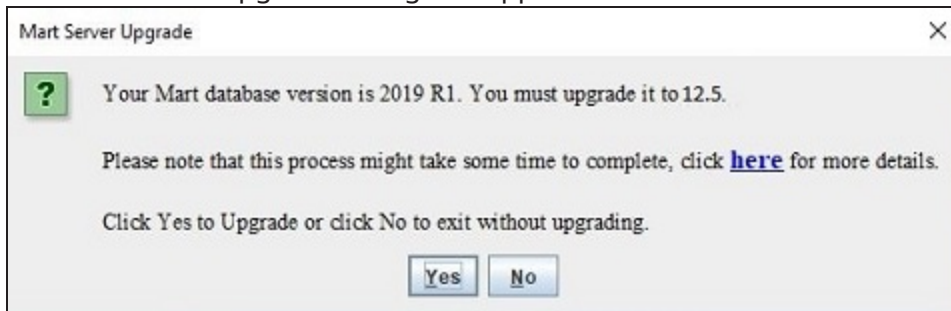
Ensure that the Mart database has the following:

- m9reportUpgrade and m9ReportListData tables
- m9Catalog table with entcnt, attcnt, relcnt, and countblob columns

To upgrade, follow these steps:

Click Configure.

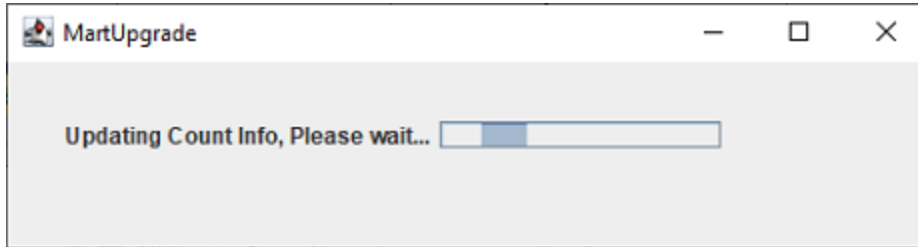
The Mart Portal Upgrade dialog box appears.



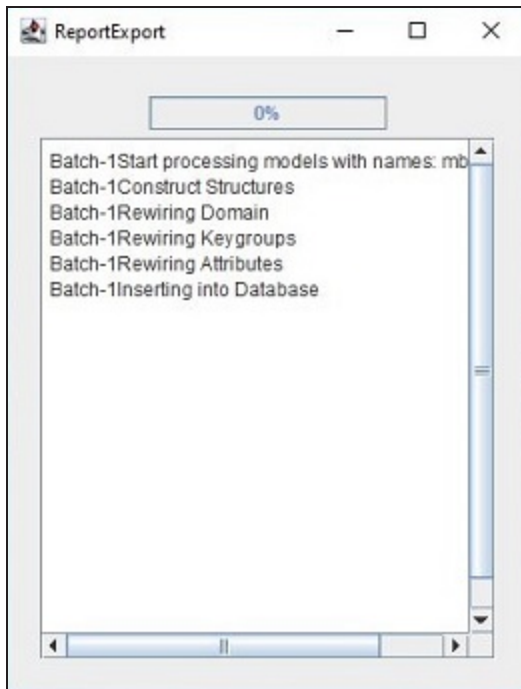
Click **Yes**.

Configure the Mart Portal

The MartUpgrade screen for count upgrade appears.



Once the count upgrade process is complete, the ReportExport screen appears.



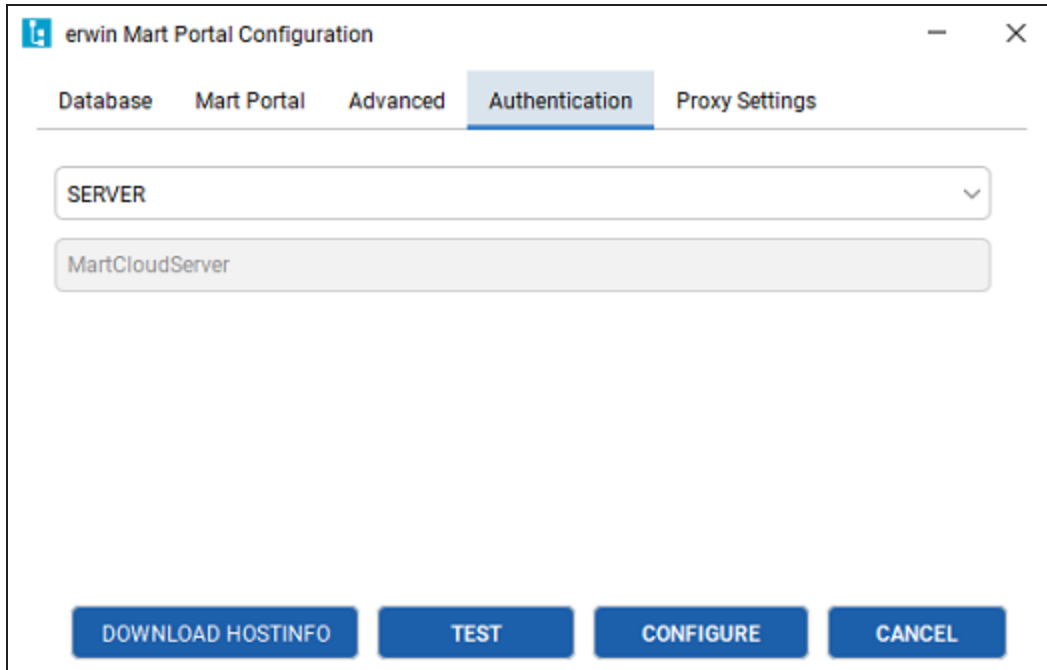
This screen does not appear when you upgrade from 2020 R1 Mart to higher versions.

On completion of report export process, the upgrade process is complete.

Configuring Authentication Settings

The Authentication tab specifies user account authentication settings for erwin Mart Portal and erwin ER360. The available settings differ based on the selected authentication method. Also, based on the authentication method configured here, the types of users that you can add in erwin Mart Portal differ. For more information on adding users, refer to the [Manage Users](#) topic.

Configure the Mart Portal



On the Authentication tab, configure the following settings:

Authentication Method	Field	Description	Additional Information
Server		Specifies that authentication is server-based	
Active Directory Details	Domain Title	Specifies the title of domain to be used in the AD list	<p>You can add up to 10 domains to the list. Enter domain information and click Add Domain.</p> <p>As a best practice, add only those domains that you use in mart. Do not add all your</p>

Configure the Mart Portal

Authentication Method	Field	Description	Additional Information
			domains.

Configure the Mart Portal

Authentication Method	Field	Description	Additional Information
	Domain Base	<p>Specifies comma separated domain base specification for search.</p> <p>For example, CN=Users,DC=erwin,DC=com</p> <p>Here, <i>cn-users,dc=erwin,dc=com</i> is the distinguished-name. The distinguished name is the full path of the object.</p>	
	Domain Server Name	Specifies server name or the IP address of the server	
	Domain Server Port	Specifies the port number to which the server listens	
	Domain user name	Specifies the domain name and user name in the <domain name>/<user name> format	
	Domain user password	Specifies the password of the domain user	
	Use SSL	Specifies whether you want to connect to the Mart through a secured connection (SSL)	
	Save password	Specifies whether you want to save domain user password	

Configure the Mart Portal

Authentication Method	Field	Description	Additional Information
Azure AD (OAuth2)	Tenant Id	Specifies your Azure AD environment properties for connection	<p>Configure these settings based on your provider and the protocol.</p> <p>For more information on configuring AzureAD OAuth on Microsoft , refer to the AzureAD OAuth topic.</p>
	Graph Scope		
	Client Id		
	Client Uri		
	Client Secret		
SAML (SAML 2.0)	Metadata XML method	Specifies your SAML environment properties for connection	<p>erwin Mart Portal is certified for SAML with:</p> <ul style="list-style-type: none"> • AzureAD • PingIdentity • Okta • WSO2 <p>You can also use any other SAML supported identity provider.</p> <p>To use any of these identity providers, ensure that you do the following:</p> <ul style="list-style-type: none"> - On the Mart Portal tab, set up Secure Sockets Layer (SSL),

Configure the Mart Portal

Authentication Method	Field	Description	Additional Information
			SSL Certificate, and SSL Key. - On the Authentication tab, click Download SP Metadata and upload the metadata XML file to your provider's portal. Then, configure these settings based on your provider and the protocol.
	MetaData XML		
	Group Attribute Name		
	User Email Attribute Name		
	Download SP Metadata	Downloads the service provider metadata file that is required for your SSO setup	

Based on your configuration here, the available options to add users in erwin Mart Portal change.

Configuring Proxy Settings

The Proxy Settings tab is applicable only to erwin ER360 and specifies proxy server settings.

Configure the Mart Portal

The screenshot shows a configuration window titled "erwin Mart Portal Configuration" with a close button (X) in the top right corner. The window has four tabs: "Database", "Mart Portal", "Advanced", and "Authentication", with "Proxy Settings" selected and highlighted in blue. Below the tabs, there is a checkbox labeled "Enable Proxy". Underneath the checkbox are four text input fields: "Proxy server address (DNS/IP Address)", "Proxy server port number (eg. 3128)", "Proxy username (optional)", and "Proxy password (optional)". At the bottom of the window, there are four blue buttons: "DOWNLOAD HOSTINFO", "TEST", "CONFIGURE", and "CANCEL".

On the Proxy Settings tab, configure the following settings:

Field	Description	Additional Information
Enable Proxy	Specifies that a proxy server should be used for erwin ER360configuration	
Proxy server address (DNS/IP Address)	Specifies the proxy server's address, either DNS or an IP address	
Proxy server port number	Specifies the port number on the proxy server that you want to use	
Proxy username	Specifies the proxy server credentials	
Port password		

Configuring via CLI

To configure erwin Mart Portal via CLI, open command line interface and run following commands, for example, for PostgreSQL:

```
>cd C:\Program Files\erwin\Mart Portal\MartUpgrade
>SET PATH = %JRE_HOME%\bin
>java -jar ./MartConfiguration.jar configure
--conntype=ON-PREM
--dbname=test
--dbport=5432
--dbpwd=postgres
--dbserver=localhost
--dbssl=false
--dbtype=POSTGRESQL
--dbuser=postgres
--dbschemaname=public
--walletlocation=
--walletpwd=
--adminport=8081
--iisport=80
--locktime=300
--martappname=MartServer
--martserverhost=localhost
--martuseiis=false
--martusessl=true
--sslfilelocation="C:\Program Files\erwin\Mart Portal\Apache\my-erwin.mart.crt"
```

Configure the Mart Portal

```
--sslkeyfilelocation="C:\Program Files\erwin\Mart Portal\Apache\my-erwin.mart.key"
```

```
--authorizationType=LDAP
```

```
--dcname="ldap://10.250.28.4:389/DC=quest,DC=com"
```

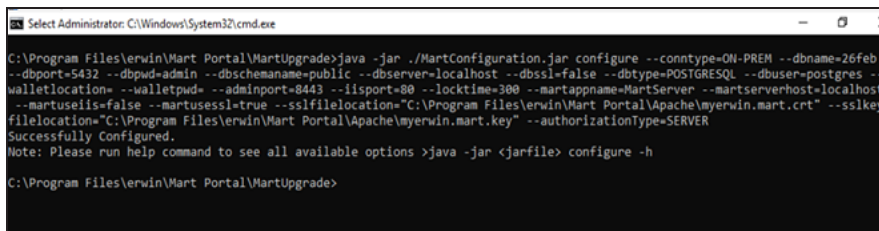
```
--domainuser=quest\sysadm
```

```
--domainpwd=Erwin12345
```

For example, to configure erwin Mart Portal with PostgreSQL database, follow these steps:

1. Open command line interface and navigate to C:\Program Files\erwin\Mart Portal\MartUpgrade.
2. Run the following command:

```
java -jar ./MartConfiguration.jar configure --conntype=ON-PREM --dbname=26feb --dbport=5432 --dbpwd=admin --dbschemaname=public --dbserver=localhost --dbssl=false --dbtype=POSTGRESQL --dbuser=postgres --walletlocation= --walletpwd= --adminport=8443 --iisport=80 --locktime=300 --martappname=MartServer --martserverhost=localhost --martuseiis=false --martusessl=true --sslfilelocation="C:\Program Files\erwin\Mart Portal\Apache\my-erwin.mart.crt" --sslkeyfilelocation="C:\Program Files\erwin\Mart Portal\Apache\my-erwin.mart.key" --authorizationType=SERVER
```



```
Select Administrator: C:\Windows\System32\cmd.exe
C:\Program Files\erwin\Mart Portal\MartUpgrade>java -jar ./MartConfiguration.jar configure --conntype=ON-PREM --dbname=26feb --dbport=5432 --dbpwd=admin --dbschemaname=public --dbserver=localhost --dbssl=false --dbtype=POSTGRESQL --dbuser=postgres --walletlocation= --walletpwd= --adminport=8443 --iisport=80 --locktime=300 --martappname=MartServer --martserverhost=localhost --martuseiis=false --martusessl=true --sslfilelocation="C:\Program Files\erwin\Mart Portal\Apache\myerwin.mart.crt" --sslkeyfilelocation="C:\Program Files\erwin\Mart Portal\Apache\myerwin.mart.key" --authorizationType=SERVER
Successfully Configured.
Note: Please run help command to see all available options >java -jar <jarfile> configure -h
C:\Program Files\erwin\Mart Portal\MartUpgrade>
```

Once done, this configuration is updated in configuration file, MartConfiguration.properties, located at C:\ProgramData\erwin\Mart Portal. It is also available on the erwin Mart Portal Configuration screen.

Configure the Mart Portal

The screenshot shows the 'erwin Mart Portal Configuration' window with the 'Database' tab selected. The configuration includes the following fields and options:

- Database: ON-PREM (dropdown)
- Database Type: POSTGRESQL (dropdown)
- Host: 5432 (text input)
- Host: localhost (text input)
- Instance Name: 26feb (text input)
- Instance Name: Instance Name (button)
- Database Name: public (text input)
- Database Name: postgres (text input)
- Password: Password (text input)
- Enable SSL/Wallet:
- Location: Location (text input)
- Password: Password (text input)

Buttons at the bottom: DOWNLOAD HOSTINFO, TEST, CONFIGURE, CANCEL.

The screenshot shows the 'erwin Mart Portal Configuration' window with the 'Mart Portal' tab selected. The configuration includes the following fields and options:

- Host: localhost (text input)
- Port: 8443 (text input)
- MartServer: MartServer (text input)
- Secure Sockets Layer(SSL) Enabled:
- Certificate Path: C:\Program Files\erwin\Mart Portal\Apache\myerwin.mart.crt (text input)
- Key Path: C:\Program Files\erwin\Mart Portal\Apache\myerwin.mart.key (text input)
- Port: 300 (text input)

Buttons at the bottom: DOWNLOAD HOSTINFO, TEST, CONFIGURE, CANCEL.

For the full list of commands, refer to the [erwin Mart Portal Configuration- CLI Commands](#) topic.

AzureAD OAuth2

To configure AzureAD OAuth2 for erwin Mart Portal authentication, follow these steps:

1. Log in to Microsoft Entra admin center.
2. Click App registrations and enter the necessary information as shown in the following image.

Configure the Mart Portal

Microsoft Entra admin center

Search resources, services, and docs (G+)

Home > App registrations >

Register an application

*** Name**
The user-facing display name for this application (this can be changed later).

MartQuest

Supported account types
Who can use this application or access this API?

- Accounts in this organizational directory only (Contoso only - Single tenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)
- Personal Microsoft accounts only

[Help me choose...](#)

Redirect URI (optional)
We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios.

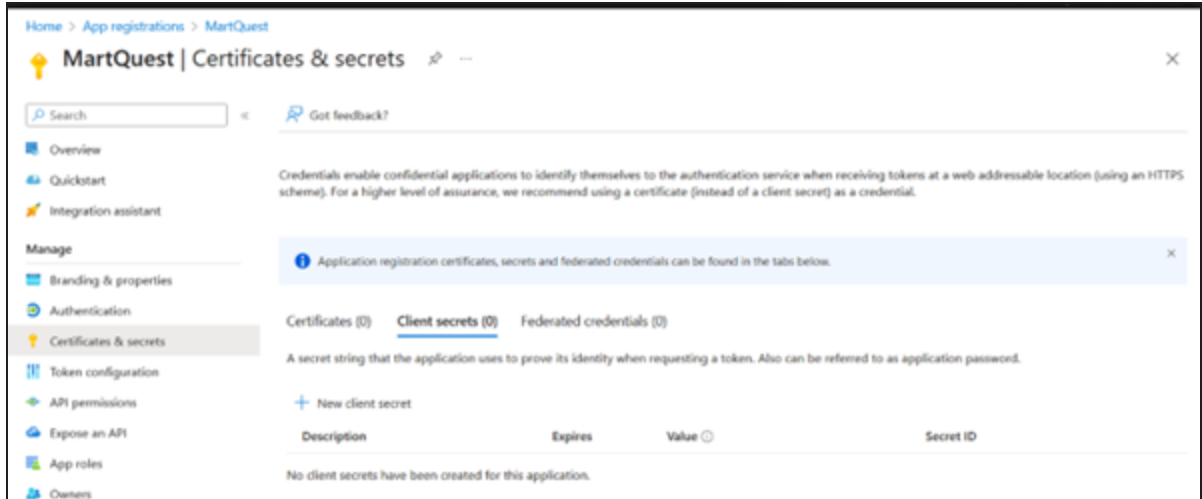
Select a platform | e.g. https://example.com/auth

[By proceeding, you agree to the Microsoft Platform Policies](#)

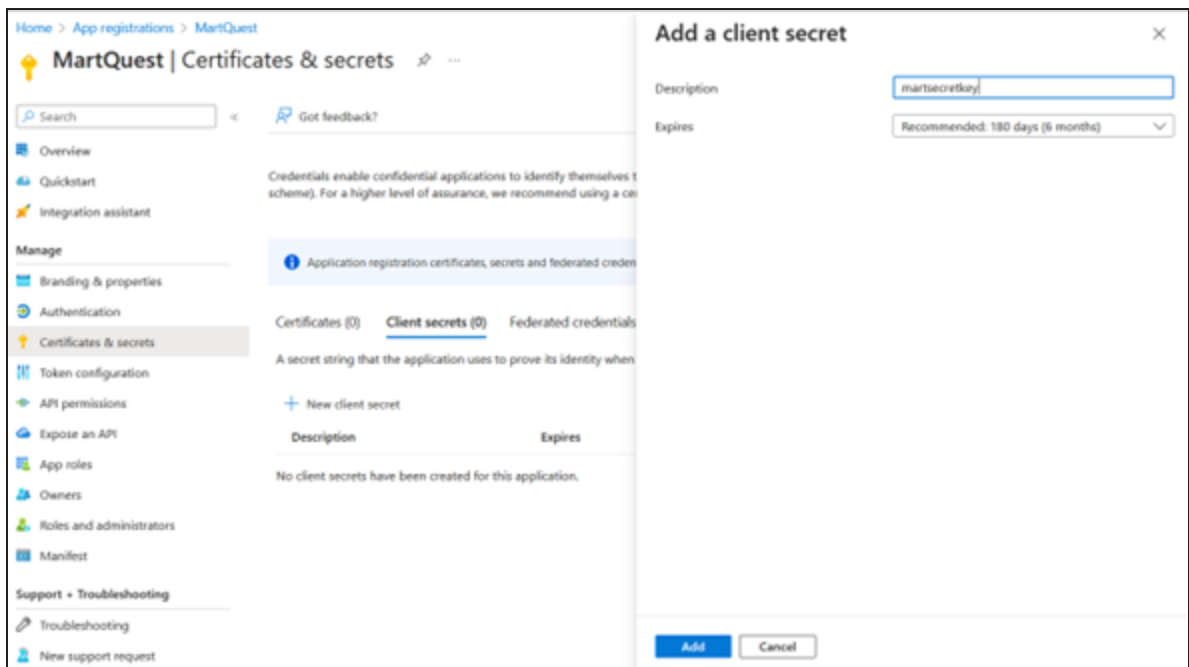
Register

3. Click **Register**.
4. Go to **Certificates & secrets**.

Configure the Mart Portal



5. Click **New client secret** and add Description. Then, click **Add**.



6. Copy the auto-generated value highlighted in the following image.

Configure the Mart Portal

The screenshot shows the 'Certificates & secrets' page for the application 'MartQuest'. The left-hand navigation pane includes sections for Overview, Quickstart, Integration assistant, Manage (with sub-items like Branding & properties, Authentication, Certificates & secrets, Token configuration, API permissions, Expose an API, App roles, Owners, Roles and administrators, Manifest), and Support + Troubleshooting. The main content area shows a notification about feedback, a description of credentials, and a table of client secrets. One secret is listed with the description 'martsecretkey', an expiration date of '1/10/2024', and a value that has been partially redacted with a yellow highlight.

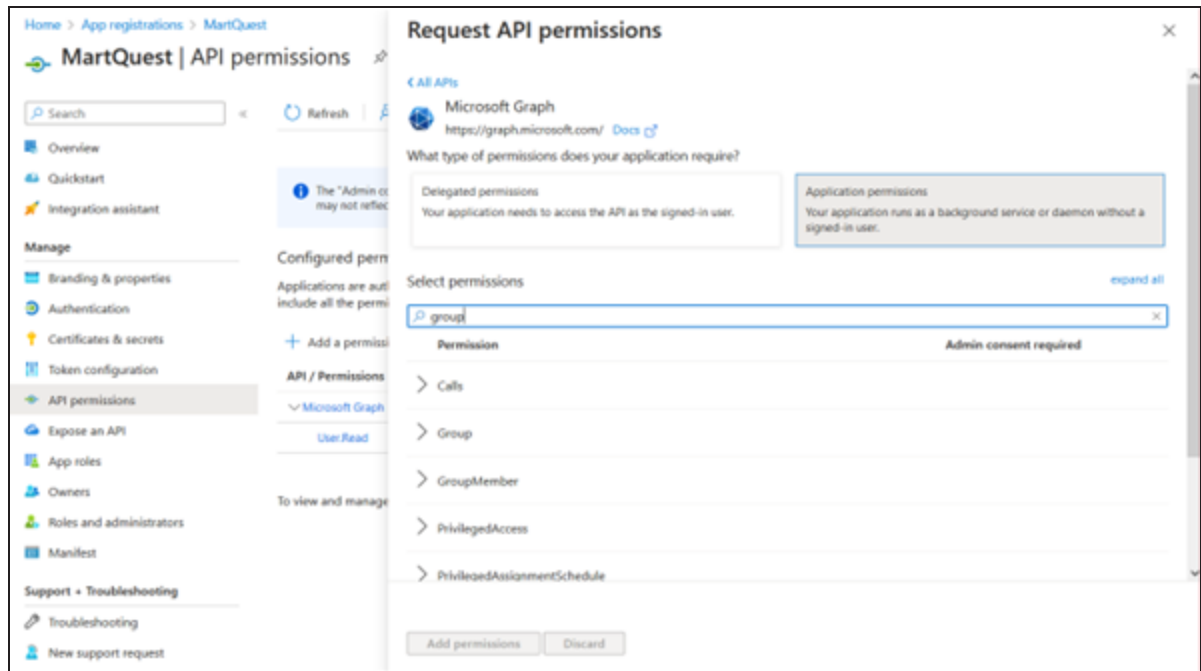
Description	Expires	Value	Secret ID
martsecretkey	1/10/2024	wP88Q-L2V_sXJKW76K5-d296Ov6c...	6fdb3f77-2a5c-4f8c-b96a-1db5e4eb6...

7. Click **API Permissions > Application Permissions**.

The screenshot shows the 'Request API permissions' dialog box. It is titled 'Request API permissions' and shows the 'Microsoft Graph' API selected. The dialog asks 'What type of permissions does your application require?' and offers two options: 'Delegated permissions' (selected) and 'Application permissions'. A tooltip for 'Application permissions' explains that it is for background services or daemons that run without a signed-in user. The 'Add permissions' button is visible at the bottom of the dialog.

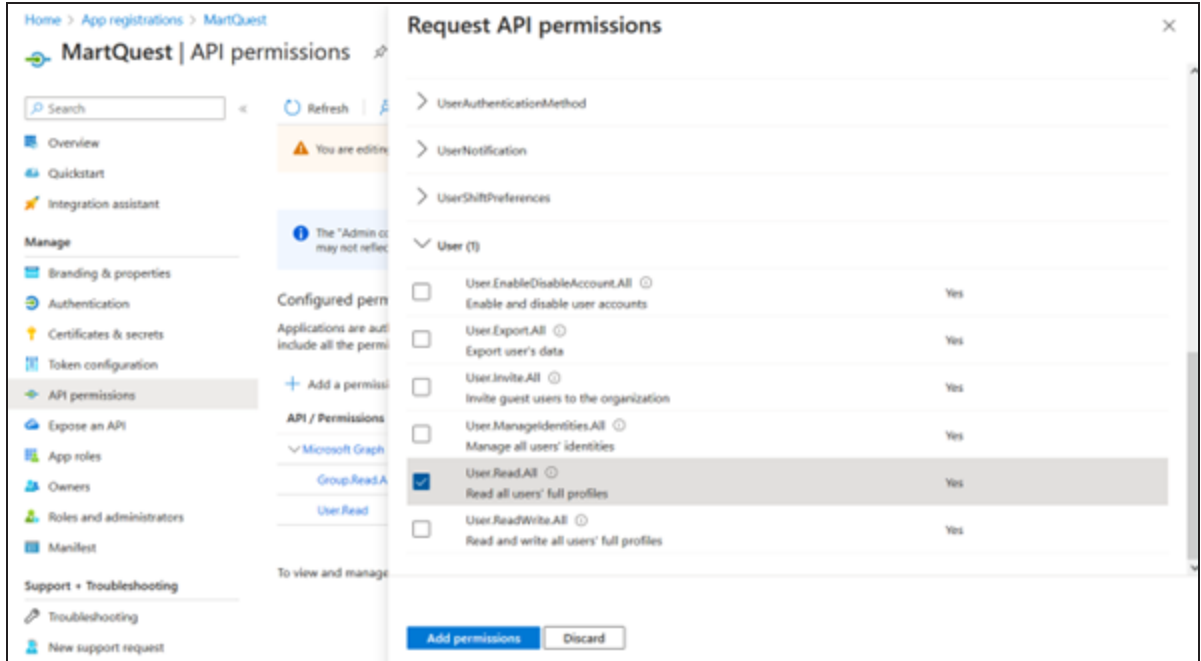
Configure the Mart Portal

8. Search and expand Group and select **Group.Read.All** permission. Then, click **Add permissions**.

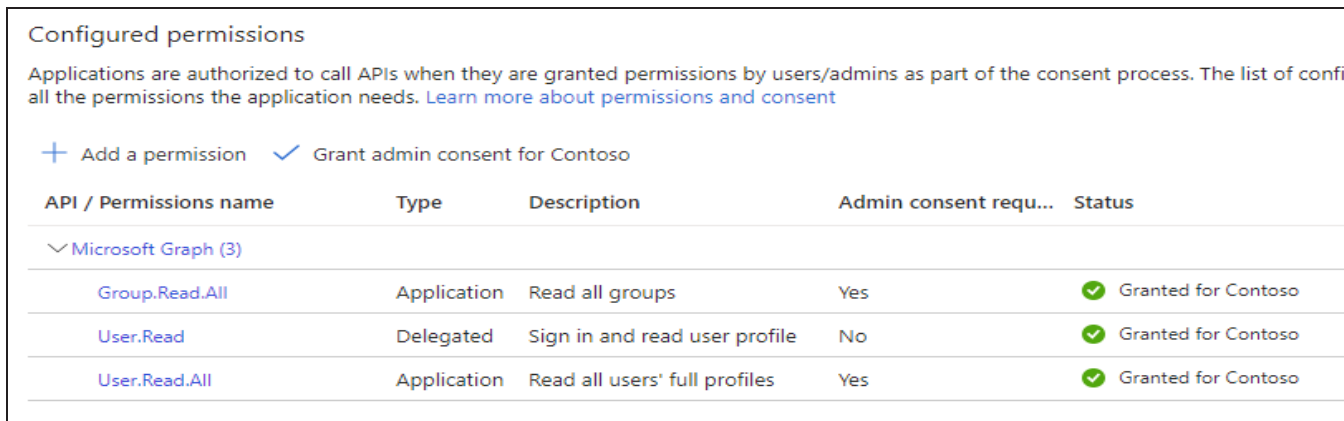


9. Search and expand User and select **User.Read.All** permission. Then click **Add permissions**.

Configure the Mart Portal

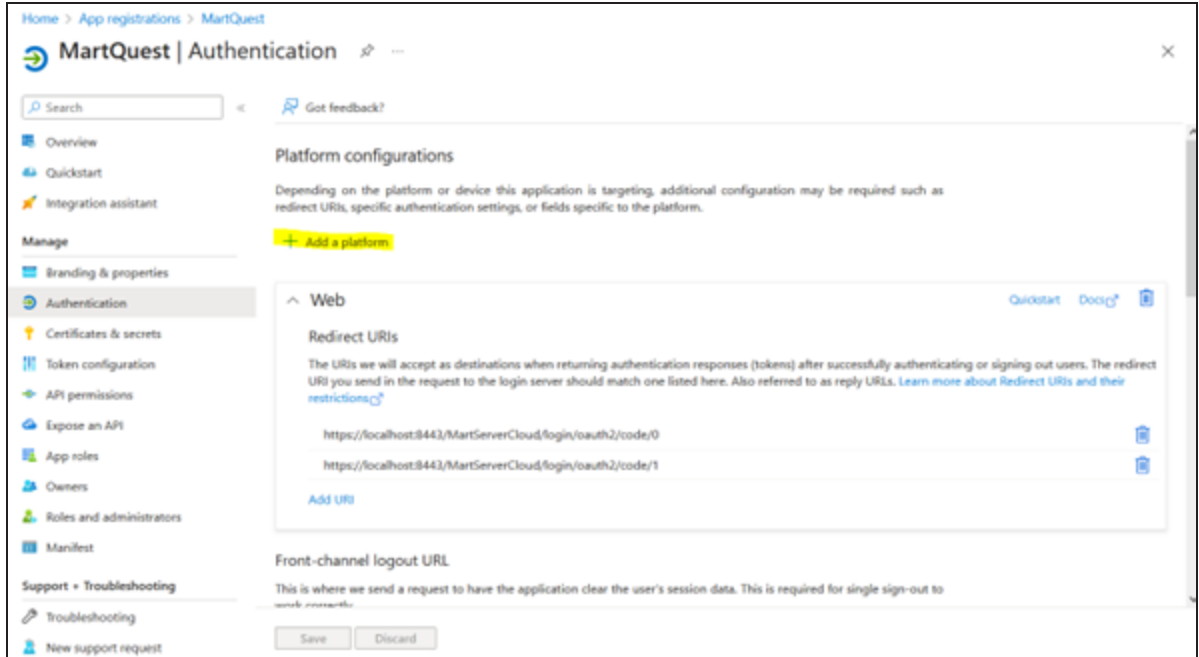


- Click **Grant admin consent for Contoso**.

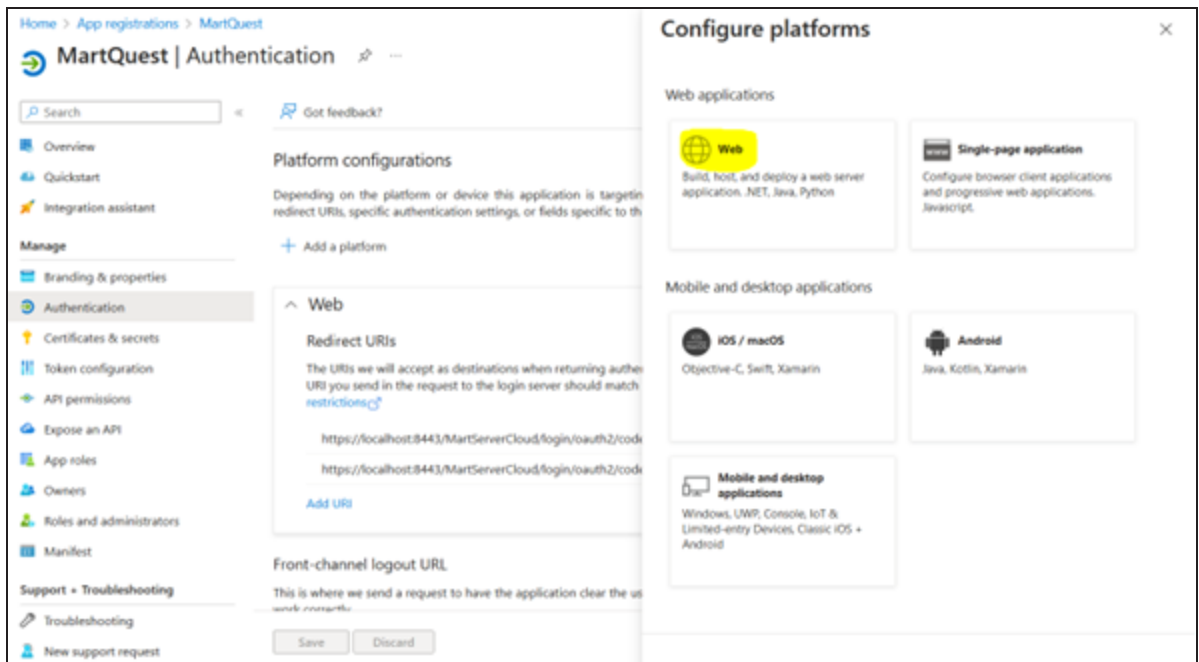


- Go to Authentication and click **Add a platform**.

Configure the Mart Portal

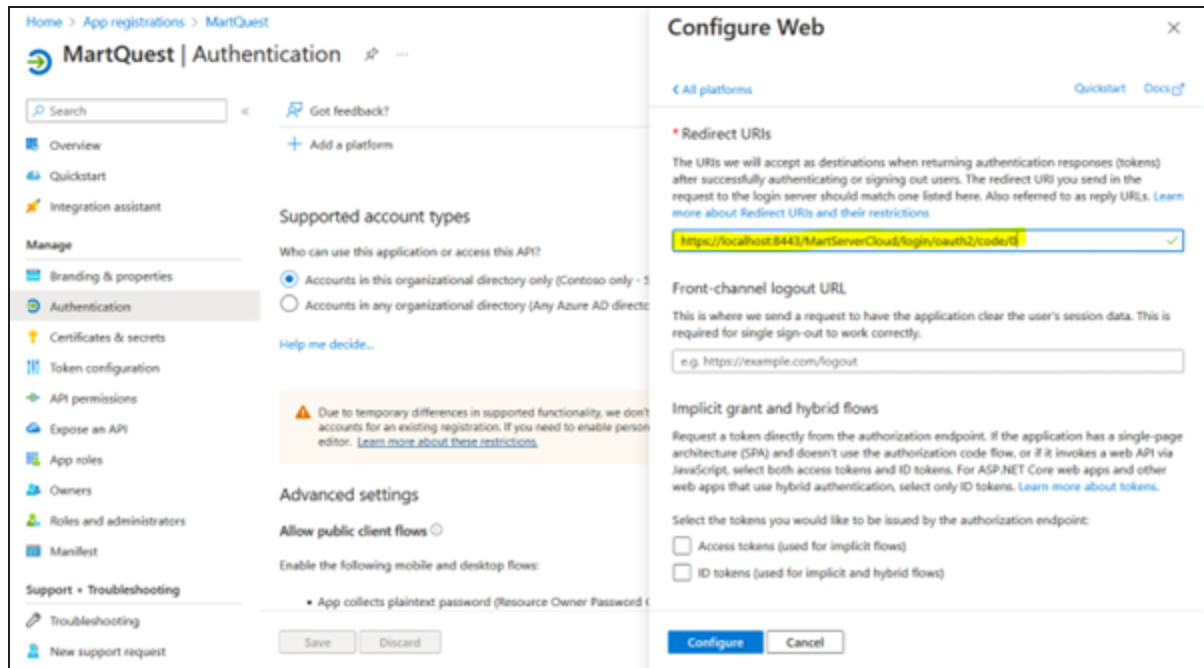


12. Click **Web**.

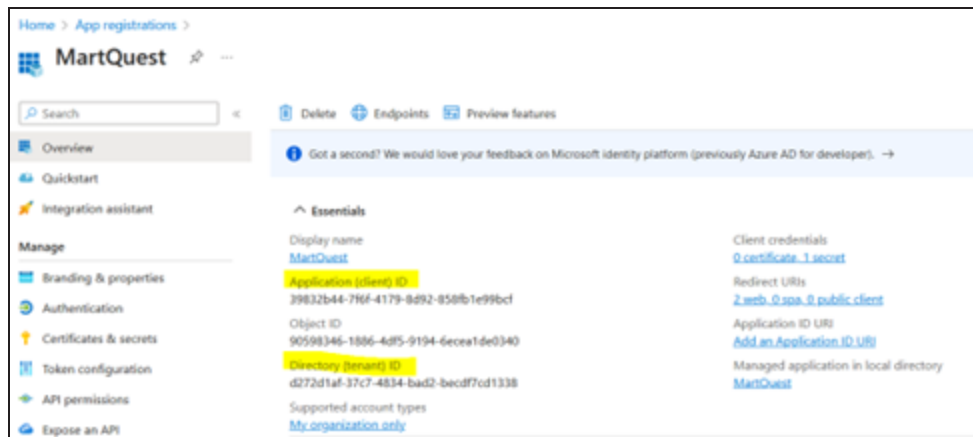


13. Add **Redirect URIs** and click **Configure**.

Configure the Mart Portal

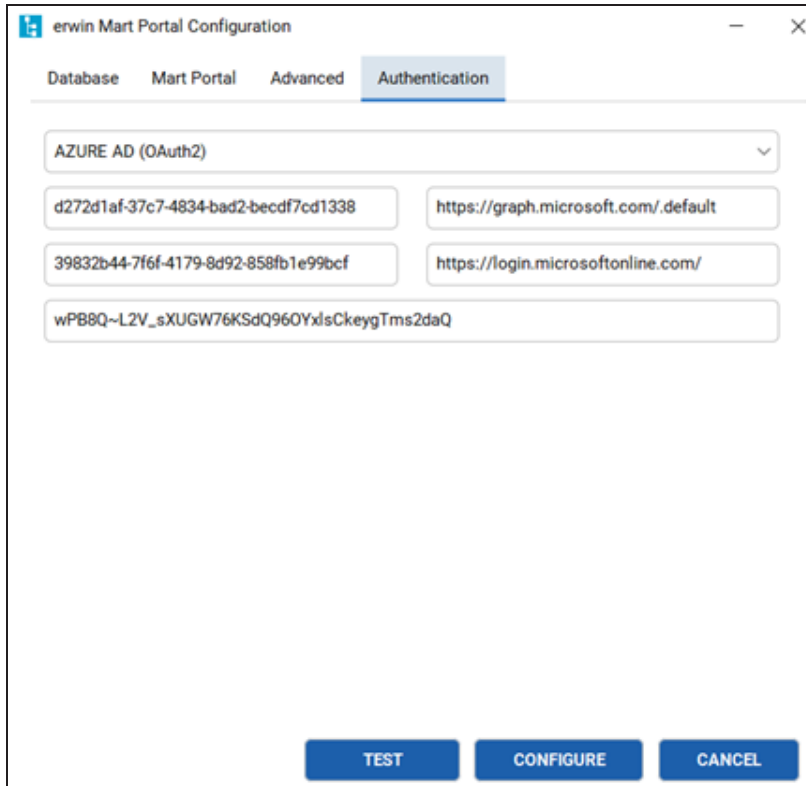


14. Go to Overview and note the Application (client) ID and Directory (tenant) ID. Graph scope and Client Uri are default.



You can now use these parameters on the Authentication tab while configuring erwin Mart Portal for SSO as shown in the following example image.

Configure the Mart Portal



The screenshot shows the 'erwin Mart Portal Configuration' window with the 'Authentication' tab selected. The configuration includes:

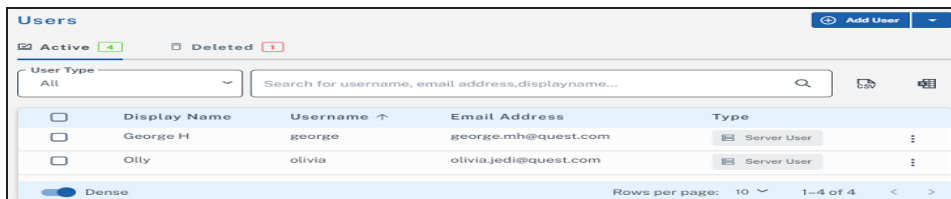
- Authentication Provider: AZURE AD (OAuth2)
- Client ID: d272d1af-37c7-4834-bad2-becdf7cd1338
- Client Secret: 39832b44-7f6f-4179-8d92-858fb1e99bcf
- Redirect URI: https://login.microsoftonline.com/
- Authority: https://graph.microsoft.com/.default
- Application ID: wPB8Q~L2V_sXUGW76KSdQ960YxlsCkeygTms2daQ

Buttons at the bottom: TEST, CONFIGURE, CANCEL.

Adding Groups in erwin Mart Portal

To add your AzureAD groups to erwin Mart Portal, follow these steps:

1. In the Microsoft Entra admin center, click **Groups > All groups > Download groups**. A CSV file with all your groups is downloaded.
2. Log in to erwin Mart Portal as administrator.
3. Go to **Application Menu > Users**. The Users page appears.



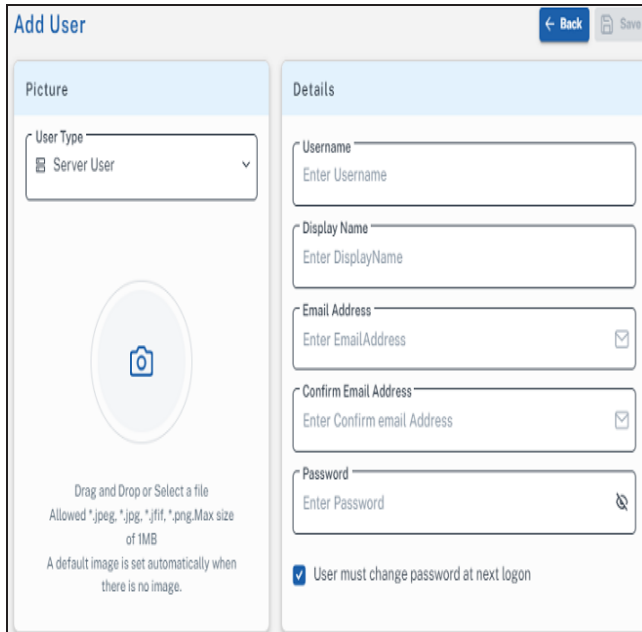
The screenshot shows the 'Users' page in erwin Mart Portal. It includes a search bar, a table of users, and a 'Dense' view toggle.

Display Name	Username	Email Address	Type
George H	george	george.mh@quest.com	Server User
Olly	olivia	olivia.jedi@quest.com	Server User

Buttons: Add User, Active (4), Deleted (0), Search, Dense, Rows per page: 10, 1-4 of 4.

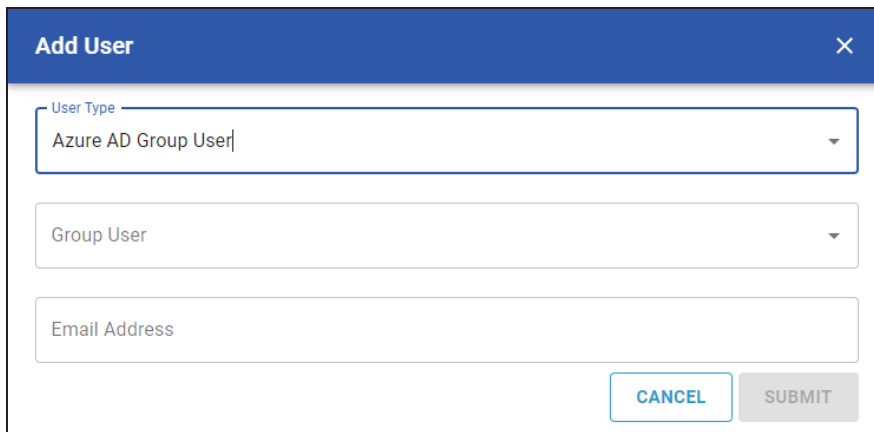
4. Click . The Add User page appears.

Configure the Mart Portal



The screenshot shows the 'Add User' form with two main sections: 'Picture' and 'Details'. In the 'Picture' section, the 'User Type' dropdown is set to 'Server User'. Below it is a placeholder for a profile picture with instructions: 'Drag and Drop or Select a file. Allowed *.jpeg, *.jpg, *.jif, *.png, Max size of 1MB. A default image is set automatically when there is no image.' The 'Details' section contains several input fields: 'Username' (Enter Username), 'Display Name' (Enter DisplayName), 'Email Address' (Enter EmailAddress), 'Confirm Email Address' (Enter Confirm email Address), and 'Password' (Enter Password). A checkbox labeled 'User must change password at next logon' is checked.

5. Under User Type, select **Azure AD Group User**.



The screenshot shows the 'Add User' form with the 'User Type' dropdown set to 'Azure AD Group User'. Below it, the 'Group User' dropdown is visible. The 'Email Address' field is empty. At the bottom right, there are 'CANCEL' and 'SUBMIT' buttons.

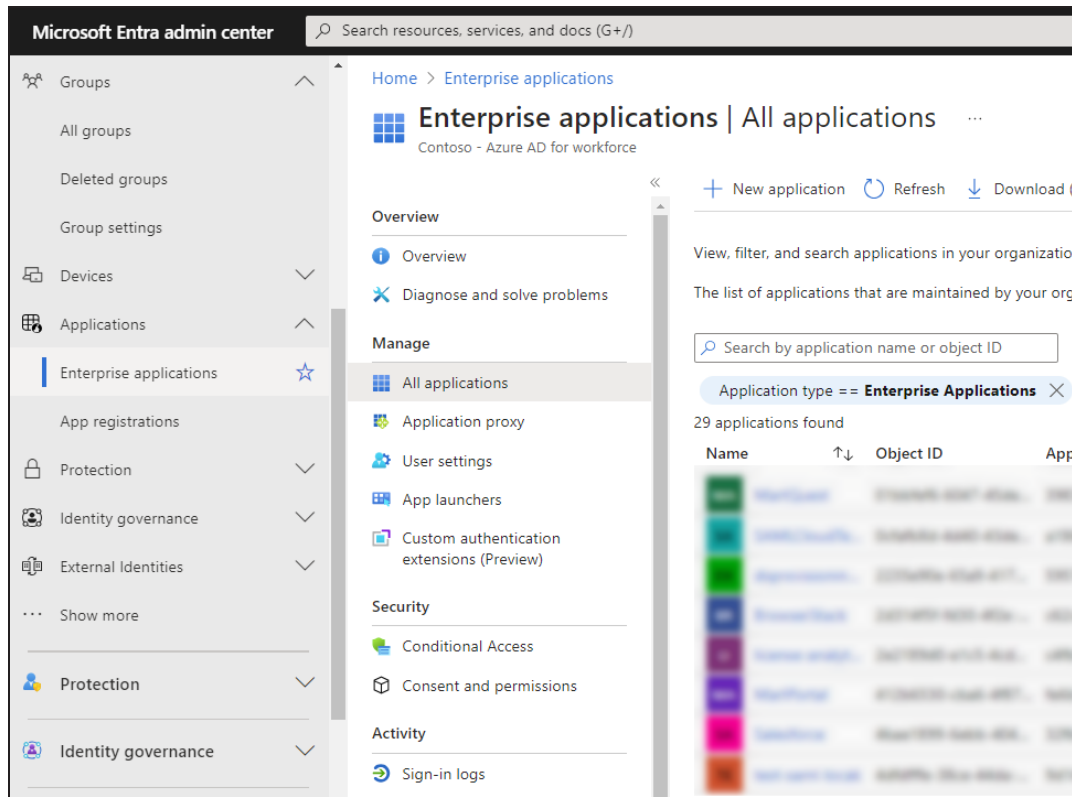
6. Under Group User, select the group that you want to add.
7. Click **Submit**.

SAML with AzureAD

To configure AzureAD SAML for erwin Mart Portal authentication, follow these steps:

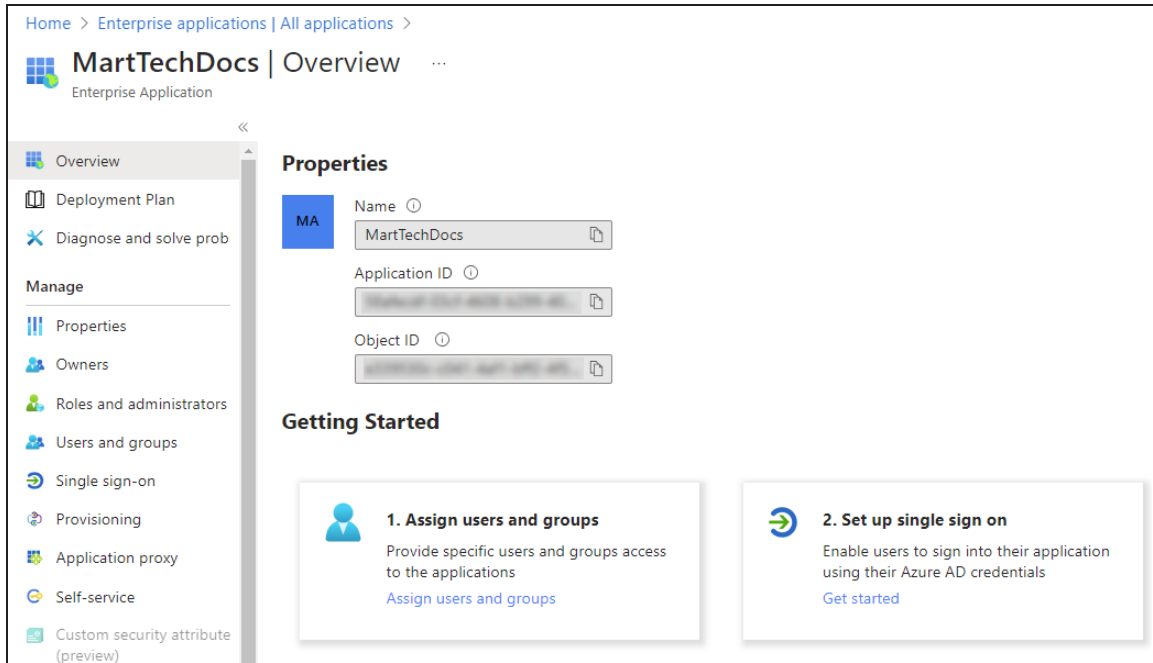
1. Log in to Microsoft Entra admin center.
2. Click **Applications > Enterprise Applications**.

Configure the Mart Portal

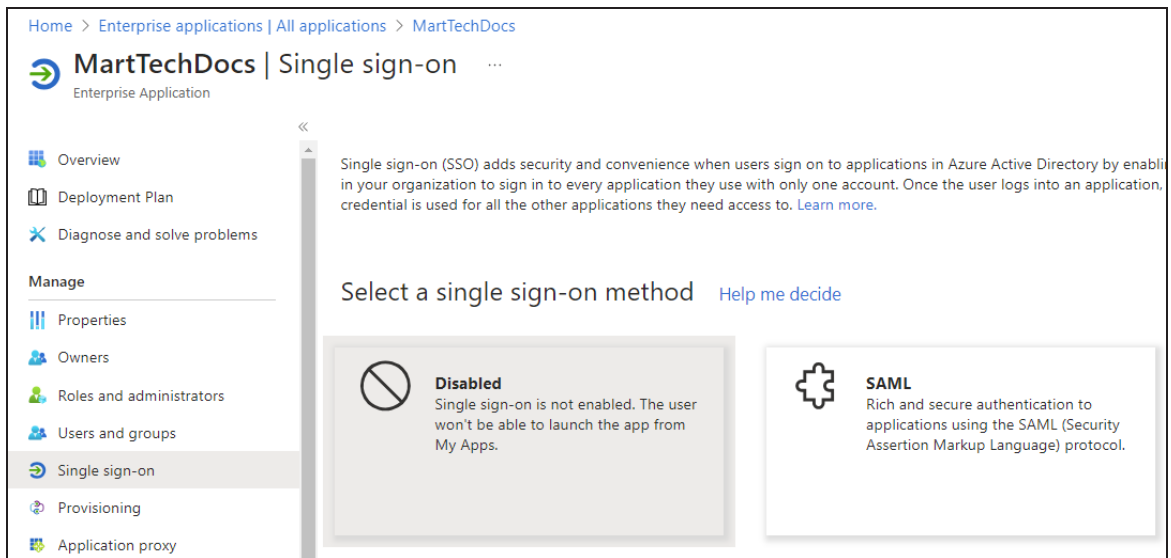


3. Click **New application** and create your non-gallery application with an appropriate name.
4. Open your newly created application.

Configure the Mart Portal

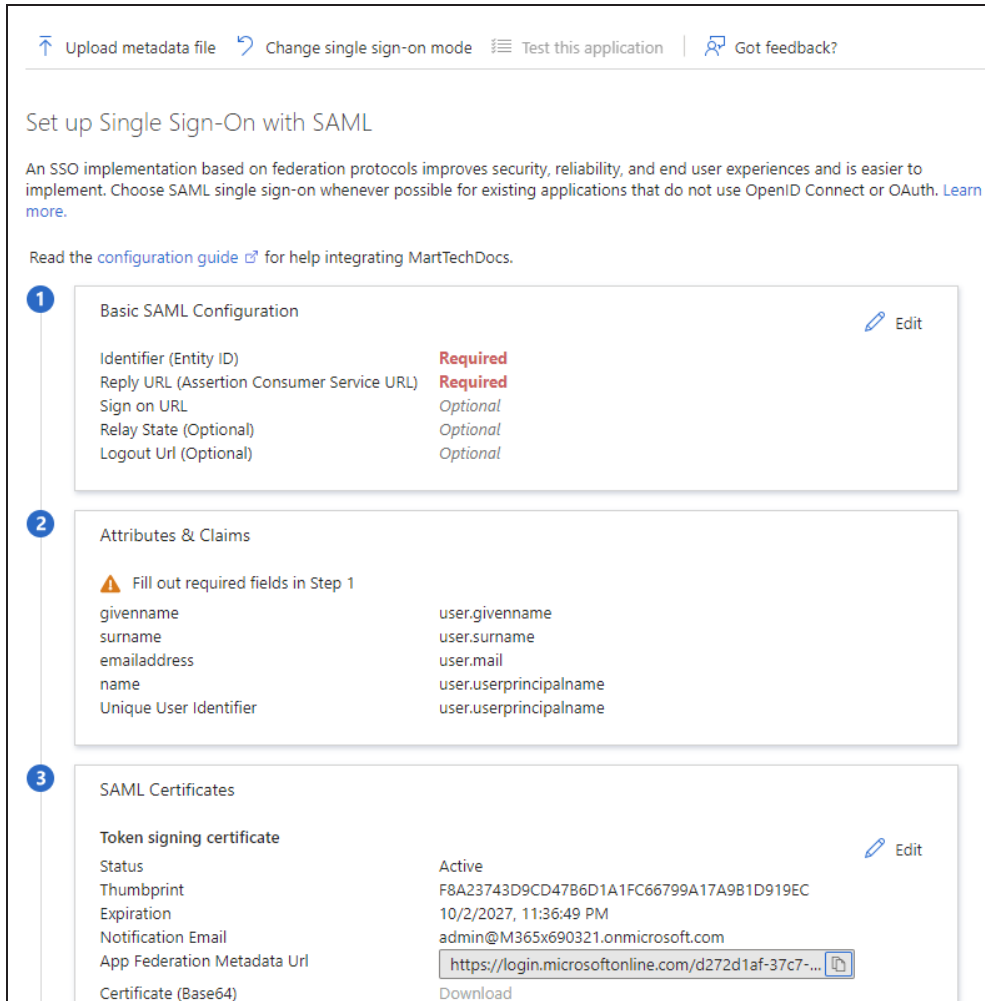


5. Click **Set up single sign on**.



6. Under single sign-on method, click **SAML**.

Configure the Mart Portal



↑ Upload metadata file ↶ Change single sign-on mode ☰ Test this application | 🗨️ Got feedback?

Set up Single Sign-On with SAML

An SSO implementation based on federation protocols improves security, reliability, and end user experiences and is easier to implement. Choose SAML single sign-on whenever possible for existing applications that do not use OpenID Connect or OAuth. [Learn more.](#)

Read the [configuration guide](#) for help integrating MartTechDocs.

- 1** Basic SAML Configuration Edit

Identifier (Entity ID)	Required
Reply URL (Assertion Consumer Service URL)	Required
Sign on URL	Optional
Relay State (Optional)	Optional
Logout Url (Optional)	Optional
- 2** Attributes & Claims ⚠️ Fill out required fields in Step 1

givenname	user.givenname
surname	user.surname
emailaddress	user.mail
name	user.userprincipalname
Unique User Identifier	user.userprincipalname
- 3** SAML Certificates Edit

Token signing certificate	
Status	Active
Thumbprint	F8A23743D9CD47B6D1A1FC66799A17A9B1D919EC
Expiration	10/2/2027, 11:36:49 PM
Notification Email	admin@M365x690321.onmicrosoft.com
App Federation Metadata Url	https://login.microsoftonline.com/d272d1af-37c7-...
Certificate (Base64)	Download

7. Click **Upload metadata file** and select the file that you downloaded (**erwin Mart Portal Configuration > Authentication tab > Download SP Metadata**) during erwin Mart Portal configuration.
Doing this retrieves and adds the necessary information for you.

Configure the Mart Portal

Read the [configuration guide](#) for help integrating MartTechDocs.

- ### 1 Basic SAML Configuration [Edit](#)

Identifier (Entity ID)	https://localhost:443/MartServerCloud
Reply URL (Assertion Consumer Service URL)	https://localhost:443/MartServerCloud/saml2/login/sso/saml2-mart
Sign on URL	Optional
Relay State (Optional)	Optional
Logout Url (Optional)	https://localhost:443/MartServerCloud/saml2/SingleLogout
- ### 2 Attributes & Claims [Edit](#)

givenname	user.givenname
surname	user.surname
emailaddress	user.mail
name	user.userprincipalname
Unique User Identifier	user.userprincipalname
- ### 3 SAML Certificates [Edit](#)

Token signing certificate	Active
Status	B81A35E6F20F363FBD9912384F2C598E4A44A186
Thumbprint	7/27/2026, 5:17:56 PM
Expiration	admin@M365x690321.onmicrosoft.com
Notification Email	https://login.microsoftonline.com/d272d1af-37c7-...
App Federation Metadata Url	https://login.microsoftonline.com/d272d1af-37c7-...
Certificate (Base64)	Download

8. Copy the App Federation Metadata Url.
9. Click **Users and groups** > **Add user/group** and select required users or groups.

Configure the Mart Portal

Home > Enterprise applications | All applications > MartTechDocs

Add Assignment

Contoso

Warning: Groups are not available for assignment due to your Active Directory p the application.

Users
3 users selected.

Select a role
User

Search: mart

	Name	Type
<input checked="" type="checkbox"/>	mart	User
<input type="checkbox"/>	Mart Test	User
<input type="checkbox"/>	mart_test_user1	User
<input type="checkbox"/>	mart_user_test	User
<input type="checkbox"/>	mart1	User
<input checked="" type="checkbox"/>	martuser	User
<input checked="" type="checkbox"/>	martuser1	User
<input type="checkbox"/>	martuser2	User

Assign Select

10. Click **Select**. Then, click **Assign**.

Your SAML SSO set up for the required users is complete. Next, during erwin Mart Portal configuration, you can configure SAML

During erwin Mart Portal configuration, on the Authentication tab, for SAML, follow these steps:

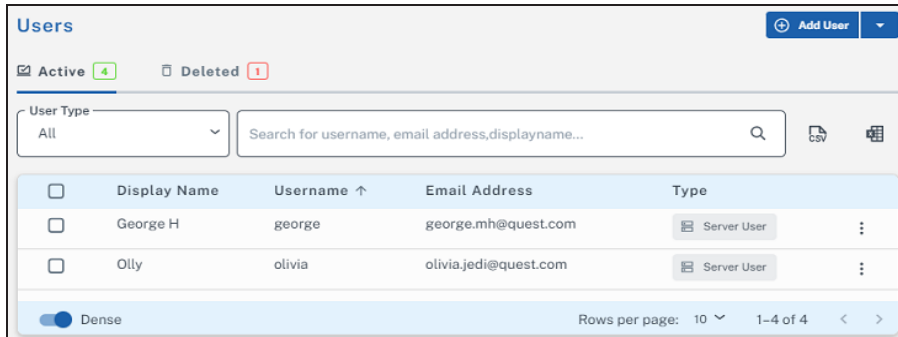
1. Select URL and paste the URL copied in step 8 above in the **MetaData XML** field.
2. In the Group Attribute Name and User Email Attribute Name, enter appropriate attribute names that are configured for Azure AD SAML SSO.


Adding Groups in erwin Mart Portal

To add your AzureAD SAML groups to erwin Mart Portal, follow these steps:

Configure the Mart Portal

1. In the Microsoft Entra admin center, click **Groups > All groups > Download groups**. A CSV file with all your groups is downloaded.
2. Log in to erwin Mart Portal as administrator.
3. Go to **Application Menu > Users**. The Users page appears.

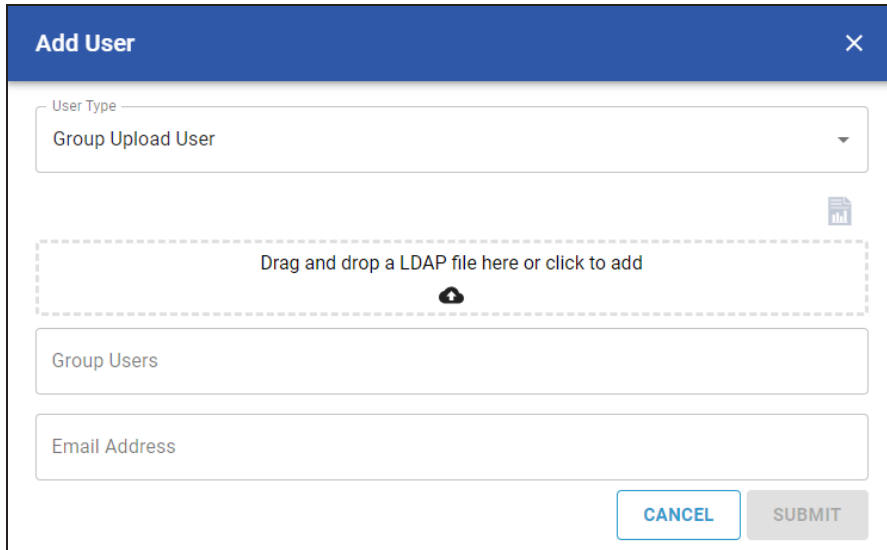


4. Click . The Add User page appears.

The screenshot shows the 'Add User' page. It has a 'Back' button and a 'Save' button at the top right. The page is divided into two main sections: 'Picture' and 'Details'. In the 'Picture' section, there is a 'User Type' dropdown menu set to 'Server User' and a large circular area with a camera icon for uploading a picture. Below this, there is text: 'Drag and Drop or Select a file. Allowed *.jpeg, *.jpg, *.jiff, *.png, Max size of 1MB. A default image is set automatically when there is no image.' In the 'Details' section, there are several input fields: 'Username' (Enter Username), 'Display Name' (Enter DisplayName), 'Email Address' (Enter EmailAddress), 'Confirm Email Address' (Enter Confirm email Address), and 'Password' (Enter Password). There is also a checkbox labeled 'User must change password at next logon' which is checked.

5. Under User Type, select **Group Upload User**.

Configure the Mart Portal



The screenshot shows a dialog box titled "Add User" with a close button (X) in the top right corner. It contains the following elements:

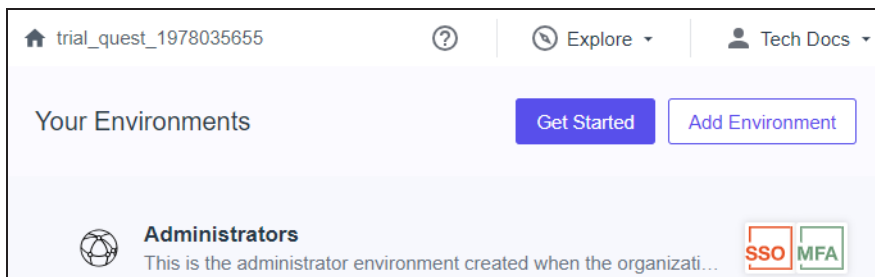
- A "User Type" dropdown menu with "Group Upload User" selected.
- A dashed box containing the text "Drag and drop a LDAP file here or click to add" and a small cloud icon.
- A "Group Users" text input field.
- An "Email Address" text input field.
- Two buttons at the bottom right: "CANCEL" and "SUBMIT".

6. Drag and drop the CSV file that you downloaded in step 1.
7. Under Group Users, select the required groups.
8. Click **Submit**.

SAML with PingIdentity

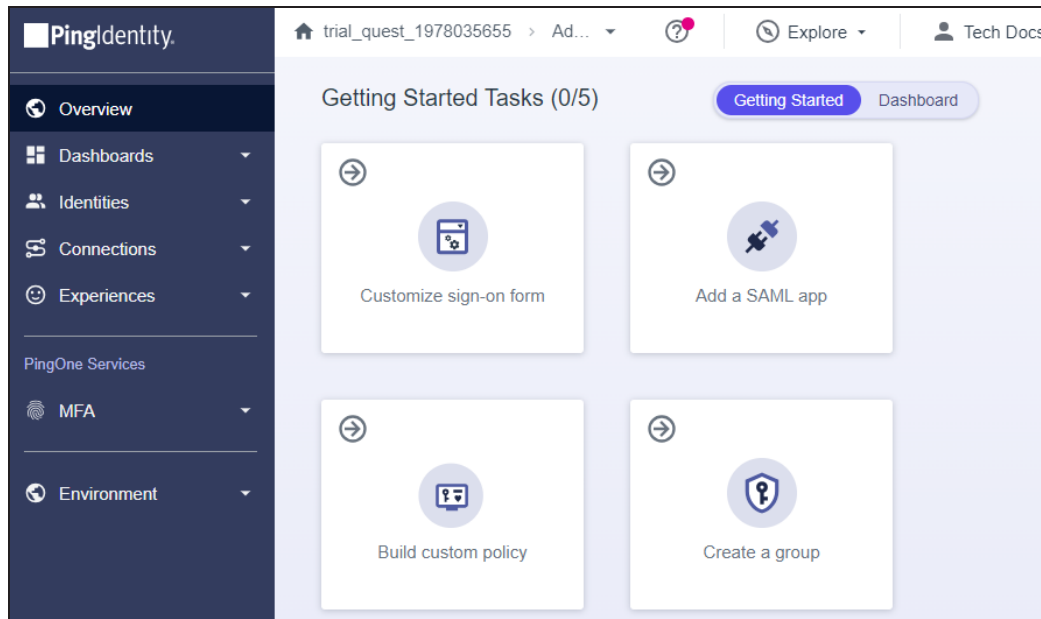
To configure AzureAD SAML for erwin Mart Portal authentication, follow these steps:

1. Log in to PingIdentity Console.




2. Click Administrators to set up your environment.

Configure the Mart Portal



3. Click **Identities** > **Users** > .

Configure the Mart Portal

 Add User

Given Name

Family Name

Username *

Email


Require Email to be Verified

Population *

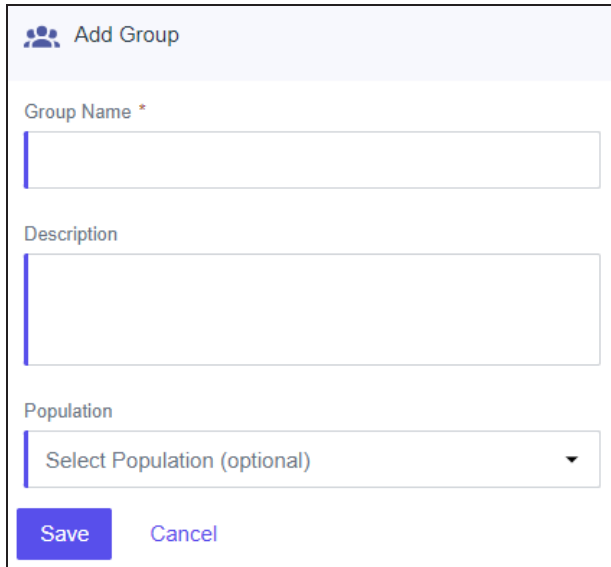
Authoritative Identity Provider ?

Password

[Generate Password](#)

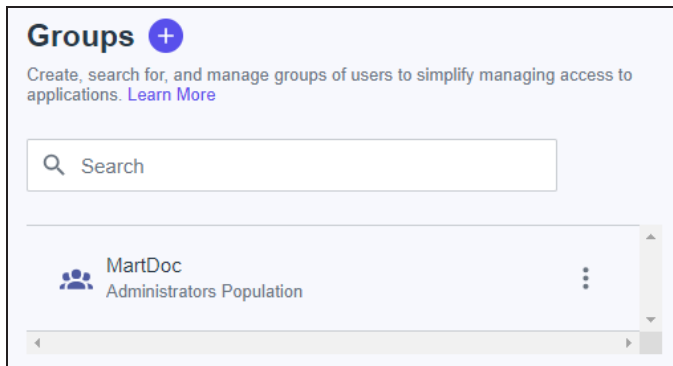
4. Enter user's information and click **Save**.
5. Click **Identities** > **Groups** > .

Configure the Mart Portal



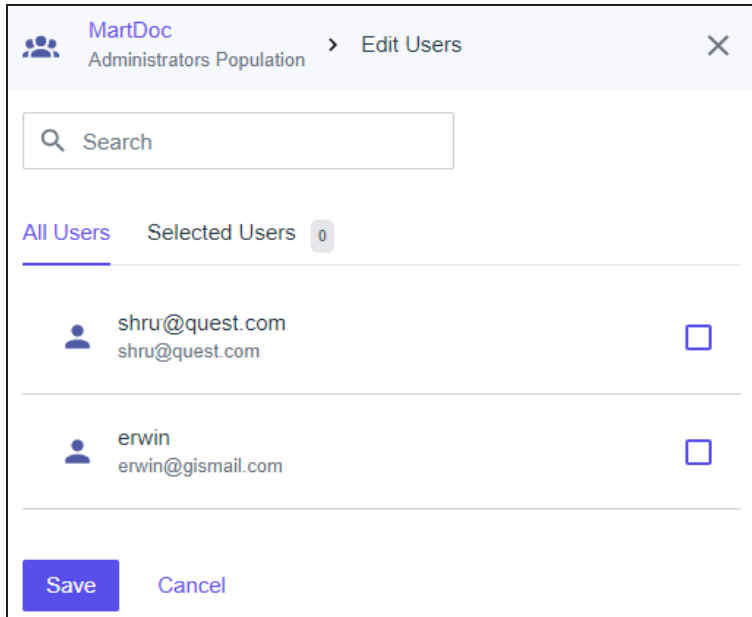
The screenshot shows the 'Add Group' form. At the top, there is a header with a group icon and the text 'Add Group'. Below this, there are three input fields: 'Group Name *' (a required text field), 'Description' (a larger text area), and 'Population' (a dropdown menu with the text 'Select Population (optional)' and a downward arrow). At the bottom of the form, there are two buttons: 'Save' (in blue) and 'Cancel'.

6. Enter **Group Name** and select **Population**.
7. Click **Save**.



8. Click **⋮**. Then, click **Add/Remove Users**.

Configure the Mart Portal



9. Select the users that you want to add to your group and click **Save**.
10. Click **Connections > Applications > +**.

Configure the Mart Portal

Add Application

Application Name *

Description

Icon

Max Size 1.0 MB

Application Type Show Details

Select an option below or view the [Application Catalog](#) to use a templated integration. If you can't find what you need in the catalog, consider SAML or OIDC to get started.

11. Enter an **Application Name**.
12. Click **SAML Application** and click **Save**.

Add Application

SAML Configuration

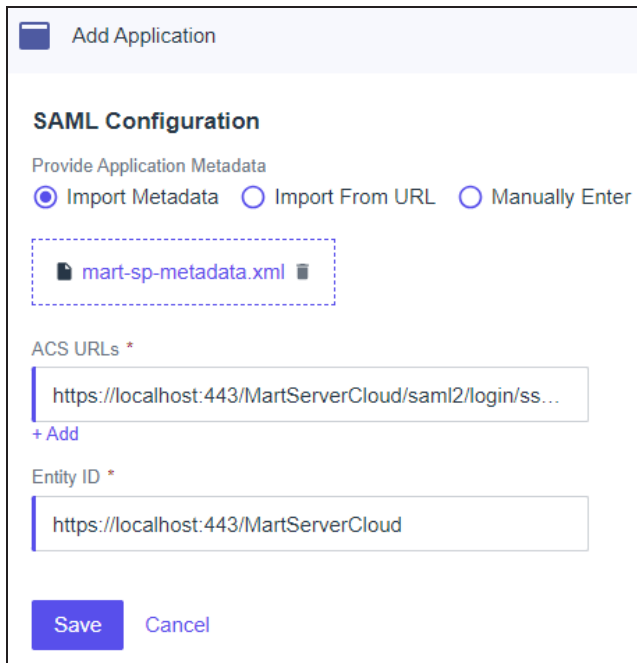
Provide Application Metadata

Import Metadata Import From URL Manually Enter

Select a file

Configure the Mart Portal

13. Click **Import Metadata** and select the file that you downloaded (**erwin Mart Portal Configuration > Authentication tab > Download SP Metadata**) during erwin Mart Portal configuration.



Add Application

SAML Configuration

Provide Application Metadata

Import Metadata Import From URL Manually Enter

mart-sp-metadata.xml

ACS URLs *

https://localhost:443/MartServerCloud/saml2/login/ss...

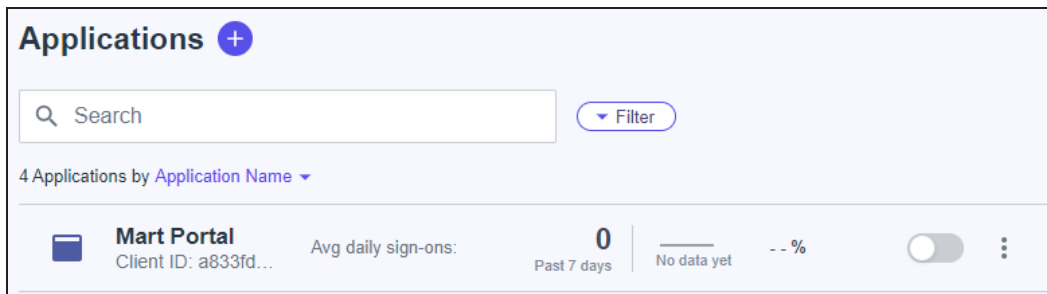
+ Add

Entity ID *

https://localhost:443/MartServerCloud

Save **Cancel**

14. Click **Save**.



Applications +

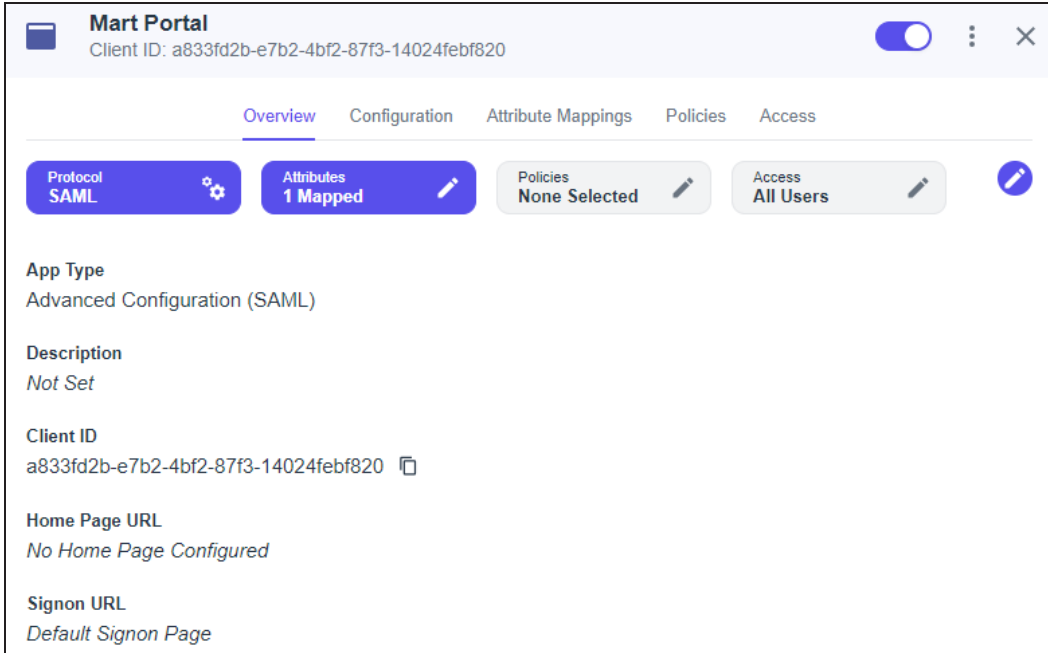
Search Filter

4 Applications by Application Name

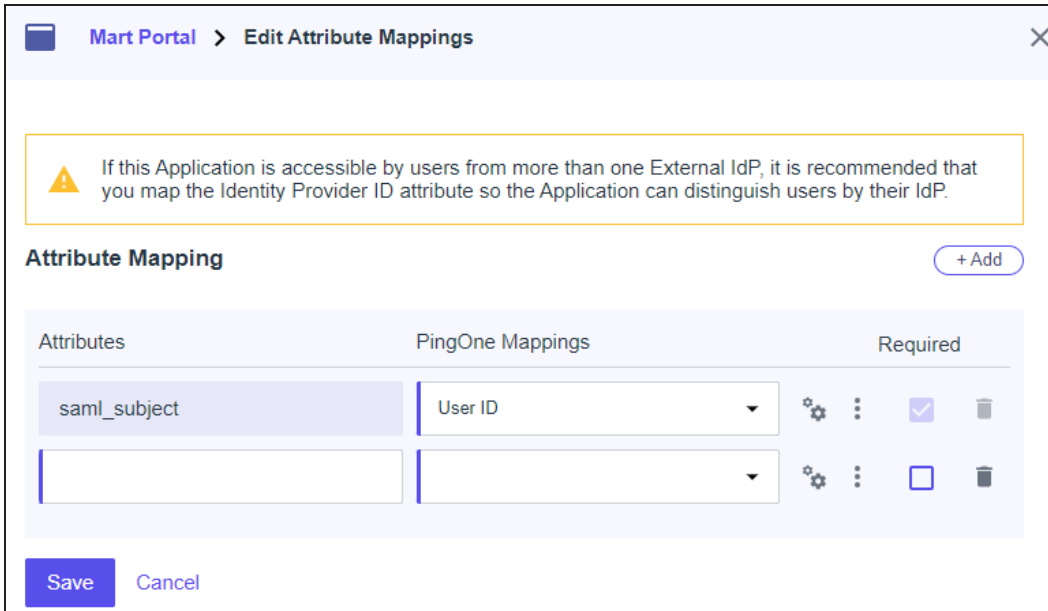
Mart Portal Client ID: a833fd...	Avg daily sign-ons: 0 Past 7 days	No data yet -- %	<input type="checkbox"/>	⋮
--	---	------------------	--------------------------	---

15. Click against your application name to enable user access to your application.
16. In the list of applications, click your application name.

Configure the Mart Portal



17. Click **Attribute Mappings** >  > **Add**.



18. Add another attribute and map as shown in the following image.

Configure the Mart Portal

Mart Portal > Edit Attribute Mappings

You map the identity provider's attributes to the application's attributes so that the application can distinguish users by their attributes.

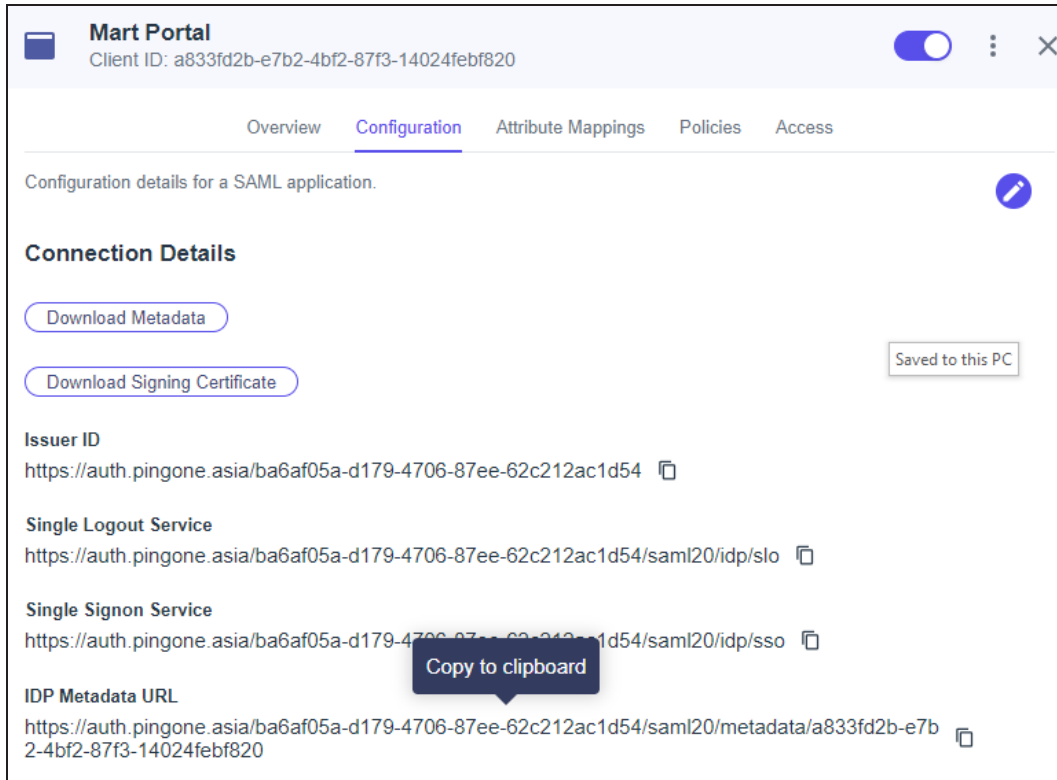
Attribute Mapping + Add

Attributes	PingOne Mappings	Required
saml_subject	User ID	<input checked="" type="checkbox"/>
email	Email Address	<input type="checkbox"/>
group	Group Names	<input type="checkbox"/>

Save Cancel

19. Click **Save**.
These attributes will be used on the erwin Mart Portal Configuration screen.
20. Click **Configuration**.

Configure the Mart Portal



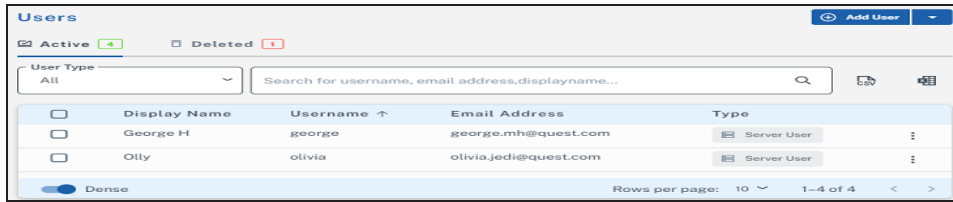
21. Copy and note the **IDP Metadata URL**.
22. During erwin Mart Portal configuration, on the Authentication tab, for SAML, follow these steps:
 1. Select URL and paste the URL copied in step 22 in the **MetaData XML** field.
 2. In the Group Attribute Name and User Email Attribute Name, enter appropriate attribute created in step 18.


Adding Groups in erwin Mart Portal

To add your PingIdentity SAML groups to erwin Mart Portal, follow these steps:

1. Create a CSV file with all your groups.
2. Log in to erwin Mart Portal as administrator.
3. Go to **Application Menu > Users**.
The Users page appears.

Configure the Mart Portal

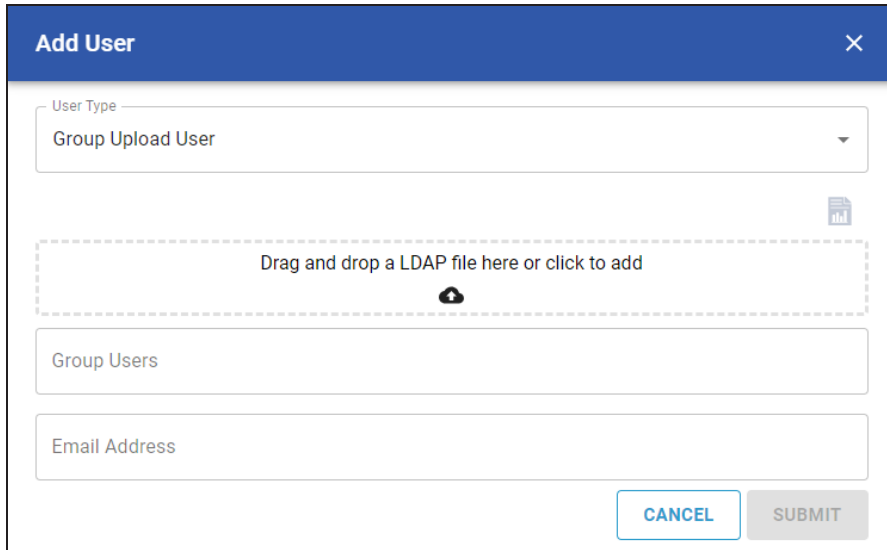


4. Click .
The Add User page appears.

The screenshot shows the 'Add User' form. It has a 'Back' button and a 'Save' button. The form is divided into two main sections: 'Picture' and 'Details'.
The 'Picture' section contains a 'User Type' dropdown menu set to 'Server User' and a large circular area with a camera icon for uploading a profile picture. Below this, there is text: 'Drag and Drop or Select a file', 'Allowed *.jpeg, *.jpg, *.jif, *.png. Max size of 1MB', and 'A default image is set automatically when there is no image.'
The 'Details' section contains several input fields: 'Username' (placeholder: Enter Username), 'Display Name' (placeholder: Enter DisplayName), 'Email Address' (placeholder: Enter EmailAddress, with an envelope icon), 'Confirm Email Address' (placeholder: Enter Confirm email Address, with an envelope icon), and 'Password' (placeholder: Enter Password, with a lock icon). At the bottom of the 'Details' section, there is a checked checkbox labeled 'User must change password at next logon'.

5. Under User Type, select **Group Upload User**.

Configure the Mart Portal



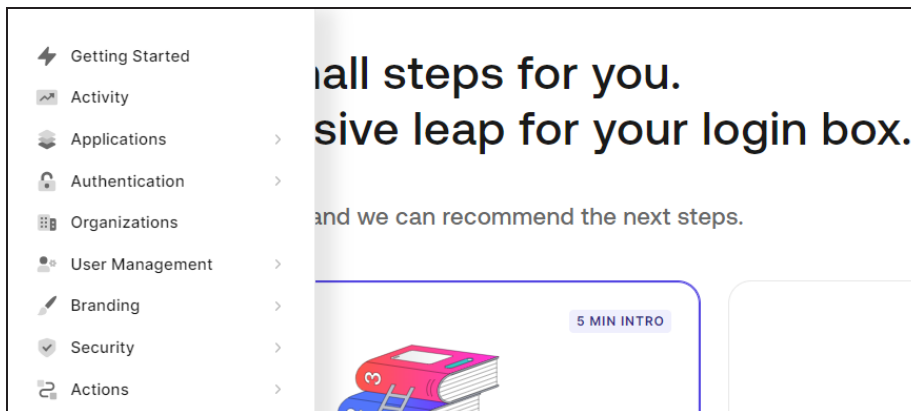
The screenshot shows a dialog box titled "Add User" with a close button (X) in the top right corner. Inside the dialog, there is a "User Type" dropdown menu currently set to "Group Upload User". Below this is a dashed box containing the text "Drag and drop a LDAP file here or click to add" and a small cloud icon. Underneath the dashed box are two input fields: "Group Users" and "Email Address". At the bottom right of the dialog are two buttons: "CANCEL" and "SUBMIT".

6. Drag and drop the CSV file that you created in step 1.
7. Under Group Users, select the required groups.
8. Click **Submit**.

SAML with Okta

To configure SAML with Okta for erwin Mart Portal authentication, follow these steps:

1. Log in to Okta environment.



2. Click **Applications > Applications > Create Application**.


Configure the Mart Portal

Create application ✕

Name *

You can change the application name later in the application settings.


Choose an application type



Native

Mobile, desktop, CLI and smart device apps running natively.


e.g.: iOS, Electron, Apple TV apps



Single Page Web Applications

A JavaScript front-end app that uses an API.


e.g.: Angular, React, Vue



Regular Web Applications

Traditional web app using redirects.

e.g.: Node.js Express, ASP.NET, Java, PHP



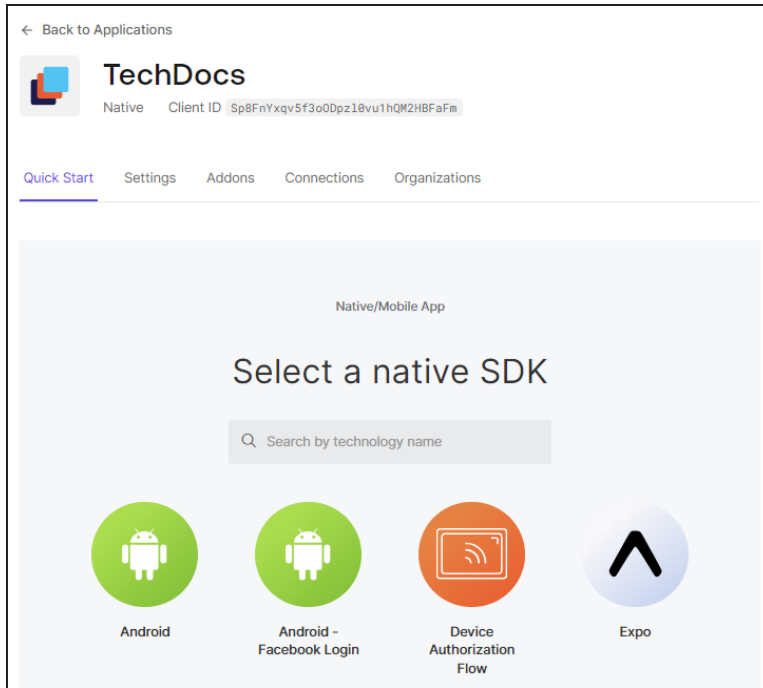
Machine to Machine Applications

CLIs, daemons or services running on your backend.

e.g.: Shell script

3. Enter **Name** for your application.
4. Under application type, select **Regular Web Applications**.
5. Click **Create**.

Configure the Mart Portal



6. Click **Addons** > **SAML2 Web App**.

Configure the Mart Portal

Addon: SAML2 Web App ✕

Settings Usage

SAML Protocol Configuration Parameters

- SAML Version: 2.0
- Issuer: `urn:dev-6jtub654067xyi4o.us.auth0.com`
- Identity Provider Certificate: [Download Auth0 certificate](#)
- Identity Provider SHA1 fingerprint:
`F0:57:C4:37:C9:16:1D:43:72:FB:C8:47:E4:C9:30:62:BF:9C:B3:29`
- Identity Provider Login URL: <https://dev-6jtub654067xyi4o.us.auth0.com/samlp/Sp8FnYxqv5f3oODpzi0vu1hQM2HBFaFm>
- Identity Provider Metadata: [Download](#)

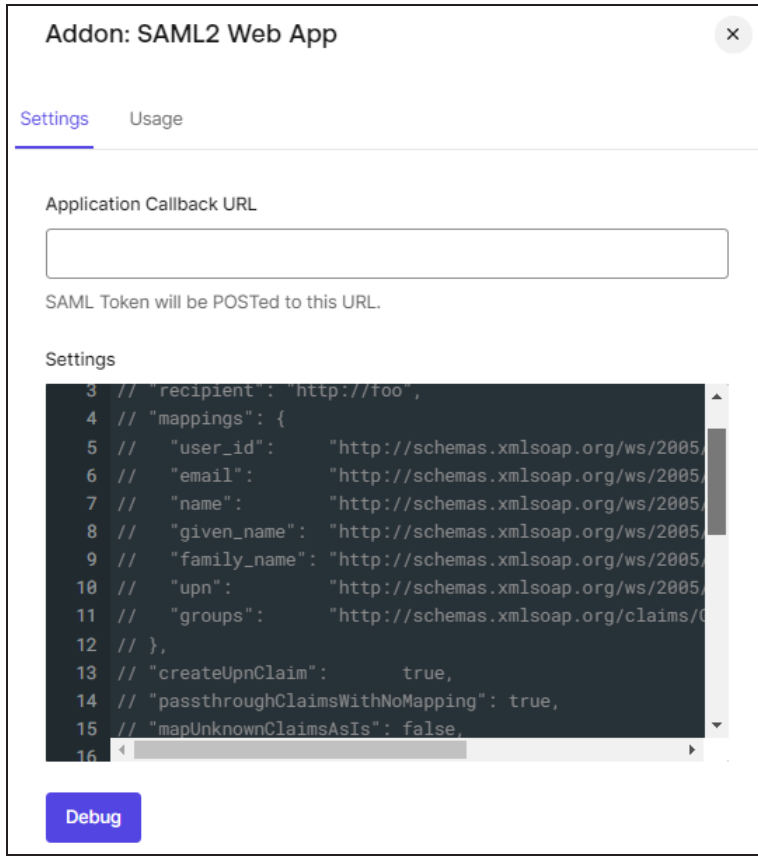
Alternatively, you can add a connection parameter:

- <https://dev-6jtub654067xyi4o.us.auth0.com/samlp/Sp8FnYxqv5f3oODpzi0vu1hQM2HBFaFm?connection=google-oauth2>
- <https://dev-6jtub654067xyi4o.us.auth0.com/samlp/Sp8FnYxqv5f3oODpzi0vu1hQM2HBFaFm?connection=Username-Password-Authentication>

In this case, Auth0 will redirect users to the specified `connection` and will not display the Login Widget. Make sure you send the SAMLRequest using `HTTP POST`.

7. Click **Settings**.

Configure the Mart Portal

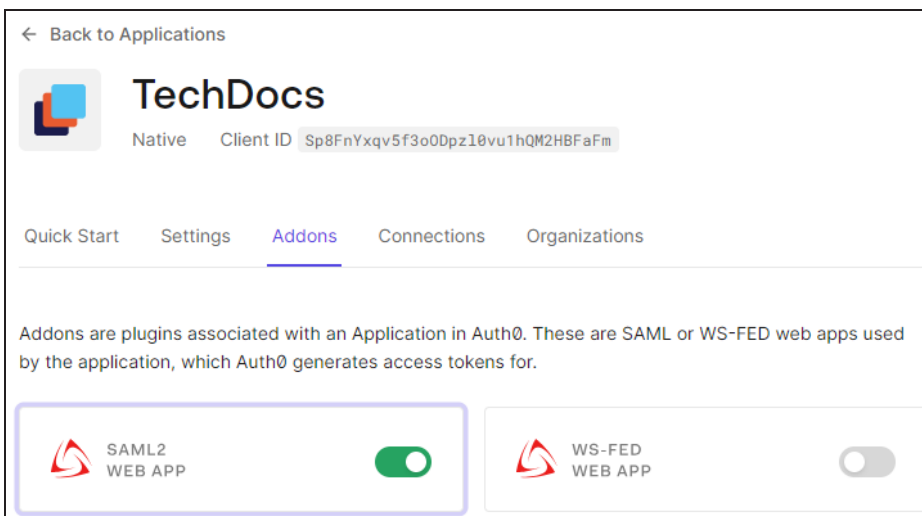


8. Uncomment line number 4, 6, 11, and 12.
9. Download the SP Metadata file (**erwin Mart Portal**) **Configuration** > **Authentication** > **Download SP Metadata** and open it in any text editor and copy the URL in the last line as highlighted in the following image.

Configure the Mart Portal

```
b2Z0d2FyZTEOMAwGA1UECwWFZlZj3aW4xDjAMBGNVBAAMBEWYd21uMSAwHgYJKoZIhvcNAQkBFhFz
dXBwb3J0QHF1ZXN0LmNvbTAEFw0yMzAzMTMxMjU2NDZaFw0yNDZaMTIzMDQwQSwCQYD
VQQGEWJlZlMakGA1UECAwCQ0ExFDASBgNVBACMC0FsaXNvIFZpZPwVRowFQYDVQQKDA5RdWVz
dCBTb2Z0d2FyZTEOMAwGA1UECwWFZlZj3aW4xDjAMBGNVBAAMBEWYd21uMSAwHgYJKoZIhvcNAQkB
FhFzdBXBwb3J0QHF1ZXN0LmNvbTCCASlWdQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAMxdWbVz
3B10V0+v28BKb3UgksXUF+hMIzG9VrV726LuxtdWp2tI991MR5pSNm3xgpBdk2Rrgg7q7kLGYe
MMzWIsqgA8GhU25M/x0ZaZqIYQAVvtOe9QwDghYYZ2s4K47xFRMp9FUYcwjapfS1fFHWiiccm3WP
3zNOW6JxtDUo5xt9H7x1v0r9a+Lpet8uH55bCvY5TyKS2XYtBnXj2RXLjwqQ5av96v8X4b0nKD
q0Hzm0/R6bGTdbNoTo64osNOxxvLDzHU8fBkWRtIjMFEPlv7Xo04oX4Lp1fNYcoyju1bfcf6EvG/
FuY8eOECIZ71twsUGcmLGMWYntKvNFqQCAWEAATANBgkqhkiG9w0BAQsFAAOCAQEAI+xpwdNLGbV
vCo27mhg9Giy8396kSve7iCX/Ahg6+gZUq9uPpDFhpqBqBprczimQ/Z1fXB4CeRXiZWMTNw6pzK
U+X9Es/Nqc+QzduqagxofpXXFNipAWSXz9K95mNFVfYcR+JwuC00ylofLZZDyNacOnD1D8F6RtOj
xxqS8lUI8qJ7doJB7XHFgnjZ5Hunqr/owlaBtX6keJGFaQmWt79qDOZFbmvk5g3dUon7487WbZM
AFOA4H17m2pCeWfa+RUKBCRjPjt8byg0fLXRO24yG1+yDH+sazq5pq3EbTz119u7ZrNEK6ad70x
zcr991NFs/DqooegQKJV4LKgdQ==
</ds:X509Certificate></ds:X509Data></ds:KeyInfo></md:KeyDescriptor><md:SingleLogoutService Binding=
"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST" Location=
"https://localhost:443/MartServerCloud/saml2/SingleLogout"/><md:SingleLogoutService Binding=
"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location=
"https://localhost:443/MartServerCloud/saml2/SingleLogout"/><md:NameIDFormat>
urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress</md:NameIDFormat><md:NameIDFormat>
urn:oasis:names:tc:SAML:2.0:nameid-format:transient</md:NameIDFormat><md:NameIDFormat>
urn:oasis:names:tc:SAML:2.0:nameid-format:persistent</md:NameIDFormat><md:NameIDFormat>
urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified</md:NameIDFormat><md:NameIDFormat>
urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName
</md:NameIDFormat><md:AssertionConsumerService Binding=
"urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST" Location=
"https://localhost:443/MartServerCloud/saml2/login/sso/saml2-mart" index="0"/>
<md:AssertionConsumerService Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Artifact" Location=
"https://localhost:443/MartServerCloud/saml2/saml2/login/sso/saml2-mart" index="1"/>
</md:SPSSODescriptor></md:EntityDescriptor>
```

- On the Addon: SAML2 Web App screen, paste the copied URL in the **Application Call-back URL** field.
- Scroll down and click **Enable**. Then, click **Save**.



- On the menu, click **User Management > Users > Create Users**.

Configure the Mart Portal

Create user ✕

Email *

email@example.com

"email" must be a valid email

Password *

Repeat Password *

Connection *

Username-Password-Authentication

Cancel Create

13. Enter appropriate values to the required fields and click **Create**.
14. On the menu, click **User Management > Users > Roles > Create Roles**.

New Role ✕

Name *

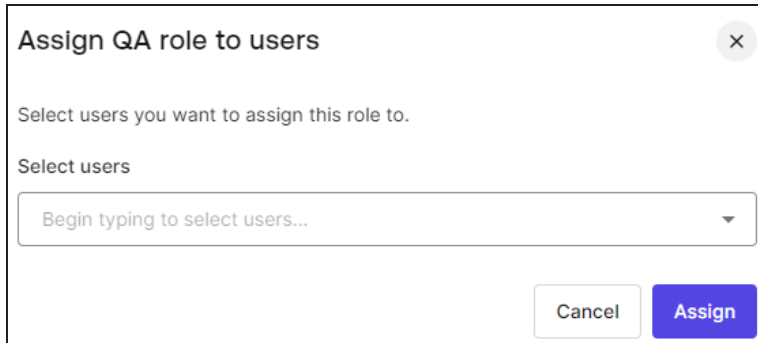
|

Description *

Cancel Create

15. Enter appropriate values to the required fields and click **Create**. Then, click **Save**.
16. On the Roles page, click ⋮. Then, click **Assign To Users**.

Configure the Mart Portal



The screenshot shows a dialog box titled "Assign QA role to users" with a close button (X) in the top right corner. Below the title, there is a text prompt: "Select users you want to assign this role to." Underneath this is a section labeled "Select users" which contains a search input field with the placeholder text "Begin typing to select users...". At the bottom right of the dialog, there are two buttons: a white "Cancel" button and a blue "Assign" button.

17. Under Select Users, select the required user and click **Assign**.
18. On the Users page, click a user.
19. On the Details tab, scroll to the Metadata section.

Configure the Mart Portal

Metadata

user_metadata

```
1 {  
2  
3 }
```

Data that the user has read/write access to (e.g. color_preference, blog_url, etc.)

app_metadata

```
1 {  
2  
3 }
```

Data that the user has read-only access to (e.g. roles, permissions, vip, etc)

[Save](#)

20. Under app_metadata, add the following and click **Save**.
- ```
"groups": [
 "QA",
 "Modeler"
]
```

## Configure the Mart Portal

```
app_metadata
1 {
2 "groups": [
3 "QA",
4 "Modeler"
5]
6 }
7 }
```

Data that the user has read-only access to (e.g. roles, permissions, vip, etc)

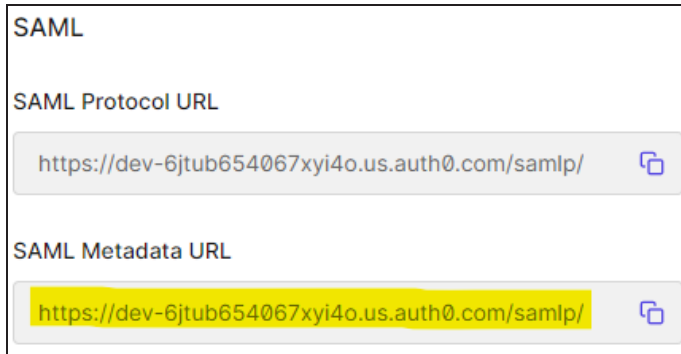
21. On the menu, click **Applications > Applications** and open your application.
22. Scroll down to the Advanced Settings section.

The screenshot shows the 'Advanced Settings' interface for an application. The 'Application Metadata' tab is selected, showing a list of tabs: Application Metadata, Device Settings, OAuth, Grant Types, WS-Federation, Certificates, and Endpoints. Below the tabs, there is a descriptive text: 'Application metadata are custom string keys and values (max 255 characters each), set on a per application basis. Metadata is exposed in the `Client` object as `client_metadata`, and in Rules as `context.clientMetadata`'. Underneath, there is a 'Metadata' section with two input fields labeled 'Key' and 'Value', and a '+ Add' button. Below the input fields, it says '10 metadata slots free'. A table with columns 'Key' and 'Value' is shown, but it is empty, with a message 'There is no metadata' at the bottom.

23. Click **Endpoints** and scroll to the **SAML** section.

## Configure the Mart Portal

---



SAML

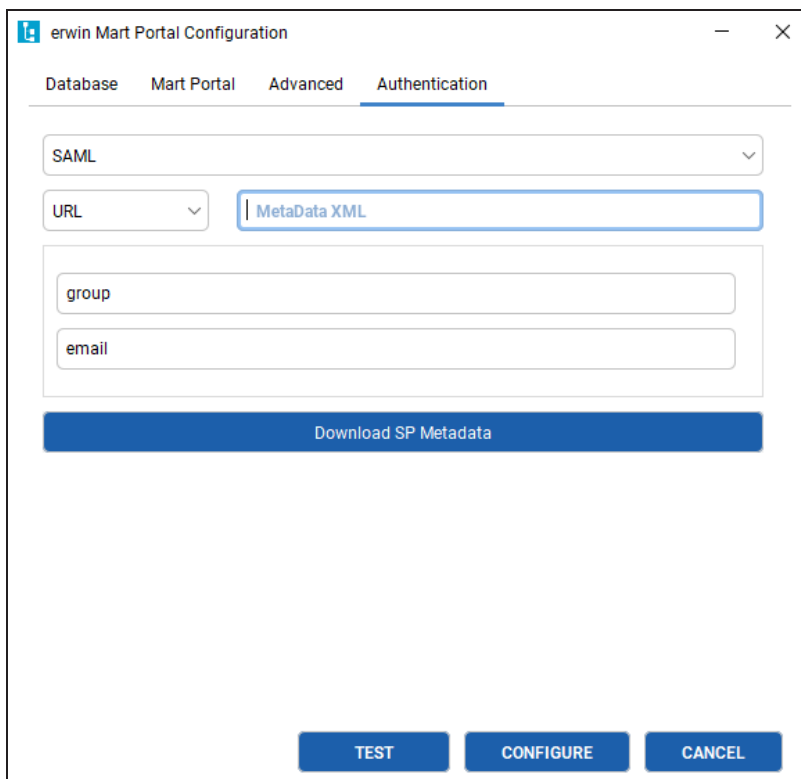
SAML Protocol URL

`https://dev-6jtub654067xyi4o.us.auth0.com/samlp/`

SAML Metadata URL

`https://dev-6jtub654067xyi4o.us.auth0.com/samlp/`

24. Copy the **SAML Metadata URL**.
25. On the **erwin Mart Portal Configuration** screen, click the **Authentication** tab.



erwin Mart Portal Configuration

Database Mart Portal Advanced **Authentication**

SAML

URL

group

email

Download SP Metadata

TEST CONFIGURE CANCEL

26. Enter values as follows:
  - a. In the MetaData XML field, paste the copied SAML Metadata URL.
  - b. In your Okta Auth0 environment, open your application and click **Addons**.

## Configure the Mart Portal

---

- c. Click **SAML2 Web App > Settings**.
- d. Copy the email and groups values.

```
Settings
1 {
2 "mappings": {
3 "email": "http://schemas.xmlsoap.org/ws/2005/05/identi
4 "groups": "http://schemas.xmlsoap.org/claims/Group"
5 }
6 }
```

- e. Paste the copied values in the email and group fields of erwin Mart Portal Configuration screen respectively.

## SAML with WSO2

To configure WSO2 SAML for erwin Mart Portal authentication, follow these steps:

1. Download WSO2 Identity Server [here](#).
2. Extract the installer and open the extracted folder.
3. Run command prompt and run the `wso2server.bat` command.

Ensure that the JAVA\_HOME environment variable is path is configured.

4. Copy the Mgt Console URL, highlighted in the following image.

## Configure the Mart Portal

```
[2023-08-17 16:35:32,097] [] INFO {org.wso2.carbon.humantask.core.HumanTaskSchedulerInitializer} - Starting HumanTasks Scheduler
[2023-08-17 16:35:32,106] [] INFO {openjpa.Runtime} - Starting OpenJPA 2.2.0-wso2v1
[2023-08-17 16:35:32,106] [] INFO {openjpa.jdbc.JDBC} - Using dictionary class "org.apache.openjpa.jdbc.sql.H2Dictionary".
[2023-08-17 16:35:32,150] [] INFO {org.wso2.carbon.core.transports.http.HttpTransportListener} - HTTP port : 9763
[2023-08-17 16:35:32,816] [] INFO {org.wso2.carbon.core.transports.http.HttpTransportListener} - HTTPS port : 9443
[2023-08-17 16:35:32,817] [] INFO {org.wso2.carbon.bpel.core.ode.integration.BPELSchedulerInitializer} - Starting BPS Scheduler
[2023-08-17 16:35:32,979] [] INFO {openjpa.Runtime} - Starting OpenJPA 2.2.0-wso2v1
[2023-08-17 16:35:32,981] [] INFO {openjpa.jdbc.JDBC} - Using dictionary class "org.apache.openjpa.jdbc.sql.H2Dictionary" (H2 2.1.210 (2022-01-21,210 (2022-01-17))
[2023-08-17 16:35:33,032] [] INFO {org.wso2.carbon.core.internal.StartupFinalizerServiceComponent} - Server : WS02 Identity Server-
[2023-08-17 16:35:33,034] [] INFO {org.wso2.carbon.core.internal.StartupFinalizerServiceComponent} - WS02 Carbon started in 50 sec
[2023-08-17 16:35:33,050] [] INFO {org.wso2.carbon.healthcheck.api.core.internal.HealthMonitorServiceComponent} - Carbon health monitoring ser
[2023-08-17 16:35:33,634] [] INFO {org.wso2.carbon.ui.internal.CarbonUIServiceComponent} - Mgt Console URL : https://localhost:9443/carbon/!
[2023-08-17 16:35:34,045] [] INFO {org.wso2.identity.apps.common.internal.AppsCommonServiceComponent} - My Account URL : https://localhost:944
[2023-08-17 16:35:34,046] [] INFO {org.wso2.identity.apps.common.internal.AppsCommonServiceComponent} - Console URL : https://localhost:9443/c
[2023-08-17 16:35:34,047] [] INFO {org.wso2.identity.apps.common.internal.AppsCommonServiceComponent} - Identity apps common service component
lly.
[2023-08-17 16:35:34,308] [] INFO {org.wso2.callhome.CallHomeExecutor} -
.....
The latest update level is 'wso2is-6.1.0.54'.
This consists of 91 updates
applied on top of 'wso2is-6.1.0.0'
[WARNING]
The update level
'wso2is-6.1.0.54' consists of 24 critical security updates applied on top of
'wso2is-6.1.0.0'.
WSO2 strongly recommends to use 'wso2is-6.1.0.54'
distribution in production as soon as possible.
```

5. Open the URL in a web browser and log in using the following credentials:

- **username:** admin
- **password:** admin

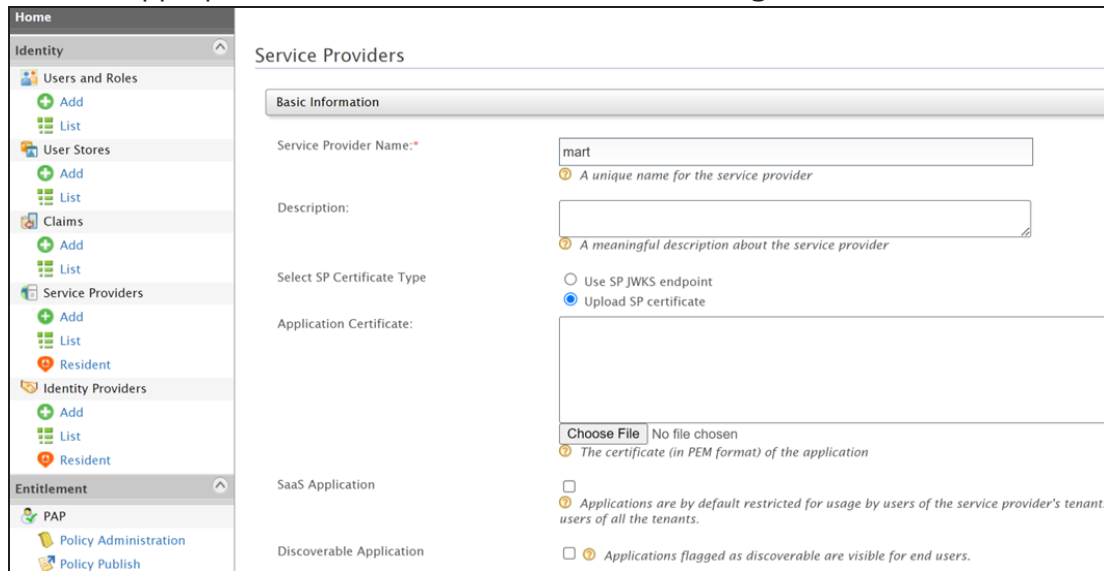
6. Under Service Providers, click **Add**.

The screenshot shows the WSO2 Identity Management console interface. On the left is a navigation menu with categories: Identity, Users and Roles, User Stores, Claims, and Service Providers. The 'Service Providers' section is expanded, showing 'Add', 'List', 'Resident', and 'Add' buttons. The main content area is titled 'Add New Service Provider' and contains the following fields:

- Select Mode:** Radio buttons for 'Manual Configuration' (selected) and 'File Configuration'.
- Basic Information:**
  - Service Provider Name:** A text input field with a red asterisk and a tooltip: 'A unique name for the service provider'.
  - Description:** A text area with a tooltip: 'A meaningful description about the service provider'.
  - Management Application:** A checkbox with a tooltip: 'If this is enabled, the application can be used to access the server management APIs.'
- Buttons:** 'Register' and 'Cancel' buttons at the bottom.

## Configure the Mart Portal

7. Enter an appropriate Service Provider Name and click **Register**.



The screenshot shows the 'Service Providers' configuration page. The left sidebar contains navigation options: Home, Identity (Users and Roles, User Stores, Claims, Service Providers), and Entitlement (PAP, Policy Administration, Policy Publish). The main content area is titled 'Service Providers' and has a 'Basic Information' tab. The form includes the following fields and options:

- Service Provider Name:** A text input field containing 'mart'. A tooltip below it reads: 'A unique name for the service provider'.
- Description:** A text area. A tooltip below it reads: 'A meaningful description about the service provider'.
- Select SP Certificate Type:** Two radio button options: 'Use SP JWKS endpoint' (unselected) and 'Upload SP certificate' (selected).
- Application Certificate:** A file upload area. The current state is 'Choose File | No file chosen'. A tooltip below it reads: 'The certificate (in PEM format) of the application'.
- SaaS Application:** A checkbox (unselected). A tooltip below it reads: 'Applications are by default restricted for usage by users of the service provider's tenant, users of all the tenants.'
- Discoverable Application:** A checkbox (unselected). A tooltip below it reads: 'Applications flagged as discoverable are visible for end users.'

8. Click Upload SP certificate and upload the myerwin.mart.crt file available at C:\Program Files\erwin\Mart Portal\Apache\.



## Configure the Mart Portal

Select SP Certificate Type

Use SP JWKS endpoint  
 Upload SP certificate

Application Certificate:

```
-----BEGIN CERTIFICATE-----
MIIDnzCCAocCFD8SioPOB1Vqb8sxm1R6/BfVGTtyMA0GCSqGSIb3DQEBCwUAMIGL
MQswCQYDVQQGEwJVUzELMAkGA1UECAwCQ0ExFDASBgNVBAcMC0FsaXNvIFZpZwpu
MRcwFQYDVQQKDA5RdWVzdCBTb2Z0d2FyZTEOMAwwGA1UECwwFZXJ3aW40xjAMBGNV
BAMBBWVyd21uMSAwHgYJKoZIhvcNAQkBFhFzdXBw3J0QHF1ZXN0LmNvbTAeFw0y
MzAzMTMxMjU2NDZaFw0yNDZaMTIxMjU2NDZaMIGLMQswCQYDVQQGEwJVUzELMAkG
A1UECAwCQ0ExFDASBgNVBAcMC0FsaXNvIFZpZwpuMRcwFQYDVQQKDA5RdWVzdCBT

```

myerwin.mart.crt

The certificate (in PEM format) of the application

SaaS Application

Applications are by default restricted for usage by users of the service provider's users of all the tenants.

Discoverable Application

Applications flagged as discoverable are visible for end users.

Access URL

Access URL for the Service Provider

Logo URL

Link to the logo of the Service Provider. A 150x150px or higher square image is r

Logout Return URL or regex

External return to URL during a direct IdP logout

Management Application

If this is enabled, the application can be used to access the server managemen

Claim Configuration

9. Expand Claim Configuration and click **Use Local Claim Dialect**.
10. Click **Add Claim** and add email address and groups.

## Configure the Mart Portal

---

The screenshot displays the 'Claim Configuration' window. At the top, there is a header with an upward arrow and the text 'Claim Configuration'. Below this, the 'Select Claim mapping Dialect:' section has two radio buttons: 'Use Local Claim Dialect' (which is selected) and 'Define Custom Claim Dialect'. The 'Requested Claims:' section features a green plus icon and the text 'Add Claim URI'. Below this, there is a table with a header 'Local Claim' and two rows of dropdown menus. The first dropdown contains 'http://wso2.org/claims/emailaddress' and the second contains 'http://wso2.org/claims/groups'. At the bottom, there are two dropdown menus: 'Subject Claim URI:' with '---Select---' and 'Service Provider Claim Dialect:' with '---Select---'. An 'Add' button is located to the right of the 'Service Provider Claim Dialect:' dropdown.

11. Under Inbound Authentication Configuration, click **SAML2 Web SSO Configuration** > **Configure**.
12. Configure properties as shown in the following image.

## Configure the Mart Portal

### Register New Service Provider

#### Edit Service Provider

**Issuer \***

**Assertion Consumer URLs \***

**Default Assertion Consumer URL \***

**NameID format**

**Certificate Alias**

**Response Signing Algorithm \***

**Response Digest Algorithm \***

**Assertion Encryption Algorithm \***

**Key Encryption Algorithm \***

**Enable Response Signing**

**Enable Signature Validation in Authentication Requests and Logout Requests**

**Enable Assertion Encryption**

**Enable Single Logout**

*SLO Response URL*

*SLO Request URL*

*Logout Method*

**Back-Channel Logout**

**Front-Channel Logout (HTTP Redirect Binding)**

**Front-Channel Logout (HTTP POST Binding)**

**Enable Attribute Profile**

*Include Attributes in the Response Always*

13. Click **Download IDP Metadata**.

14. Click **Register**.

15. Under Users and Roles, click **Add > Add New User**. Then, enter the necessary information.

## Configure the Mart Portal

---

Home > Add User

### Add New User

Step 1: Enter Username and Password

Enter username

Domain

Username\*

Password\*

Confirm Password\*

16. Under Users and Roles, click **Add > Add New Role**. Then, enter the necessary information.

Home > Add New Role

### Add New Role

Step 1: Enter Role Details

Enter role details

Domain

Role Name\*

17. Click **Finish**.

## Configure the Mart Portal

| Name              | Actions                                               |
|-------------------|-------------------------------------------------------|
| admin             | Rename  Permissions  Assign Users  View Users  Delete |
| demo_role         | Rename  Permissions  Assign Users  View Users  Delete |
| Internal/admin    | Assign Users  View Users                              |
| Internal/everyone | Permissions                                           |
| Internal/system   | Rename  Permissions  Assign Users  View Users  Delete |
| martadmin         | Rename  Permissions  Assign Users  View Users  Delete |

18. For the required role, click **Assign Users**.

Home > Users of Role

User List of Role : demo\_role

Enter Username Pattern (\* for all) \*

Unassigned Users

Select all on this page | Unselect all on this page

admin  
 demo  
 sameer

19. Click **Finish**.
20. You can now use these parameters and the IDP metadata file downloaded in step 13 on the Authentication tab while configuring erwin Mart Portal for SSO as shown in the following example image.

## Configure the Mart Portal

The screenshot shows the 'erwin Mart Portal Configuration' dialog box with the 'Authentication' tab selected. The dialog has four tabs: 'Database', 'Mart Portal', 'Advanced', and 'Authentication'. The 'Authentication' tab contains the following elements:

- A dropdown menu set to 'SAML'.
- A 'File' dropdown menu and a text field containing the path 'C:\Users\...erwin\Downloads\metadata.xml'.
- A group box containing two text input fields:
  - The first field contains 'http://wso2.org/claims/groups'.
  - The second field contains 'http://wso2.org/claims/emailaddress'.
- A large blue button labeled 'Download SP Metadata'.
- At the bottom, three blue buttons: 'TEST', 'CONFIGURE', and 'CANCEL'.

# Initializing erwin Mart Portal and erwin ER360

To start using erwin Mart Portal and erwin ER360, you first need to initialize the database. You can initialize the database using a database authenticated user.

Before you proceed, verify that you have installed a DBMS, created the database, and configured Mart Portal. If the application is already initialized, the Login page appears.

## erwin Mart Portal

When you open erwin Mart Portal for the first time, the Initialize Mart page appears.

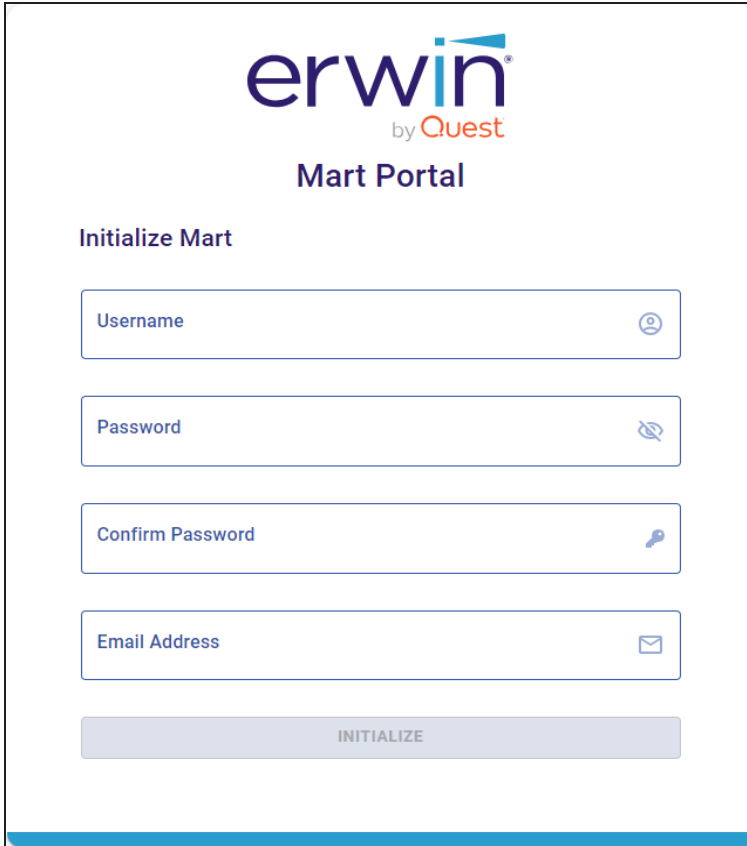
If you are using Mart Portal as a Windows service, ensure that the service is started. If not, from the Windows Start menu, click **erwin > Start as Service** to start the Mart Portal. A Windows command prompt window appears and indicates when the server starts.

To initialize mart, follow these steps:

## Initializing Mart

---

1. On the Windows Start Menu, click **erwin > erwin Mart Portal**.  
erwin Mart Portal opens in your default browser.



The screenshot shows the 'erwin by Quest Mart Portal' initialization page. At the top is the logo 'erwin by Quest' and the title 'Mart Portal'. Below this is the heading 'Initialize Mart'. There are four input fields: 'Username' with a user icon, 'Password' with an eye icon, 'Confirm Password' with a key icon, and 'Email Address' with an envelope icon. At the bottom is a grey button labeled 'INITIALIZE'.

2. Complete the following fields:

### **Username**

Specifies the user name with which you want to access the Mart. If you are using a Windows-authenticated user, enter the name in the <domain name>/<user name> format.

### **Password**

Specifies the password for the user name.

A password should fulfill the following criteria:

- ◆ Contains at least 1 lowercase character
- ◆ Contains at least 1 uppercase character



## Initializing Mart

---

- ◆ Contains at least 1 number
  - ◆ Is minimum 6 characters in length
  - ◆ Is maximum 130 characters in length
- Apart from the above criteria, special characters are optional.

### Confirm Password

Confirms the password that you entered in the previous field.

### Email Address

Specifies the email address for the user account that you are creating.

### 3. Click **Initialize**.

The user name is added as an administrator of Mart, Mart is initialized, and the Login web page appears. Initializing is a one-time task. After initialization, the user who initialized must log in first. Later, any other user who wants to use erwin Mart Portal can log in.

The user name that is entered here is an application level user and not a database user. Remember the password that you have entered here, because without the password you cannot log in to erwin Mart Portal for the first time.

In the previous releases, only a server user was allowed to initialize a Mart. From release r9.6, a Windows-authenticated user can also initialize a Mart. Further, a Windows-authenticated user can log in to a Mart as a Windows user.

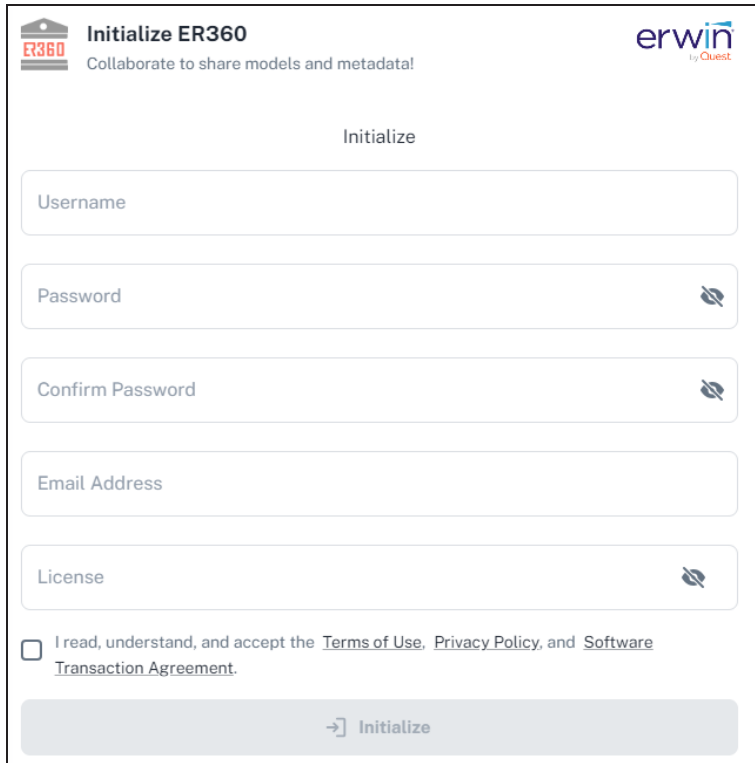
## erwin ER360

When you open erwin ER360 for the first time, the Initialize ER360 page appears.

To initialize erwin ER360, follow these steps:

1. On the Windows Start Menu, click **erwin > erwin ER360**.  
erwin ER360 opens in your default browser.

## Initializing Mart



**Initialize ER360**  
Collaborate to share models and metadata!

erwin  
by Quest

Initialize

Username

Password

Confirm Password

Email Address

License

I read, understand, and accept the [Terms of Use](#), [Privacy Policy](#), and [Software Transaction Agreement](#).

→ Initialize

2. Complete the following fields:

### Username

Specifies the user name with which you want to access the application. If you are using a Windows-authenticated user, enter the name in the <domain name>/<user name> format.

### Password

Specifies the password for the user name.

A password should fulfill the following criteria:

- ◆ Contains at least 1 lowercase character
- ◆ Contains at least 1 uppercase character
- ◆ Contains at least 1 number

## Initializing Mart

---

- ♦ Is minimum 6 characters in length
  - ♦ Is maximum 130 characters in length
- Apart from the above criteria, special characters are optional.

### Confirm Password

Confirms the password that you entered in the previous field.

### Email Address

Specifies the email address for the user account that you are creating.

### License

Specifies your erwin ER360 license code.

If you need help with the license code, contact your license administrator.

You can initialize erwin ER360 with an offline license. For more information on offline licenses, contact [license support](#).

3. Select the terms of use, privacy policy, and software transaction agreement check box.

4. Click **Initialize**.

The user name is added as an administrator of ER360, ER360 is initialized, and the Login page appears. Initializing is a one-time task. After initialization, the user who initialized must log in first. Later, any other user who wants to use erwin ER360 can log in.

## Logging in to erwin Mart Portal and Configuring Settings

After the Mart is initialized, the user who initialized must log in first. When you log in for the first time, configure it according to your requirements. You can configure the following settings:

- Default profile for the model creator
- Default selector for user
- Email notification
- Device tracking

To log in to mart, follow these steps:

1. On the Windows Start Menu, click **erwin > erwin Mart Portal**.

The log in page appears.

2. Enter the credentials with which you initialized the mart and log in.

If you enter an incorrect password five consecutive times, your account will be locked for five minutes (300 seconds) by default. To change the default lock out time, refer to the Change [Default Account Lockout Duration](#) section.

3. On the application menu, click  **Settings**.

4. Complete the following fields:

### Default profile for model creator

Specifies the profile that is assigned to a user on a model. This profile is assigned whenever a user creates a model and saves it to Mart for the first time. The user inherits the permissions of the default profile selected here on the model that is saved. For example, suppose that User1 is assigned with Modeler profile and the System Administrator selects Architect as the default profile for model creator. If User1 creates Model1 and saves it to Mart, for Model1, User1 inherits the permissions of Architect. Now, suppose that the System Administrator selects Viewer as the default profile for model creator, and suppose that User1 creates Model2 and saves it to Mart. For Model2, User1 inherits the permissions of Viewer.

### **Default Selector for User**

Specifies whether the default display selector for users is username, email address, or both. Based on the settings here, users' username and/or email is displayed in the Permissions module.

### **Use SMTP Settings**

Specifies whether SMTP settings are configured for email notification through the application.

### **SMTP host name**

Specifies the name of the SMTP host. Enter the name in the mail.domain.com format. Notification emails are sent from this server.

### **Port number**

Specifies the port number of the SMTP server. The default port number is 25. If your company is using an alternate port number for the mail server, specify that port number.

### **Authenticate**

Specifies whether transactions with the SMTP server are authenticated. Select the check box to authenticate.

### **Use TLS Connection**

Specifies whether transactions with the SMTP server use a Transport layer Security (TLS). If you intend to use a TLS connection, ensure that the User name and Administrator email correspond to each other.

Select this option only if you want to use a TLS connection.

### **Username**

Specifies the user name to authenticate the SMTP server. Select the Authenticate check box to enable authentication.

### **Password**

Specifies the password to authenticate the SMTP server. Select the Authenticate check box to enable authentication.

### **Administrator email**

## Log In to erwin Mart Portal and Configure Settings

---

Specifies the email ID of the Mart administrator. Notifications to Mart users are sent from this ID.

### No-reply email from


Specifies the email ID from which administrative emails such as the password reset email are sent.

### Enable Device Tracking

Specifies whether the devices on which you log in to your mart account are tracked and logged.

5. Click **Submit**.

Mart options are configured.

If SMTP server is not configured, an Administrator can reset a user's password manually via the Users Page. On the Users page, select a user and click . Enter a new password and click **Submit**.

### To log in as a Windows-authenticated user, follow these steps:

This procedure describes how to enable a Windows-authenticated user log in to a Mart that is already initialized. Use this procedure if the Mart is initialized with either a server user or a Windows-authenticated user.

1. In erwin Mart Portal configuration, on the Authentication tab, ensure that you have provided Active Directory details.
2. While adding users, search and add the required user corresponding to the necessary Windows user.

Now, the Windows-authenticated user can log in to erwin Mart Portal by providing the user name in the <domain name>/<user name> format.

A local Windows user who does not belong to an Active Directory group cannot log in to the Mart as a Windows user.

## Use a Pluggable Database

This information applies to Oracle 12c.

You can use the pluggable database concept of Oracle 12c and create multiple Marts of the same Mart release in a single Oracle instance. For example, you can create two pluggable databases erwin\_test and erwin\_production in an Oracle global database erwin. You can

## **Log In to erwin Mart Portal and Configure Settings**

---

configure these databases with the Mart Portal one after the other and connect to one of them at a time.

### **Follow these steps to use multiple pluggable databases:**

1. Create multiple pluggable databases, for example, erwin\_test and erwin\_production.
2. Install erwin Mart Portal for the first pluggable database, for example, erwin\_test.
3. Initialize the Mart for the first pluggable database, erwin\_test. For more information on how to initialize the Mart, see the Initialize an Oracle Mart topic.
4. Log in to the Mart and create the models that you want to store in the test Mart.
5. To use the second pluggable database, follow these steps:
  - a. Stop the Mart Portal or the Mart Portal service.
  - b. Repeat Steps 1, 2, and 3 for the second pluggable database, erwin\_production.
  - c. Start the Mart Portal or the Mart Portal service.
  - d. Log in to the Mart and create the models as required.

## Logging in to erwin ER360 and Configure Settings

After the erwin ER360 is initialized, the user who initialized must log in first. When you log in for the first time, configure it according to your requirements. You can configure the following settings:

- Default user selector
- Email notification
- Device tracking
- Search permissions
- License

To log in to ER360, follow these steps:

1. On the Windows Start Menu, click **erwin** > erwin ER360.

The log in page appears.

2. Enter the credentials with which you initialized ER360 and log in.

If you enter an incorrect password five consecutive times, your account will be locked for five minutes (300 seconds) by default. To change the default lock out time, refer to the Change [Default Account Lockout Duration](#) section.

3. On the application menu, click Settings.
4. Complete the following fields:

### **Default User Selector**

Specifies whether the default display selector for users is username, email address, or both. Based on the settings here, users' username and/or email is displayed in the Permissions module.

### **Use SMTP Settings**

Specifies whether SMTP settings are configured for email notification through the application.

### **SMTP host name**

Specifies the name of the SMTP host. Enter the name in the mail.domain.com format. Notification emails are sent from this server.



### **Port number**

Specifies the port number of the SMTP server. The default port number is 25. If your company is using an alternate port number for the mail server, specify that port number.

### **Authenticate**

Specifies whether transactions with the SMTP server are authenticated. Select the check box to authenticate.

### **Use TLS Connection**

Specifies whether transactions with the SMTP server use a Transport layer Security (TLS). If you intend to use a TLS connection, ensure that the User name and Administrator email correspond to each other.

Select this option only if you want to use a TLS connection.

### **Username**

Specifies the user name to authenticate the SMTP server. Select the Authenticate check box to enable authentication.

### **Password**

Specifies the password to authenticate the SMTP server. Select the Authenticate check box to enable authentication.

### **Administrator email**

Specifies the email ID of the Mart administrator. Notifications to Mart users are sent from this ID.

### **No-reply email from**

Specifies the email ID from which administrative emails such as the password reset email are sent.

### **Enable Device Tracking**

Specifies whether the devices on which you log in to your mart account are tracked and logged.

### **License**

## Logging in to erwin ER360


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Specifies your erwin ER360 license code that you used to initialize the application.

You can change and validate the license code here.

5. Click **Save**.

erwin ER360 options are configured.

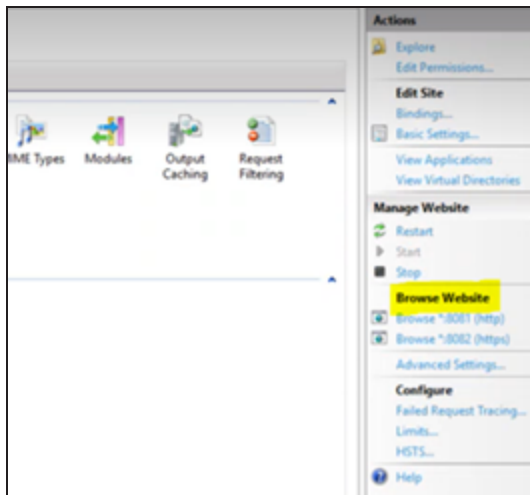
If SMTP server is not configured, an Administrator can reset a user's password manually via the Users Page. On the Users page, select a user and click . Enter a new password and click **Submit**.

## Enabling IIS

In IIS-enabled environments, erwin Mart Portal and the configuration will work automatically.

For environments where IIS is not enabled, to enable IIS, follow these steps:

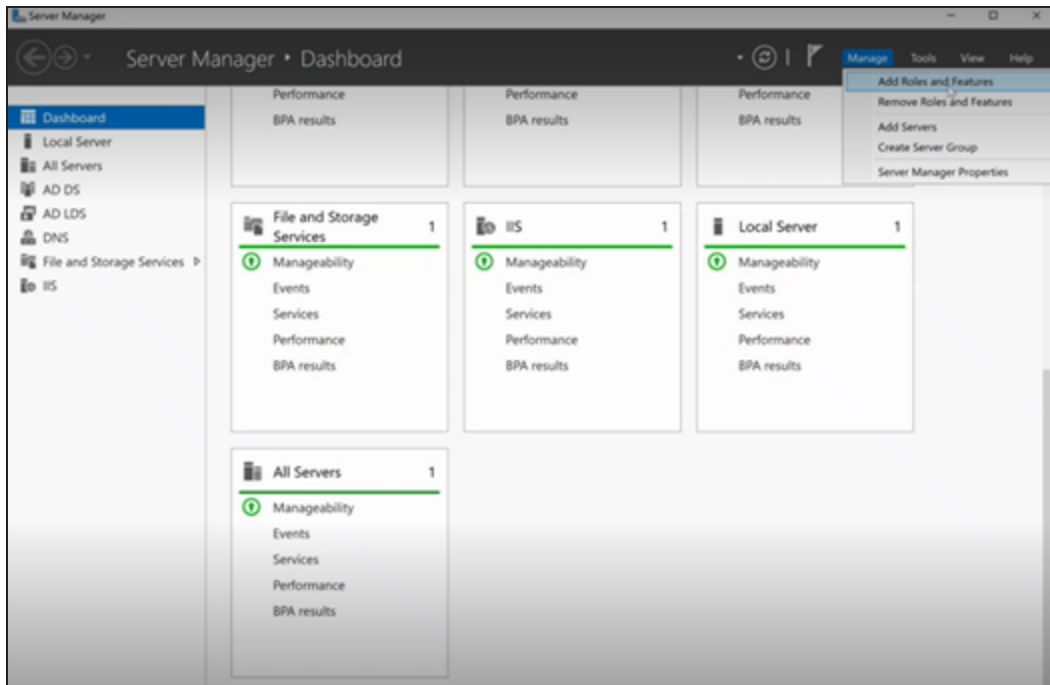
1. On the machine where you have installed and configured erwin Mart Portal, open Internet Information Services (IIS) Manager.
2. Under Browse Website, click the appropriate option.



3. Open Server Manager and click **Manage**.

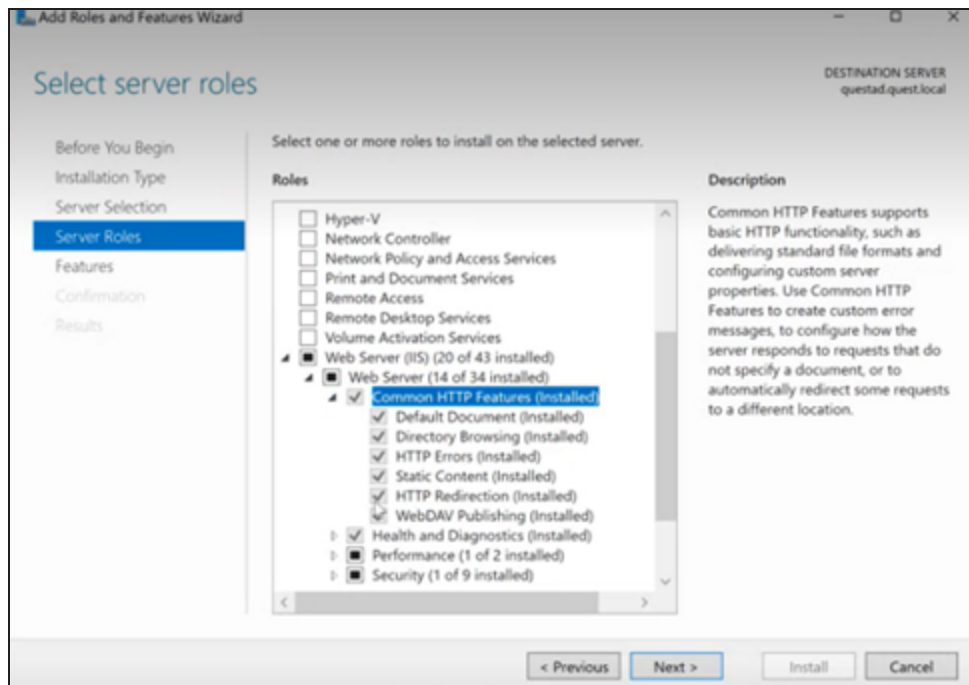
## Logging in to erwin ER360

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### 4. Click **Add Roles and Features**.

The Add Roles and Features Wizard appears.



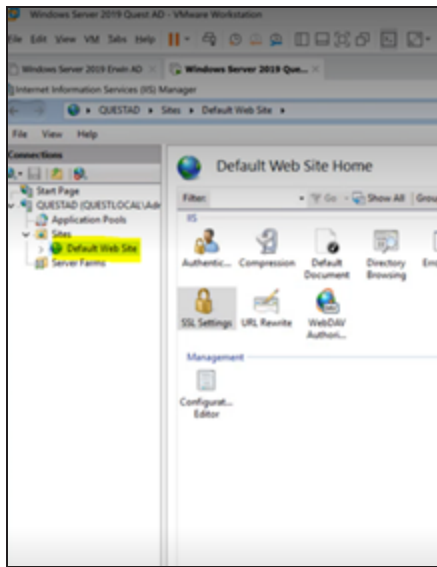
Follow these steps:

1. On the Before you Begin tab, click **Next**.
2. On the Installation Type tab, click **Role-based or Feature-based Installation**.
3. On the Server Selection tab, click **Default**.
4. On the Server Roles tab, select **Web Server (IIS) > Common HTTP Features (Installed)**. Also, ensure that **HTTP Redirection** is selected.
5. Click **Install**.

## Logging in to erwin ER360

---

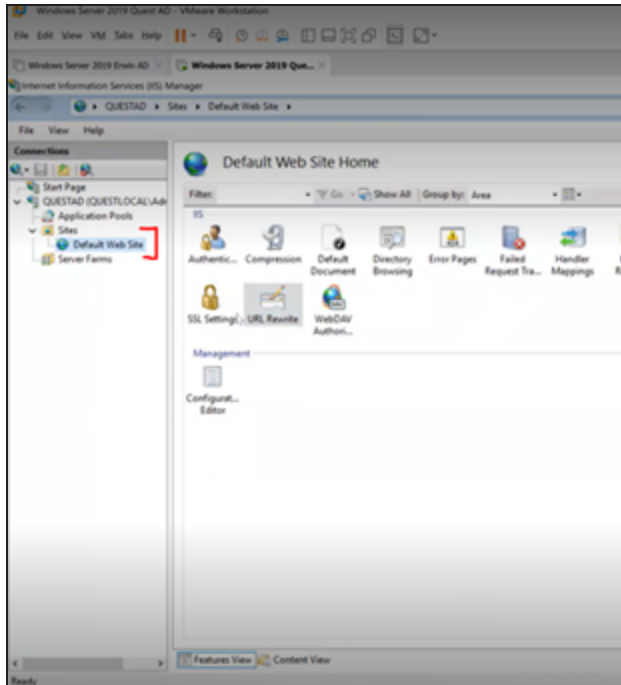
Once done, the Default Web Site option is available.



5. Download and install [ARR 3.0](#).  
Ensure that you use the 64-bit installer.
6. Download and install [URL Rewrite Module 2.1](#).  
Ensure that you use the 64-bit installer.
7. In the Internet Information Services (IIS) Manager, click **Default Web Site**.

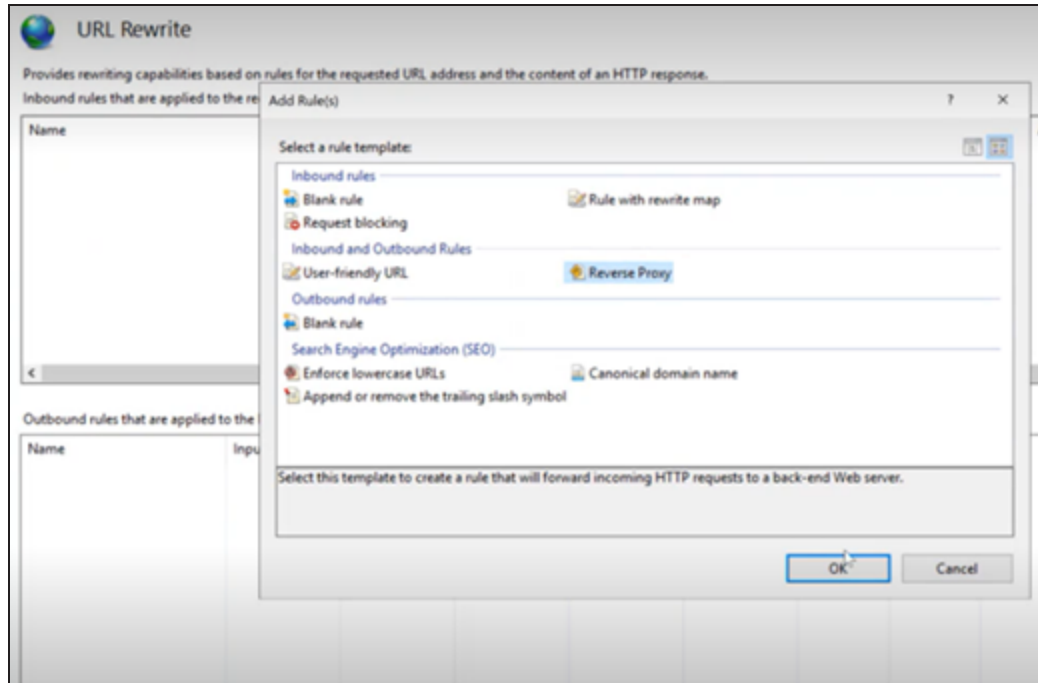
## Logging in to erwin ER360

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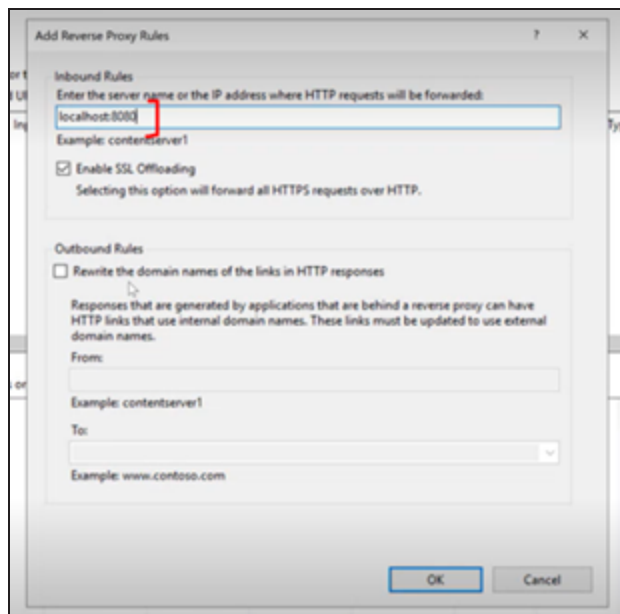
8. Click **URL Rewrite**.
9. Under Actions, click **Add Rules**.

## Logging in to erwin ER360



10. Click **Reverse Proxy**.

The Add Reverse Proxy Rules screen appears.



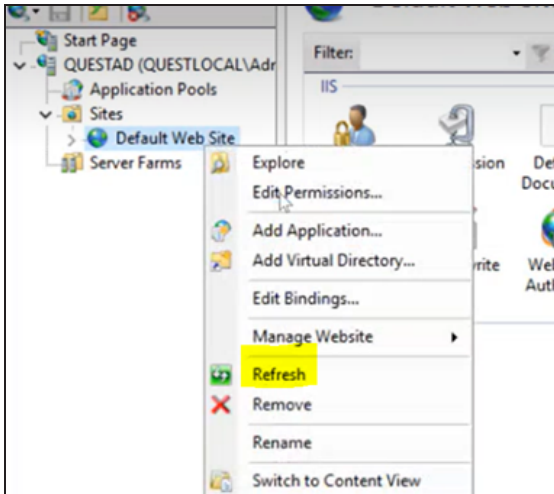
## Logging in to erwin ER360

11. Under Inbound Rules, add the server name or the IP address and port number of the server where you have installed and configured erwin Mart Portal.

For example, localhost:8080.

It will work with any IP address/port number and not just localhost and 8080. Do not use port that is already in use for another purpose.

12. Under Outbound Rules,
  - a. In the **From** field, add the server name or the IP address and port number of the server where you have installed and configured erwin Mart Portal. For example, localhost:8080.
  - b. In the **To** field, add the server name or the IP address of the server where you have installed and configured erwin Mart Portal. For example, localhost.
13. Click **OK**.  
This will redirect you to Apache Server console.
14. In the Internet Information Services (IIS) Manager, right-click **Default Web Site** and click **Refresh**.



15. Right-click **Default Web Site** and click **Manage Website > Restart**.  
This completes IIS configuration.



# Change the Mart Database Server

Sometimes, you may change the server on which the mart database is installed, or you may restore the mart database with a new name. When there is a change the server name or database name, reconfigure the erwin Mart Portal.

To change your mart database server, follow these steps:

1. Back up your mart database.
2. Restore the database on the designated server.
3. If you use the same computer for erwin Mart Portal and restore the database in a different name, include the new database name in the erwin Mart Portal Configuration screen.

From the Windows Start menu, open the erwin Mart Configuration dialog. On the **Database** tab > **Database Name** field, enter the new name with which the database is restored. Enter the current user name and password to access the database.

4. If you use a different computer for erwin Mart Portal and restore the database in the same name, install the erwin Mart Portal on the new computer.

Install the erwin Mart Portal. On the **Database** tab > **Server Name** field, enter the name of the new server where the database is restored. Enter the current user name and password to access the database.

5. Stop the erwin Mart Portal service and start it again.
6. On the Windows Start Menu, click **erwin > erwin Mart Portal**.

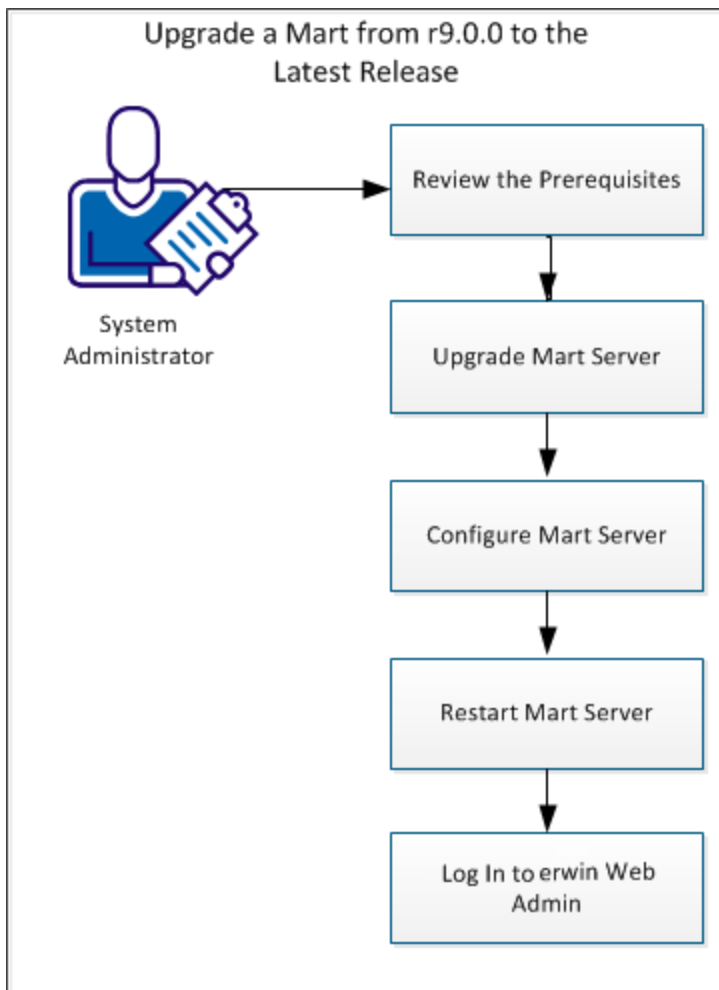
Enter the credentials and log in.

## Upgrading Mart

If you are using any earlier release of r9 series and you want to upgrade it to the latest release, upgrade the Mart Portal application and the Mart database. Once the Mart Portal program is upgraded, you must implement the upgraded software.

**Important!** The current Mart is designed to work with only the current version of erwin Data Modeler. If you try to connect the current Mart with an older version erwin Data Modeler such as r9.0.0, it may corrupt the Mart and cause unexpected behavior.

The following diagram illustrates how System Administrators can upgrade a Mart from any earlier release of r9 series to the latest release:



## How to Upgrade any r9 Series Mart to the Current Version

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Complete the following tasks to upgrade a Mart of any earlier release of r9 series to the latest release:

1. [Review the prerequisites](#)
2. [Upgrade erwin Mart Portal](#)
3. [Configure erwin Mart Portal](#)
4. [Restart the service](#)
5. [Log in to erwin Mart Portal](#)

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## Upgrade Performance Considerations

Ensure that you consider mart size, model count, and associated versions while upgrading a mart from an earlier version to the latest version. The following table provides sample data of the upgrade process. You can use this information as a guideline.

| Mart Database                                                                    | Machine Configuration | Time Taken (Upgrade from lower version to erwin Mart 2021 R1 and above) |
|----------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------|
| Oracle 12c R2 (1221 Models , 42108498 million rows present in M9Object Table)    | 8 GB RAM 1 CPU        | 50 minutes                                                              |
| SQL Server 2017 (1277 Models, 44294824 million rows present in M9Object Table)   | 8 GB RAM 1 CPU        | 142 minutes                                                             |
| Postgresql 9.6.15 (1020 Models, 33594468 million rows present in M9Object Table) | 16 GB RAM 4 CPUs      | 15 minutes                                                              |
| Oracle 12c R1 (10784 Models, 505178719 million rows present in M9Object Table)   | 32 GB RAM AWS Machine | 15 hours                                                                |
| Oracle 12c R1 (11980 Models, 520732699 million rows present in M9Object Table)   | 32 GB RAM 4 CPU       | 20 hours 40 minutes                                                     |

Following are a few tips to ensure a smooth upgrade:

- Before upgrading, ensure that you double the number of data files in tablespaces for MMDATA and MMINDEX in an Oracle mart.
- Check the Report Upgrade status in the MartServerUpgrade.log file.
- If the M9Object Table has high volume of data and models over 100 MB, run the upgrade on a machine that has 64 GB or more RAM.
- In case of failures in upgrade, before you rerun the upgrade, ensure that you select the following check boxes on the Advanced tab on the erwin Mart Configuration

## Upgrade Performance Considerations

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dialog:

- Rerun Count Upgrade
- Rerun Report Upgrade
- Rerun Report Upgrade For All Models

For more information, refer to the [Configuring erwin Mart Portal](#) topic.

### Upgrading erwin Mart Portal

If you are upgrading a Mart from any earlier release of r9 series to the latest release, upgrade the Mart Portal application.

Refer to the [Install a Mart or Upgrade a Mart](#) topic before proceeding.

#### Follow these steps:

1. If you are running Mart Portal as a Windows service, stop the service and delete it.

If you upgrade erwin Mart Portal without stopping the service, it may not start after you complete the upgrade process.

2. Download and run the installer file from the [erwin Support site](#).  
The erwin Mart PortalInstallation Wizard appears.
3. Follow the wizard.
4. Restart your computer.

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## Restarting the erwin Mart Portal Service

When you modify the details of the mart database and Mart Portal application, restart the erwin Mart Portal service.

**Follow these steps:**

1. On the Windows Start menu, click **erwin > Stop as Service**.
2. On the Windows Start menu, click **erwin > Start as Service**.

## Creating Customized Security Messages

As the administrator, you can add a custom message on the Connect to Mart screen. The message appears whenever one of the client applications (erwin Mart Portal or erwin Mart Portal Navigator Edition) connects to the mart. The message appears after your connection to the desired mart is authenticated and before the connection dialog closes.

### Follow these steps:

1. After you install and configure the Mart, locate and open the *privacy.message* file.

If you are using the default web server Tomcat, the file is available in the following folder:

```
C:\Program Files\erwin\Mart Portal r9\Tomcat64\
webapps\Mart Portal\WEB-INF\classes
```

2. Type the message that you want to display and save the file.

The message can be up to 2000 characters long, anything beyond 2000 characters is not displayed. Insert line-breaks manually after every 80 characters, for the message to display properly. If there are no manual line-breaks, Windows automatically inserts line-breaks in the security message. These line-breaks are based on the specific version of Windows you use.

3. From the Windows Start menu, click All Programs, erwin, erwin Mart Portal 14.0 , Stop Mart Portal Service to stop the web server.
4. From the Windows Start menu, click All Programs, erwin, erwin Mart Portal 14.0 , Start Mart Portal Service to start the web server again.

When a user connects to the Mart the next time, the security message is displayed.

To suppress the security message, open the *privacy.message* file and delete the contents. Do not delete the file.



## Viewing Log Files

You can find erwin Mart Portal log files at the following locations:

- **erwin Mart Portal as server:**
  - {user.home}/AppData/Local/erwin/Mart Portal/logs/martportal.log
  - {user.home}/AppData/Local/erwin/Mart Portal/logs/martportalupgrade.log
  - {user.home}/AppData/Local/erwin/Mart Portal/logs/vaultservice.log
- **erwin Mart Portal as Windows service:**
  - C:\Windows\System32\config\systemprofile\AppData\Local\erwin\Mart Portal\logs\martportal.log
  - C:\Windows\System32\config\systemprofile\AppData\Local\erwin\Mart Portal\logs\martportalupgrade.log
  - C:\Windows\System32\config\systemprofile\AppData\Local\erwin\Mart Portal\logs\vaultservice.log

You can configure how the log is generated. For more information about how to configure logging, refer to the [erwin Mart Portal user guide](#).

### Use erwin Mart Portal as a Windows Service

There are two ways to start the web server that hosts erwin Mart Portal and erwin ER360:

- Start the web server manually.
- Use a Windows service to start the web server.

For example, if you have used Apache webserver as the server to host Mart Portal, you can start it in two ways:

- Start Apache through the startMartServer.cmd file or through a shortcut to this file.
- Use a Windows service to start Apache.

The benefits of using a Windows service to start a web server are as follows:

- Any user with administrative privileges on a computer can start the Windows service, whereas, only designated users can start a web server manually.
- A Windows service runs regardless of whether a user has logged in. A manually-started web server shuts down when the user who started it logs out.

#### Follow these steps:

1. On the Windows Start Menu, click **erwin > Create Mart Services** to create erwin Mart Portal Windows services.

Creating the service is a one-time task. After the service is created, you only have to start and stop the service.

## Use Mart Portal as a Windows Service

2. On the Windows Start Menu, click **erwin > Start as Service** to start the web server. The necessary services are created

| Name                                 | Description         | Status  | Startup Type    | Log On As  |
|--------------------------------------|---------------------|---------|-----------------|------------|
| Distributed Transaction Coordinator  | Coordinates tra...  | Running | Manual          | Network S  |
| DNS Client                           | The DNS Client ...  | Running | Automatic (T... | Network S  |
| Downloaded Maps Manager              | Windows servic...   |         | Automatic (...) | Network S  |
| Embedded Mode                        | The Embedded ...    |         | Manual (Trig... | Local Syst |
| Encrypting File System (EFS)         | Provides the co...  |         | Manual (Trig... | Local Syst |
| Enterprise App Management Service    | Enables enterpri... |         | Manual          | Local Syst |
| erwin Apache Server                  | Apache/2.4.57 (...) |         | Automatic       | Local Syst |
| erwinER360                           |                     |         | Automatic       | Local Syst |
| erwinMartPortal                      |                     |         | Automatic       | Local Syst |
| erwinVaultService                    |                     |         | Automatic       | Local Syst |
| Express Connect Dynamic Bandwidth... | This service dyn... | Running | Automatic       | Local Syst |
| ExpressConnect Analytics Service     | ExpressConnect...   | Running | Automatic       | Local Syst |
| ExpressConnect AP Selector Service   | This service ana... | Running | Automatic       | Local Syst |

You can find the log files, martportal.log, er360.log, and vaultservice.log, at {user account}\AppData\Local\erwin\Mart Portal\logs\.

## Enable Logging in Local AppData

To enable logging in a user's AppData while using erwin Mart Portal as a Windows Service, follow these steps:

1. Once the service is created, go to service properties.
2. On the Log On tab, click **This Account**.
3. Enter the credentials.
4. Start the service.

Logging is now enabled for your instance of erwin Mart Portal as a Windows service. The log files, martportal.log, er360.log, and vaultservice.log will be created at {user account}/AppData/Local/erwin/Mart Portal/logs.

# Troubleshooting

This section explains the errors that you can encounter while installing and configuring erwin Mart Portal, and how you can troubleshoot them.

The Mart Portal log files are available at C:\Program Files\erwin\Mart Portal\MartApp\config.

## Unable to Create Mart Portal Service

### Symptom:

If Mart Portal is upgraded to the latest version without stopping and deleting the Mart Portal service of the earlier version, creating a new Mart Portal service does not work.

### Solution:

Run the `sc Delete Mart Portal` command to delete the Mart Portal Service from command prompt and then try to create a Mart Portal Service in the new version.

## Port out of range

### Symptom:

Whenever I connect to the web server, I get the following error message:

```
java.lang.IllegalArgumentException: port out of range 80821.
```

### Solution:

Type the correct port number in the Configure erwin Mart Portal's Server dialog and then restart your web server.

## Call failed on the server

### Symptom:

When I try to connect to the Mart Portal, I get the following error:

```
500 The call failed on the server; see server log for details
```

### Solution:

The probable reasons for this error could be one of the following reasons:

## Troubleshooting

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- The server name is not correct.
- The application name is not correct. By default, the application name is Mart Portal and it is case-sensitive.

Type the correct server name and application name in the erwin Mart Portal's Server dialog and the Configure Mart Portal Details dialog. Restart the web server.

## Application Internal Error

### Symptom:

When I try to connect to the database, I get the following error:

```
Application Internal Error
```

### Solution

You get this error when the Mart Portal application is unable to connect to the required database. The following reasons are probable for this error:

- The database details that are provided in the Configure Mart Portal Details dialog are incorrect.
- The username and the password for the database are incorrect.
- The database is not present.
- The port number for the database is incorrect.
- The network is down.

Ensure that you enter the correct details of your database in the Mart Portal tab of the erwin Mart Configuration dialog.

## ORA-12514 TNS listener does not currently know of service requested in connect descriptor

### Symptom:

When I try to open the erwin Mart Portal page, I get the Application Internal Error. The Tomcat windows shows the following error message:

```
ORA-12514, TNS:listener does not currently know of service requested in connect descriptor
```

### Solution:

Use a fully qualified instance name when starting the Mart Portal.

**Note:** This section is applicable only for Oracle and SQL Server.

Use a fully qualified instance name when starting the Mart Portal.

### Mart already exists. Specify another database name

**Symptom:**

When I try to connect to the Mart, I get the following error message:

```
An earlier mart is already present in the database you are trying to initialize. This process can not be continued. Please specify another database name to continue.
```

**Solution:**

You get this error when you connect to an old Mart that you have used for erwin DM Release r7 series, r8 series, or Beta release of any r9 series release.

Create a database and provide its details in the Configure Mart Portal Details dialog.

### Initialize page is not loading in Internet Explorer

**Symptom:**

When I type the URL to initialize my Mart in Internet Explorer, the Initialize Mart page is taking a long time to load.

**Solution:**

The Initialize Mart page does not load because the Active Scripting option in Internet Explorer is disabled.

**To enable Active Scripting, follow these steps:**

1. In Internet Explorer, click Tools, Internet Options.
2. In the Security tab, click the Custom Level button.  
The Security Settings Local Intranet Zone window opens.
3. From the list of options, locate Scripting, Active Scripting, and select Enable. Click OK.
4. Restart Internet Explorer and enter the URL to initialize Mart.  
The Mart Initialize page opens.

## The Tomcat server is not starting properly. The Configure button is disabled.

### Symptom:

My administrator has given me the Administrator rights and when I start the Tomcat server, I get a series of errors. Also, I cannot click the Configure button in the configuration dialog because it is disabled.

### Solution:

Right-click Start Server, and click Run as Administrator.

The Tomcat server starts without any error, and the configuration button is enabled.

## A connection with the server could not be established

### Symptom:

When I try to connect to the web server from erwin Data Modeler, I get the following error message:

```
A connection with the server could not be established
```

### Solution:

Verify that you have provided the correct port number and then reconnect to the web server.

## The server name or address could not be resolved

### Symptom:

When I try to connect to the web server from erwin Data Modeler, I get the following error message:

```
The server name or address could not be resolved
```

### Solution:

Verify that the server name where the web server is installed is correct and then reconnect to the server.

If erwin Data Modeler and the web server are installed on the same computer, you can give the server name as localhost. Suppose that erwin Data Modeler and the web server

## Troubleshooting

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are installed on different computers. The server name is the name of the computer where the web server is installed.

### Invalid user ID or password

#### Symptom:

When I try to connect to the server, I get the following error message:

```
Invalid user ID or password. Please try again to login.
```

#### Solution:

Type the correct user name and password.

The user must be an application level user and not a database user.

### Error 12029

#### Symptom:

When I connect to the web server, I get the following error message:

```
Error 12029
```

#### Solution:

Restart the web server.

### Unable to load the web page from my web browser

#### Symptom:

When I type the URL in Internet Explorer or Google Chrome to connect to the web server, I get the following error messages:

#### For Internet Explorer

```
Internet Explorer cannot display the webpage
```

#### For Google Chrome

```
Oops! Google Chrome could not connect to localhost:18170
```

#### Solution:



Restart the web server.

## Internet Explorer Redirects to a Different Link

### Symptom:

Suppose that I install erwin Mart Portal on a fresh machine. If I enable the SSL option and I invoke erwin Mart Portal, Internet Explorer redirects the page to `res://ieframe.dll//`.

### Solution:

Internet Explorer versions 8 through 10 have a security enhancement that blocks the following types of sites:

- Sites that have self-signed certificates
- Sites that have self-signed certificates where the certificate does not match the URL

### Follow any of these steps:

- Install the certificate in the Trusted Root Certification Authorities store.
- Add the site to trusted sites.
- Set the Internet Explorer Security level to Medium Low.

## Chinese characters are replaced with question marks in Postgre SQL Mart

### Symptom:

I type Chinese characters in the Version Description dialog in erwin Mart Portal. If I open erwin Data Modeler and go to the Catalog Manager window, I see that the Chinese characters are replaced with ????.

### Solution:

#### Follow these steps:

1. Select Chinese for the Format, Location, and Locale fields in the computer where you have installed erwin Data Modeler, Mart Portal, and Mart database. (You can access these settings through the Control Panel.)
2. Open the Database Properties dialog for the Mart database and verify the value for the Collation field.
3. If the value is other than `SQL_Latin1_General_CP1_CI_AS`, create a database and assign this value for Collation. Initialize the Mart again.

# I have a very long Windows user name and I cannot log in to the Mart through erwin Data Modeler

### Symptom:

I have added a very long Windows user name similar to "Magdalena.Chalamalasetti" using the Mart Portal. When the user tries to log in to the Mart through erwin Data Modeler, the name is truncated to "US\Magdalena.Chalamas" and the user cannot log in.

### Solution:

The name is truncated due to a limitation with Windows. The Windows API returns the legacy user name that is limited to 20 characters. If the length of a user name exceeds 20 characters, for example, "US\Magdalena.Chalamalasetti", the name is displayed as "US\Magdalena.Chalamas" in the Connect to Mart dialog.

You can resolve this in one of the following ways:

- Type the first 20 characters of the user name when you add the user as a Windows User, in the Mart Portal. For example, instead of typing "US\Magdalena.Chalamalasetti", type "US\Magdalena.Chalamalas".
- Use a Windows Group instead of the user's domain name. Using your Windows domain controller software, add the user to a Windows Group, and then add the group as a User Group in the Mart Portal. For more information about how to add a User Group, see [erwin Data Modeler r9 Workgroup Edition: Support for Directory Services](#) video.

## SSL Certificate Error

### Symptom:

When you open Mart Portal from Mart Portal that is configured with an SSL certification, an SSL certificate error appears.

### Solution:

1. Replace localhost in the Mart Portal URL with your computer name.  
https://localhost:12345/MartAdmin/  
https://<computer\_name>:12345/MartAdmin/
2. Use the updated URL to access the Mart Portal

## Unable to save a model to Mart with an existing model name

**Symptom:**

When you save a model to Mart with an existing model name, a dialog with the following text appears.

Model '<model name>' already exists in library '<mart name>'. Rename the new model name

**Solution:**

Save the model with a different name.

## Administer Mart

This section contains the following topics

[Adding a User](#)

[Sessions](#)

[Delete Mart](#)

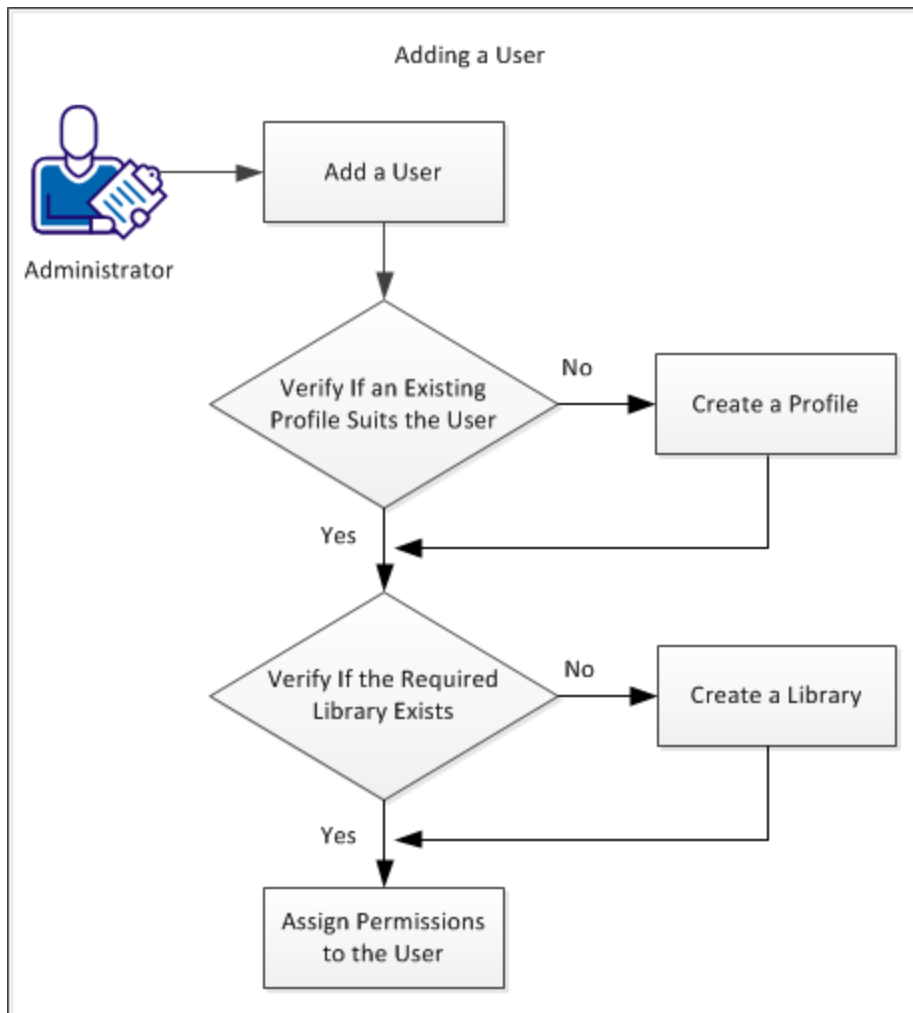
[Catalog Management](#)

## Adding a User

As a System Administrator, after installing Mart, you add users, create libraries, and give permissions to users on the required libraries. You know which user should be of what type. You have the details of the profiles you want to create, and you know which profile to assign to which user.

This scenario describes how you can add users to Mart.

The following diagram illustrates how to add a user to Mart:



The following tasks describe how to add a user:

## Adding a User

---

1. [Add a user.](#)
2. [Verify if an existing profile suits the user.](#)
3. [Create a profile.](#)
4. [Verify if the required catalog or library exists.](#)
5. [Create a catalog or library.](#)
6. [Assign permissions to the user.](#)

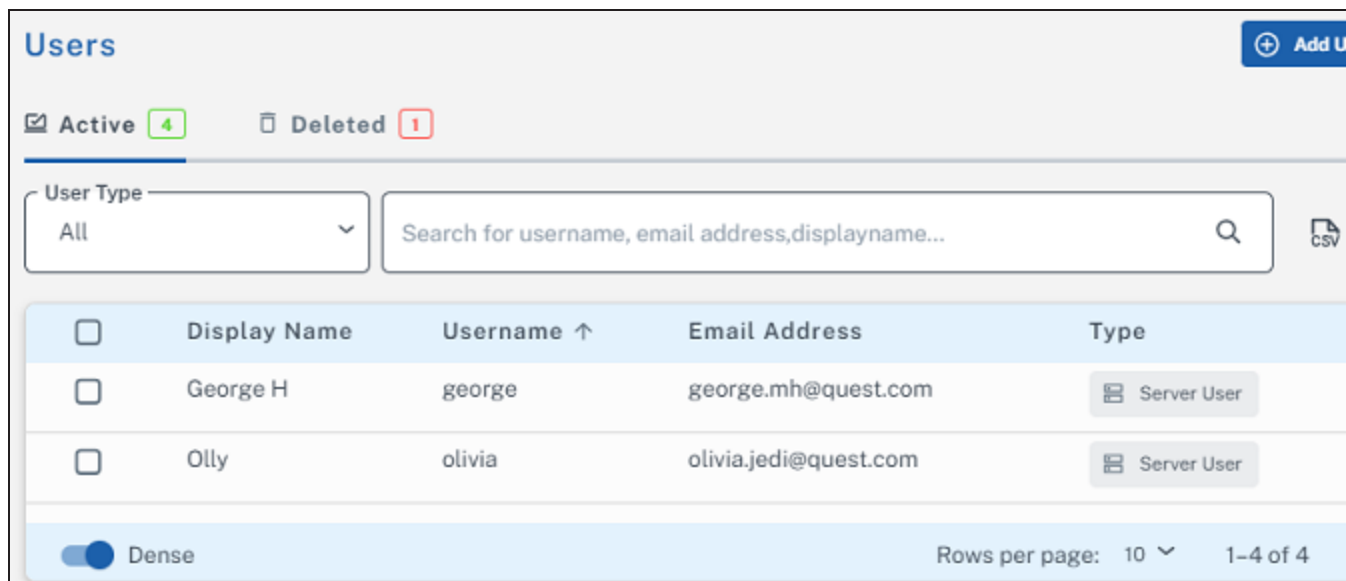
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### Add a User

As a Mart Portal, you can add users so that they can access Mart. You delete users if they are not required to access the Mart. You know the type of user you want to add--a user that is authenticated by Mart, a user that is authenticated by the Windows network, or a Windows user group.

#### Follow these steps:

1. Go to **Application Menu > Users**.  
The Users page appears.

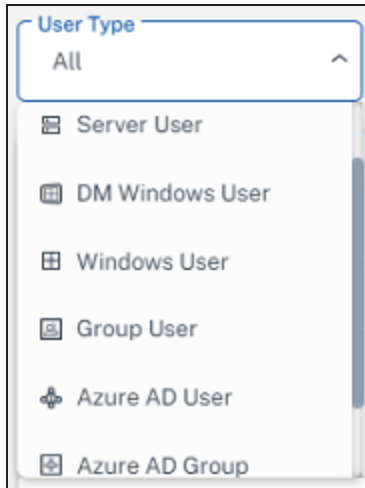


The screenshot shows the 'Users' management page. At the top, there are filters for 'Active' (4) and 'Deleted' (1). Below this is a 'User Type' dropdown menu set to 'All' and a search bar with the placeholder text 'Search for username, email address, displayname...'. A table lists the users with columns for 'Display Name', 'Username', 'Email Address', and 'Type'. Two users are listed: George H and Olly, both of type 'Server User'. At the bottom, there is a 'Dense' toggle switch and pagination information: 'Rows per page: 10' and '1-4 of 4'.

| <input type="checkbox"/> | Display Name | Username ↑ | Email Address         | Type        |
|--------------------------|--------------|------------|-----------------------|-------------|
| <input type="checkbox"/> | George H     | george     | george.mh@quest.com   | Server User |
| <input type="checkbox"/> | Olly         | olivia     | olivia.jedi@quest.com | Server User |

You can filter the list of users based on user type. Click the **User Type** arrow and select the required type.

## Add a User



2. Click **Add User**.  
The Add User page appears.

A screenshot of the "Add User" page. The page is divided into two main sections: "Picture" and "Details".  
The "Picture" section on the left contains a "User Type" dropdown menu with "Server User" selected. Below it is a large circular area with a camera icon and the text: "Drag and Drop or Select a file. Allowed \*.jpeg, \*.jpg, \*.jif, \*.png. Max size of 1MB. A default image is set automatically when there is no image."  
The "Details" section on the right contains several input fields: "Username" (Enter Username), "Display Name" (Enter DisplayName), "Email Address" (Enter EmailAddress), "Confirm Email Address" (Enter Confirm email Address), and "Password" (Enter Password). There is also a checkbox labeled "User must change password at next logon" which is checked. At the top right of the page are "Back" and "Save" buttons.

3. Click the **User Type** arrow and select the type of user that you want to add.

| User Type   | Description                                        | Additional Information                                                             |
|-------------|----------------------------------------------------|------------------------------------------------------------------------------------|
| Server User | Indicates a user that is authenticated by the cre- | This is an application-level user. There are no database-level users in erwin Mart |



## Add a User

| User Type       | Description                                                                       | Additional Information                                                                                                                                                                                                                                                                    |
|-----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | credentials provided in erwin Mart Portal                                         | Portal.                                                                                                                                                                                                                                                                                   |
| Windows User    | Indicates a user that is authenticated by the local Windows network               |                                                                                                                                                                                                                                                                                           |
| DM Windows User | Indicates a user that is authenticated by the local Windows network               |                                                                                                                                                                                                                                                                                           |
| Group User      | Indicates a Windows user group                                                    | This means that all users that are part of the selected group can access Mart. To log in as a Group User, use your Group User's email ID.                                                                                                                                                 |
| Azure AD User   | Indicates a Mart user that is authenticated by the Azure Active Directory network |                                                                                                                                                                                                                                                                                           |
| Azure AD Group  | Indicates a user group that is authenticated by the Azure Active Directory        |                                                                                                                                                                                                                                                                                           |
| SAML Group      | Indicates a user group that is authenticated by the configured SAML provider      | erwin Mart Portal is certified for SAML with: <ul style="list-style-type: none"><li>• <a href="#">AzureAD</a></li><li>• <a href="#">PingIdentity</a></li><li>• <a href="#">Okta</a></li><li>• <a href="#">WSO2</a></li></ul> You can also use any other SAML supported identity provider. |

4. Based on the user type, enter values to the following fields:

## Add a User

| Field                                   | Description                                                                                    | Additional Information                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Username                                | Specifies the name to use to login                                                             | This field applies to Server and Windows users.                                                                                                                                                                                                                                                                                                                                                                                 |
| Password                                | Specifies the password of the user.                                                            | This field applies to Server users. A password must fulfil the following criteria: <ul style="list-style-type: none"><li>• Contains at least 1 lower-case character</li><li>• Contains at least 1 upper-case character</li><li>• Contains at least 1 number</li><li>• Is minimum 6 characters in length</li><li>• Is maximum 130 characters in length</li></ul> Apart from the above criteria, special characters are optional. |
| Display Name                            | Specifies the name that is displayed in case you want a specific name to be displayed          | Display Name                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Email Address                           | Specifies the email address associated with the user account                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Confirm Email Address                   | Specifies the email address again to confirm                                                   | This field applies to Server and Windows users.                                                                                                                                                                                                                                                                                                                                                                                 |
| User must change password at next logon | Specifies that the users get a change password screen when they log in next time to Mart Admin | This field applies to Server users. This is an optional field.                                                                                                                                                                                                                                                                                                                                                                  |



## Add a User

| Field                   | Description                                                                | Additional Information                                                                                                                                                                                                                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Load type option        | Specifies whether all or partial groups are loaded in the user groups list | This field applies only to erwin Mart on premises for a Group User <ul style="list-style-type: none"><li>• <b>Partial Load:</b> Selecting this option loads groups in the Group Name field based on the search keyword.</li><li>• <b>Full Load:</b> Selecting this option loads all available groups in the Group Name field.</li></ul> |
| Group name              | Specifies the group name to which a user belongs                           | This field applies only to erwin Mart on premises for a Group User                                                                                                                                                                                                                                                                      |
| LDAP file upload option | Specifies a list of users (for example, LDAP users) in the CSV format      | This field applies only to erwin Mart on Cloud for a Group User.                                                                                                                                                                                                                                                                        |
| Group Users             | Specifies the identifier of the group that you want to add                 | This field applies only to Group users.                                                                                                                                                                                                                                                                                                 |


5. Click **Submit**. The user account is added, and an email is sent to the user.

Ensure that SMTP settings are configured.

To delete users, do one of the following:

- In the users list, for a user that you want to delete click  and then click **Delete**.
- Select multiple users and click  on the actions bar.

When a user is deleted, the models and objects that the user created are retained. You cannot delete the user that is currently logged in.

To reset server user's password, select the required users and click  and then click **Reset**. Enter a new password and click **Reset**.

## Add a User

---

- If you have configured an SMTP server for emails, new passwords are generated and sent to the registered email address.
- In the absence of an SMTP server for emails, the password is reset to the password that you enter on the Reset Password screen. No email is sent automatically.
- In the absence of an SMTP server for emails, if users forget their passwords, they cannot use the Forgot Password link on the Login Page. Use this option and reset the passwords manually.

If you enter an incorrect password five consecutive times, your account will be locked for five minutes (300 seconds) by default. You can change the time for which the account stays locked. For more information, refer to the [Log In to erwin Mart Portal and Configure Settings](#) topic.

### Mart Users

From r9 onwards, you can add individual users and Active Directory user groups to Mart. Individual users are categorized as Server users and Windows users, which are based on the way they are authenticated. There are no database level users in the current Mart.

The descriptions of user types are as follows:

#### Server User

Specifies the user that is authenticated by the Mart Portal. The server user is an application level user and not a database user. A server user provides the user name and password to log on to Mart. For example, Peter is a Business Analyst and reviews data models. Add Peter as a Server user as he accesses Mart only at the time of reviewing data models. Peter provides his user name and password to connect to Mart.

Only a Server user can access erwin Mart Portal. There are no database level users in the current Mart.

#### Windows User

Indicates a user that is authenticated by the Windows network.

If you have configured Azure Active Directory (AD) in erwin Mart Portal configuration, while adding users, you can search and select users associated with the necessary Windows users. Such users can then log in to erwin Mart Portal using their Azure AD log on names. For example, AZUREAD\abd@MyOrg.com or AZUREAD\abc or abc@MyOrg.com.

To log into erwin Mart Portal using the domain/username, windows users have to be a part of an active directory group that has already been configured in your erwin Mart Portal configuration.

#### User Group

Specifies a user group that is part of an Active Directory. Use this option to add an entire group that accesses Mart. For example, you have a user group ABC-Domain\XYZDivision\_AllModelers@MyOrg.com. Add XYZDivision\_AllModelers, so that all users that are part of this group and are authenticated by ABC-Domain, connect to Mart. Users of this group do not have to provide their user name and password when they connect to Mart.

## Mart Users

---

A password should fulfill the following criteria:

- ◆ Contains at least 1 lowercase character
- ◆ Contains at least 1 uppercase character
- ◆ Contains at least 1 number
- ◆ Is minimum 6 characters in length
- ◆ Is maximum 130 characters in length

Apart from the above criteria, special characters are optional.

Also, if you enter an incorrect password five consecutive times, your account will be locked for five minutes (300 seconds) by default. You can change the time for which the account stays locked as follows:

1. From Windows Start menu, click All Programs, erwin, Mart Portal 14.0, Configure Mart Portal.  
The erwin Mart Configuration dialog appears.
2. On the Mart Portal tab, edit the value of the Account Lockout Duration (Seconds) field to an appropriate value. At the most, you can set it to 30 days (2592000 seconds).

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### Best Practices to Add a Group User

The following are the best practices to add a Group User:

- Suppose that you have a parent group that includes subgroups. To give access to all the subgroups under a parent group, add the parent group as a Group User.
- Suppose that you want to give generic permissions to all users of a parent group and specific permissions to a subgroup. Add both, the parent group and the subgroup and give specific permissions to the subgroup. The permissions given to a subgroup take precedence over the permissions given to a parent group.
- Suppose that you want to give generic permissions to a group and specific permissions to a particular user of the group. Add the group and add the particular user as a Windows user. The permissions given to a Windows user take precedence over the permissions given to a group user.

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## Verify if an Existing Profile Suits the User

erwin DM Version 9 Mart has four built-in profiles:

- Admin
- Architect
- Modeler
- Viewer

Verify if any of these profiles suit the user you have created. If they do not, create the required profile.

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**More information:**

[How Profiles Work](#)



### How Profiles Work

The way profiles work depends on the following factors:

- The type of user that is assigned to the profile.
- The objects that are included in the profile.
- The permissions that are assigned to the objects.

This section describes the permissions available for various types of users. The section also includes common user profiles and describes permissions for those profiles.

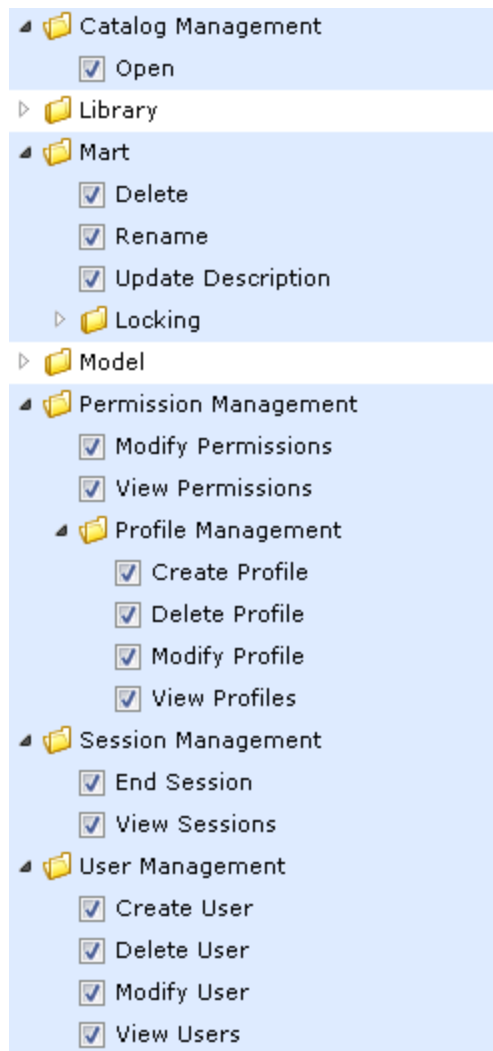
#### Type 1: Mart level

- Includes items under Catalog Management, Mart, Permission Management, Session Management, and User Management.
- Mart level permissions are granted only if a user is assigned to a profile on Mart.
- The Mart level permissions are restricted or allowed at Mart Portal itself. The only

## How Profiles Work

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exception is that Catalog Manager, Open is handled by the client.



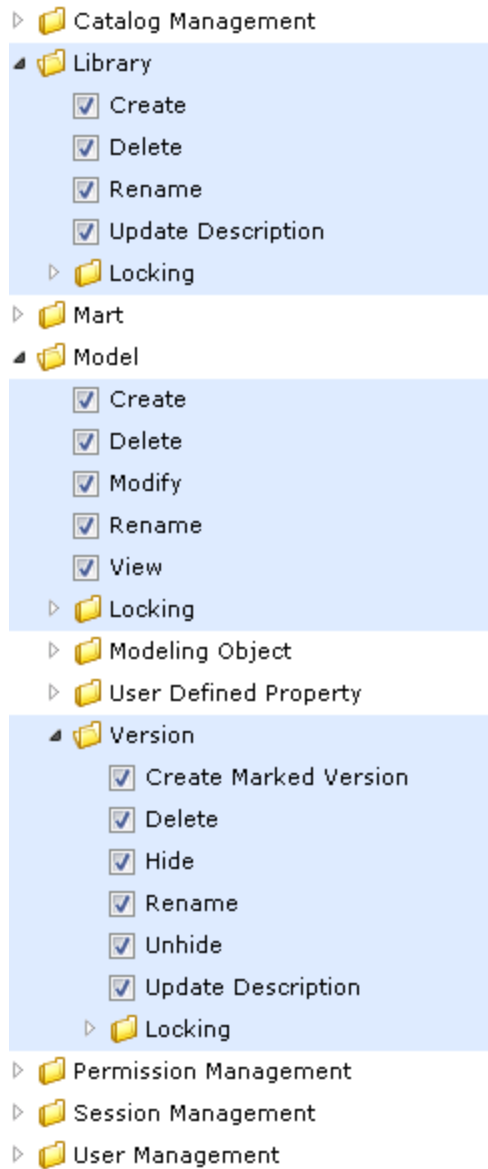
### Type 2: Catalog Object level

- Includes items under Library, Model, and Version.
- All library privileges, that is, create, delete, and modify are granted when a user is assigned to a profile on the Library or Mart.
- Catalog Object level permissions are restricted or allowed at Mart Portal itself. The only exception is that Model, Modify is also verified in erwin DM as part of live

## How Profiles Work

---

semantic.



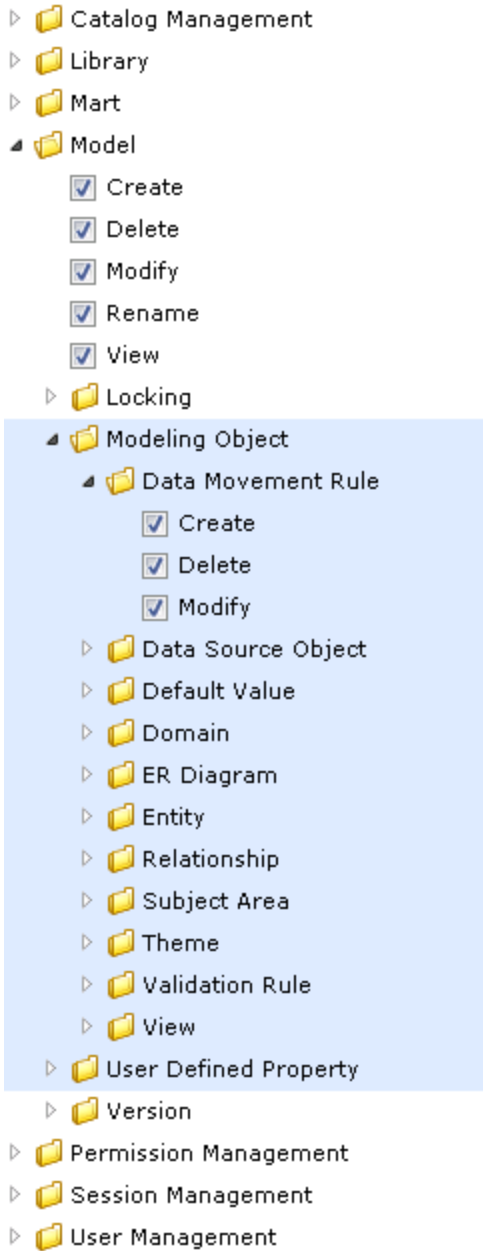
### Type 3: Modeling Object level

- Includes items under Modeling Object.
- Modeling Object level permissions are used for restricting or allowing create, modify, and delete operations on modeling objects within the Catalog of type Model.

## How Profiles Work

---

- Modeling Object level permissions are restricted or allowed from live semantic in erwin DM.



To be able to add an entity to the Subject Area and ER Diagram, set the Modify permission for Entity, Subject Area, and ER Diagram for the profile.

## How Profiles Work

---

### Permissions

Permissions are defined as follows:

- A profile assigned to a user on a catalog.
- A Catalog could be the Mart, a Library, or a Model.

For more information about the types of users, see the Mart Users topic.

### Authorization rules for users

The authorization rules for users are explained with examples for profiles and users. This approach helps you relate to a scenario that exists in your work environment and understand the rules better.

The authorization rules are explained based on the following sample catalog structure:

- Mart
  - Library1
    - Model1
    - Model2
  - Library2
    - Model3
    - Model4

Consider the following sample profiles and users:

- Sample profiles P1 and P2
- Sample Server user SU1
- Sample Active Directory (AD) user ADU1
- Sample AD groups ADG1 and ADG2

### Authorization Rules for Server User

- Rule 1: P1 assigned to SU1 on Mart
  - SU1 gets the following privileges:
    - Type 1 privileges of P1 on Mart
    - Type 2 privileges of P1 on all libraries and models

## How Profiles Work

---

- Type 3 privileges of P1 on all models in Mart
- Rule 2: P1 and P2 assigned to SU1 on Mart
  - SU1 gets the union of P1 and P2 privileges on the entire Mart. Type 1, 2, and 3 privileges are considered. Union here means that if a privilege is restricted in P1 but allowed in P2, it is allowed for SU1.
  - In this case, multiple profile rule does not apply, as the union of privileges is used.
- Rule 3: P1 assigned to SU1 on Library1
  - SU1 gets the privileges assigned for P1 on the entire Library1.
  - Type 1 privileges are not considered.
- Rule 4: P1 assigned to SU1 on Model1
  - SU1 gets the privileges assigned for P1 on Model1.
  - Type 1 privileges and some Type 2 (Library) are not considered.
- Rule 5: P1 assigned to SU1 on Mart and P2 assigned to SU1 on Library1
  - SU1 gets the privileges of P1 on Mart and Library2, but not on Library1.
  - SU1 gets the privileges of P2 on Library1.
- Rule 6: P1 assigned to SU1 on Mart and P2 assigned to SU1 on Model1
  - SU1 gets the privileges of P1 on Mart, Library1, Model2, and the entire Library2, but not on Model1.
  - SU1 gets the privileges of P2 on Model1.

### Authorization Rules for Windows User

- Rule 7:
  - If a Windows user is added as a Mart user, the rules of a Server User apply to the Windows user.

### Authorization Rules for Group user

- Rule 8: P1 assigned to ADG1 on Mart, ADU1 is part of ADG1, and ADU1 not added as user on Mart
  - ADU1 gets the privileges of P1 on Mart.
- Rule 9: P1 assigned to ADG1 on Mart, P2 assigned to ADG1 on Library1, ADU1 is part of ADG1, and ADU1 is not added as user on Mart

## How Profiles Work

---

- ADU1 gets the privileges of P1 on Mart and Library2, but not on Library1.
- ADU1 gets the privileges of P2 on Library1.
- Rule 10: P1 assigned to ADG1 on Mart, P2 assigned to ADG2 on Mart, ADU1 is part of ADG1 as well as ADG2, and ADU1 is not added as user on Mart
  - ADU1 gets the union of P1 and P2 privileges on Mart.
- Rule 11: P1 assigned to ADG1 on Mart, P2 assigned to ADG2 on Library1, ADU1 is part of ADG1 as well as ADG2, and ADU1 is not added as user on Mart
  - ADU1 gets the privileges of P1 on Mart and Library2.
  - ADU1 gets the union of P1 and P2 privileges on Library1.
- Rule 12: P1 assigned to ADG1 on Mart, ADU1 is part of ADG1, and ADU1 is also added as user on Mart
  - Since ADU1 is also added as a user on Mart, the user is not considered a part of any group. The rules are same as that of a Windows user.
- Rule 13: P1 assigned to ADG1 on Mart, P2 assigned to ADG2 on Mart, ADU1 is part of ADG1 only, ADG1 is subgroup of ADG2, and ADU1 is not added as user on Mart
  - ADU1 gets the privileges of P1 on Mart. This is because ADG1 is explicitly added on Mart and ADU1 is only part of ADG1.
- Rule 14: P1 assigned to ADG1 on Mart, P2 assigned to ADG2 on Mart, ADU1 is part of ADG1 as well as ADG2, ADG1 is subgroup of ADG2, and ADU1 is not added as user on Mart
  - ADU1 gets the union of P1 and P2 privileges on Mart.

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### Create a Profile

Profiles determine who can change the data or models in Mart. As a System Administrator, you can create profiles and can attach them to users for a catalog. When a user creates, modifies, or deletes an object in Mart, the profile determines if the operation is permitted. Each profile grants permissions at the following object levels, in the same hierarchical order:

- Catalog Management
- Library
- Mart
- Model
  - Locking
  - Modeling Object
    - ♦ Data Movement Rule
    - ♦ Data Source Object
    - ♦ Default value
    - ♦ Domain
    - ♦ ER Diagram
    - ♦ Entity
    - ♦ Relationship
    - ♦ Subject Area
    - ♦ Theme
    - ♦ Validation Rule
    - ♦ View
  - User-Defined Property
  - Version
- Permission Management
- Reports
- Session Management
- User Management

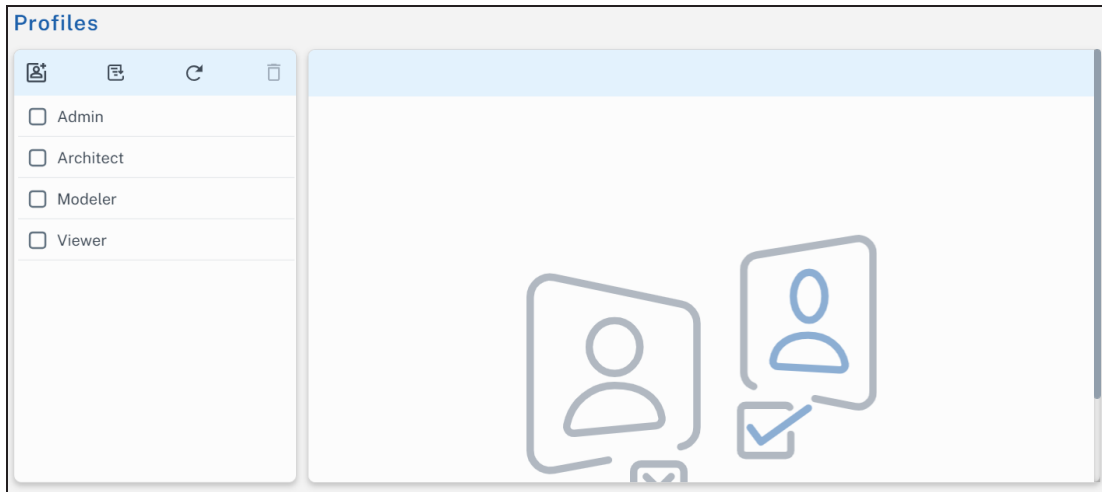



## Create a Profile

Admin, Architect, Modeler, and Viewer profiles are created when you install Mart.

### Follow these steps:

1. Go to **Application Menu > Profiles**.  
The Profiles page appears.



2. Click  to add a profile.  
The Add Profile page appears.

## Create a Profile

---

3. Select or enter values to the following fields:

| Field                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                         | <p>Specifies the name of the profile.</p> <p>(backtick), ~(tilde), @(at the rate), %(percentage), ^(carat), () (brackets), -(hyphen), _(underscore), +(plus), =(equal to),   (pipe), {}(flower bracket), [](square bracket), :(colon), ;(semi colon), .(dot) and ,(comma) are allowed.</p>                                                                                                                                                                                                           |
| Description                  | <p>Specifies the description and purpose of the profile</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Clone From Existing Profiles | <p>If replicating an existing profile, specifies the source profile</p>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Permissions                  | <p>Specifies the permissions that the profile has on each Mart Portal module.</p> <p>If you have cloned an existing profile, on top of default permissions, you can edit the permissions according to your preferences.</p> <p>Any dependent permissions for the selected permissions are selected too. For example, if you select the Create Entity permission, then Model Modify, ER Diagram Modify, ER Diagram Modify under Subject Area, and Key Group Create permissions are also selected.</p> |

4. Click **Save**.

To edit a profile, follow these steps:

1. Select the profile and click **Edit**.
2. Edit the **Name**, **Description**, or **Permissions**.
3. Click **Save**.

If the objects are part of a model, the changed permissions come to effect when the user opens the model the next time. If the objects are part of the Mart, such as catalog, the changed permissions are effective immediately.

## Create a Profile

---

To delete a profiles, select a profile and click  .

You cannot edit or delete the default profiles.

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## Verify if the Required Library Exists

When you migrate your models to erwin DM Version 9 Mart, you can choose to create libraries and copy models to them. Verify if you can assign these libraries to the user you want to create. If not, create the required libraries.

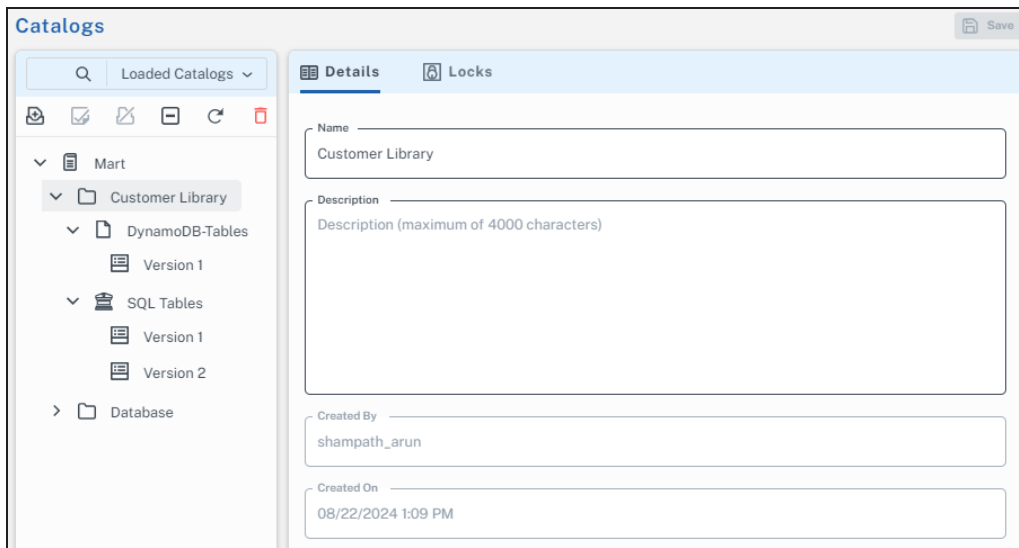
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# Create a Library

A library is a collection of related models and a catalog is a group of libraries. Use libraries to add an extra level of security or isolate implementation differences, such as development and production environments.

### Follow these steps:

1. Go to **Application Menu > Catalogs**.  
The Catalogs page appears.



2. In the Catalog pane, click  (**Create Library**).  
A library is added to the catalog tree.
3. Select the newly created library to edit them in the Details pane.
4. Edit the **Name** and **Description**.

In Name field, (backtick), ~(tilde), @(at the rate), %(percentage), ^(carat), ()(brackets), -(hyphen), \_(underscore), +(plus), =(equal to), |(pipe), {}(flower bracket), [] (square bracket), :(colon), ;(semi colon), .(dot) and ,(comma) are allowed.

5. Click **Save**.

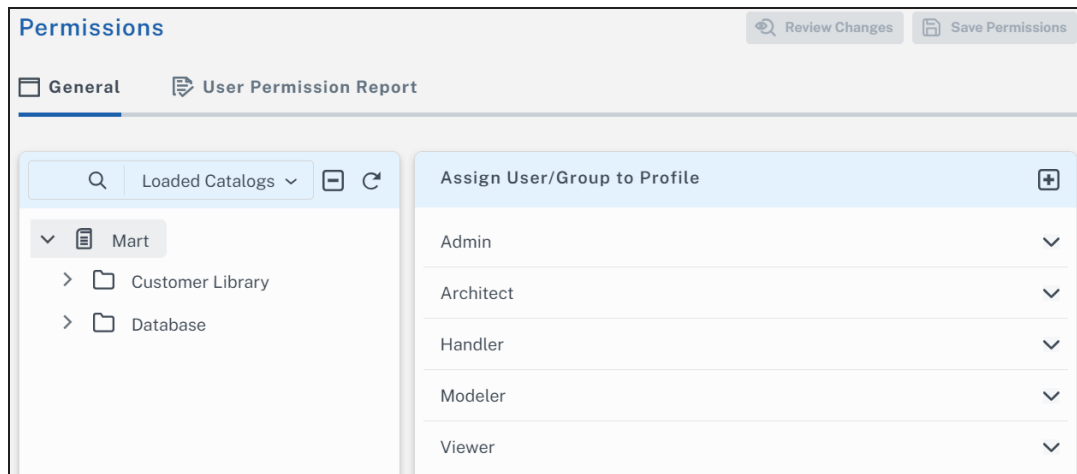
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### Assign Permissions to a User

As a System Administrator, you assign different levels of permissions to different profile users. Control the level of permission and assign a user or a group to a profile so that they have specific access. A user can be assigned to multiple profiles. For example, a user can have full permissions on one library and only view permissions on another.

#### Follow these steps:

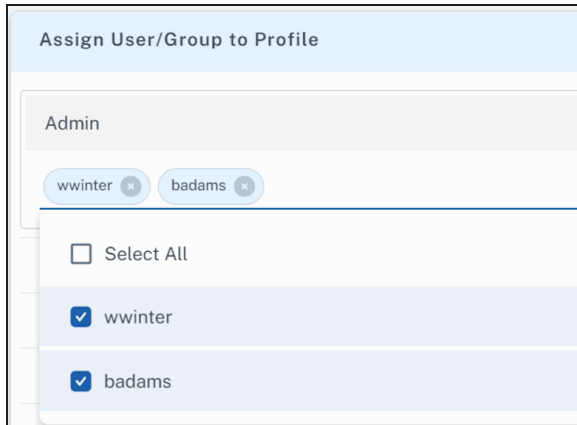
1. Go to **Application Menu > Permissions**.  
The Permissions page appears.



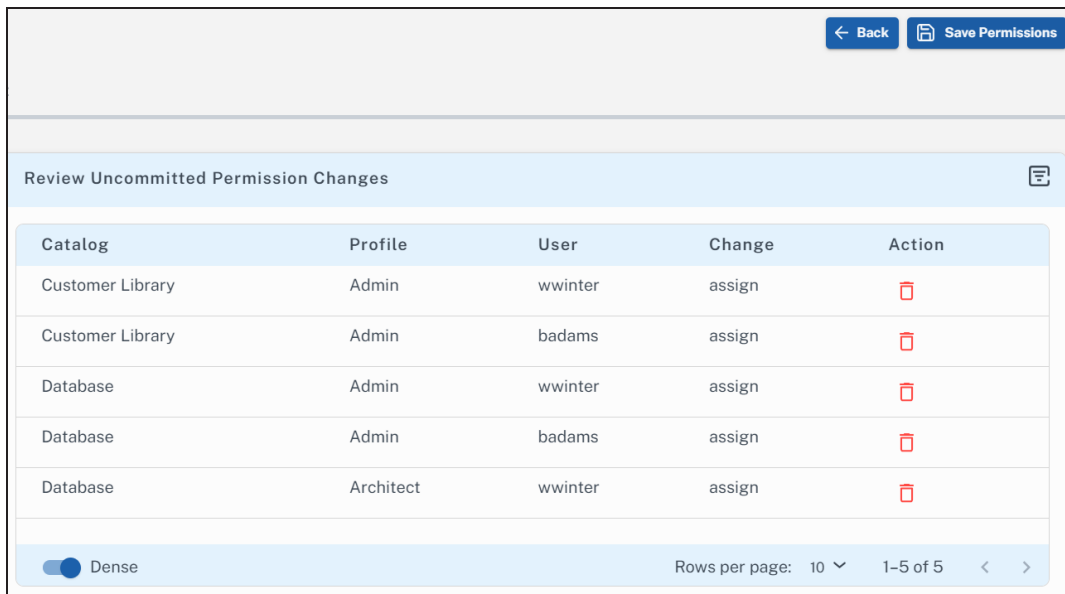
2. On the Catalog pane, select the libraries that you want the user to access.
3. In the Assign User/Group to Profile pane, click a profile to view the list of users or group.

## Assign Permissions to a User






4. Click  to search and select new users or groups.



5. Click **Review Changes** to verify your permission updates before saving them. The Review Uncommitted Permission Changes displays your permission updates.



The screenshot shows a table titled "Review Uncommitted Permission Changes". The table has five columns: Catalog, Profile, User, Change, and Action. There are five rows of data, each representing a permission change. In the Action column, there is a red trash icon for each row. At the bottom of the table, there is a "Dense" toggle switch and a "Rows per page: 10" dropdown menu.

| Catalog          | Profile   | User    | Change | Action                                                                                |
|------------------|-----------|---------|--------|---------------------------------------------------------------------------------------|
| Customer Library | Admin     | wwinter | assign |  |
| Customer Library | Admin     | badams  | assign |  |
| Database         | Admin     | wwinter | assign |  |
| Database         | Admin     | badams  | assign |  |
| Database         | Architect | wwinter | assign |  |

You can click  under the Actions column to delete a permission.

6. Click **Save Permissions**.  
The selected users or groups acquire the profile's permissions.

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## Examples

This section describes steps to accomplish common business requirements.

## Assign Permissions to a User

---

### Example: Provide permissions to view models in a specific library

Chris, a Business Analyst, has to access Mart to review the models you have copied to the *For Review* library. Chris only reviews the ER diagrams available in a specific subject area. He may modify the diagrams if required. Chris uses his Windows credentials to log on.

#### Follow these steps:


1. Add a Windows user named Chris.
2. Create a library named For Review and copy the required model to it.
3. Create a profile named Business Analyst and include the following permissions:
  - Model, Modify
  - Model, Modeling Object, Subject Area, Create and Modify
  - Model, Modeling Object, Subject Area, ER Diagram, Create and Modify
4. Assign the profile to Chris.

Chris can now log in to Mart using his Windows credentials and review the model.

### Example: Set up Mart that allows users save models under a specific library and not under root

You are a System Administrator and you want Jane to create models only under a specific library and not under Mart root.

#### Follow these steps:

1. Add a Windows user named Jane.
2. Create a library named Projects\_Jane.
3. Create a profile named Jane\_Profile and include the following permissions:
  - Model, Create
  - Model, Modeling Object, Subject Area, Create and Modify
  - Model, Modeling Object, Subject Area, ER Diagram, Create and Modify
4. Click Permission Management.
5. Select Projects\_Jane in the Select Catalog pane.
6. Select Jane\_Profile in the Select Assign User/Group to Profile pane.
7. Click the  to view a list of users or groups and select Jane in the Select User/Group pane.



## Assign Permissions to a User

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8. Click Submit.

Jane can create models and save them only under the Projects\_Jane folder.

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# Sessions

When you log in to the mart, this event is recorded as the start of a session. During a session, the models that you open and the locks that are applied to each catalog entry are tracked. Each session has its own Action Log, contained in erwin Data Modeler, which logs the transaction information containing real-time changes that are made to a model. After you have logged out of the mart, the Action Log is updated and the session is closed.

Session Manager lets you view a session and terminate your sessions. You can also assign the appropriate permission to a user to terminate a session.

To view a session, on the ribbon, click Mart > Session Manager. The Session Manager dialog lists all the sessions of the current user.

You can also view and delete offline mart models that are saved in a session.

Deleting the offline mart model does not delete the model from the stored location. It deletes the information about that model from erwin Data Modeler.

To delete an offline mart model, open the Session Manager dialog, and click Offline Mart Models. The Offline Mart Model Manager dialog opens. Select the Catalog item and click Delete offline mart models. The information about the offline mart model is deleted from erwin Data Modeler.

### Terminate Inactive or Closed Sessions

Terminate an Inactive or a Closed session to release all the locks applied in that session. If a session is terminated, then all the information that is related to offline mart models in that session is deleted.

**Follow these steps:**

1. On the ribbon, click **Mart > Session Manager**.  
The Session Manager dialog opens. It displays all the sessions of a user.
2. Select a session from the Sessions list and click Delete Session.  
The selected session is terminated.

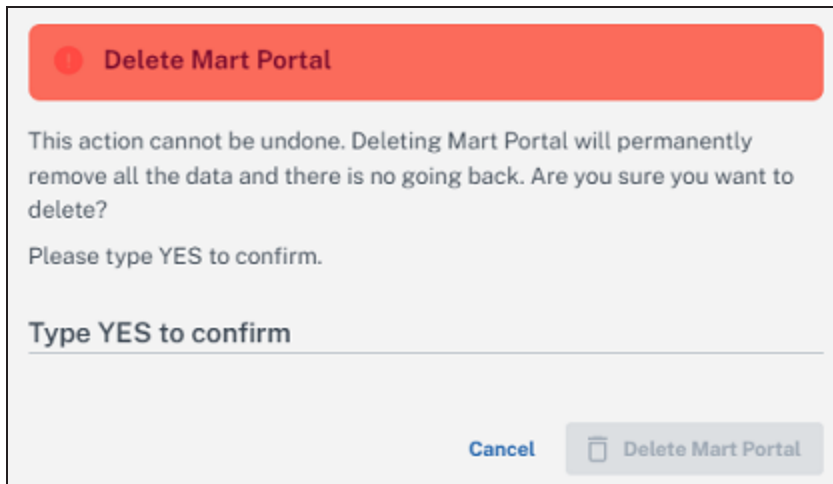
## Delete Mart

As a Mart Portal, you can delete Mart.

Important! If you delete Mart, all your libraries, models, and the associated data are deleted permanently.

### Follow these steps:

1. Go to **Application Menu > Settings > Delete Mart Portal**.






2. Click **Delete**.
3. Type YES and click **Delete Mart Portal**.  
Mart is deleted and the Initialize Mart page appears.

# Catalog Management

The catalog includes libraries, models, and versions of models. Libraries help you organize projects by grouping models together. For example, you can create a library to store models that share a workgroup, a security level, or a target server. Any number of libraries or models can be created and stored in a catalog. By organizing your data models in libraries, you can also easily manage model merging and conflict resolution.

### Library Structure Planning

Before you set up your library structure in the Catalog Manager, review how the workgroup modeling process works in your organization. To help you review your workgroup modeling process, answer the following questions:

- How are erwin  Data Modeler models moved from the development library to the production library?
- How are the approval process for moving models documented and enforced?
- How are erwin  Data Modeler models merged into the enterprise model and who controls this process?
- Do you use versioning to record the milestones of models?
- Who has what type of access to each library?
- Are erwin  Data Modeler models generated to multiple target environments (such as Microsoft SQL Server and Oracle)?
- How are you warehousing your data?

### Library Structure Organization

During the model development life cycle, you must have an organized library structure. Having an organized library structure helps you move only those models that are intended for production to that level. You can structure your libraries in three distinct types:

#### **Development Libraries**

Contains models that are being created or updated.

#### **Test Libraries**

Contains finished models that are being tested before moving them to production.

#### **Production Libraries**

Contains the finished models that were tested and debugged.

### Library Security Levels

After you have created your libraries, determine the security levels for each library. The following examples give you an idea of how you can use libraries and security together to help safeguard models:

- The entire modeling team can have access to the development library and read-only access to the test and production libraries. Authorized project leaders can be assigned to move models from the development library to the test library, and then from the test to the production library.
- Models from other libraries (for example, Sales and Accounting) can be merged from their own libraries in the enterprise model. Modelers working on projects in the Sales or Accounting libraries can have read-only access to the enterprise library and full access to their own projects. Assign one person or group to manage integration to the enterprise model.
- Modelers need full access to their own libraries and read-only access to the libraries of others. This type of security enhances production for the following reasons:
  - Everyone can see what everyone else is working on.
  - All models are stored in one location.
  - Permissions can be changed as different collaborations among modelers become necessary.



# Library Structure Considerations


You must consider any or all of these suggestions when building a library structure:

### Practical library names

Use practical and functional library names that help all users understand the purpose and type of models contained in the library. For example, you can use the format: Short System Name+Version+Stage (for example, Ora\_8\_Production).

### Model naming and data type standards

Enforce naming and data type standards, which are vital to efficient workgroup modeling.

For more information, see the *erwin*  *Data Modeler Online Help*.

### Rules for promoting models

Define a rigid and documented model approval and promotion process using different libraries for each development phase.

### Rules for versioning models

Define versioning rules using different libraries for each development version (for example, Development Beta 1).

### User rights and security

Apply stricter rights to libraries that contain mature models nearing the latter stages of development. You can also apply strict rights to individual models.

### Publication

Generate reports to communicate milestones in the model development process.

### Schema generation rules

Set up a library where you generate the model schema. Usually, you generate the model schema of promoted models only in the latter stages of development.

# Manage Catalogs

A catalog is similar to a directory structure. It consists of libraries, data models, model versions, and templates. Catalog Management displays a hierarchical tree of Mart and lets you manage your catalogs. It has all the features included in the Library Manager and Session Manager modules that were available in the previous releases of erwin® Data Modeler Workgroup Edition.

Following are some of the features in Catalog Management:

### Libraries

Use libraries to group related models. Libraries add an extra level of security or isolate implementation differences, such as development and production environments. A library can be part of another library or can be present under the Mart.

### Sorting

In a catalog, the libraries are sorted alphabetically, and the models within the libraries are also sorted alphabetically. Versions are sorted newest to oldest; Named Versions appear first, and then Delta Versions follow. The catalog entries sort in the following order: Libraries, Models, Templates, and Versions respectively.

### Context Menu

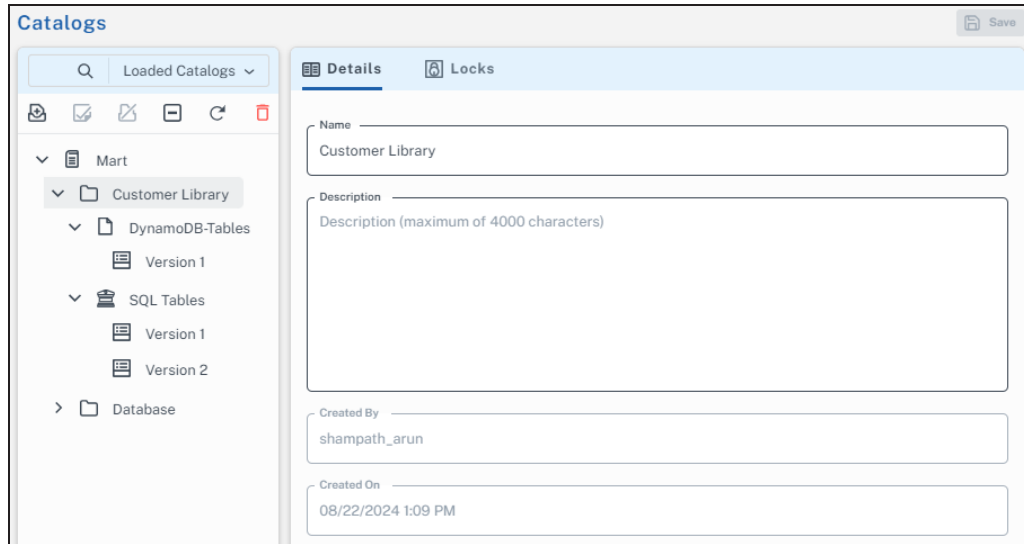
The context menu appears when you select a catalog entry and right-click. You can use the context menu to cut, copy, paste, and delete a library, model, or template. You can also use the context menu to mark a Delta version and delete, hide, and unhide Named and Delta versions.


You can create, delete, copy, and move catalog entries; you can hide and unhide versions.

### Follow these steps:



1. Open erwin Mart Portal and select the Catalog Management panel.
2. To create a library, follow these steps:
  1. Go to **Application Menu > Catalogs**.  
The Catalogs page appears.

## Catalog Manager




2. In the Catalog pane, click  (**Create Library**).  
A library is added to the catalog tree.
3. Select the newly created library to edit them in the Details pane.
4. Edit the **Name** and **Description**.


In Name field, (backtick), ~(tilde), @(at the rate), %(percentage), ^(carat), () (brackets), -(hyphen), \_(underscore), +(plus), =(equal to), |(pipe), {}(flower bracket), [] (square bracket), :(colon), ;(semi colon), .(dot) and ,(comma) are allowed.

5. Click **Save**.
3. To create a Named version, follow these steps:
  1. Select either a Named version or a Delta version of a data model and click  (**Mark Version**).  
A Named version is created.
  2. In the Catalog Details pane, edit the **Name** and **Description**.
  3. Click **Save**.  
The name and description of the Named version is updated.
4. To hide a model version, select the version from the Catalog pane, and click .

## Catalog Manager

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5. To unhide a model version, select the model of that version, click . From the Hidden versions dialog, select your version and click **OK**.

6. To delete a catalog entry, select the entry and click .

The Delete button is disabled when the last existing version of a model, or all the versions of a model are selected. The catalog entry is permanently deleted from Mart and it cannot be recovered.

### Lock a Catalog Entry

You can lock any catalog entry, even mart, to restrict other users from editing it. You can view the current lock status of a catalog entry in the Locks section. Locks last until the duration of a session or until removed. Locks can last even after a session is disconnected; it means that the user is disconnected from Mart but the lock is still preserved. You can work offline on a model without losing the lock. Only the Administrator can override any lock.

The following lock options are available in Mart:

#### Existence Lock

Prevents other users from deleting a catalog entry. When you have an Existence lock, other users can read and update, but not delete the catalog entry. You can edit or move the catalog entry but cannot delete the entry. The presence of an Existence Lock prevents anyone, other than the lock owner, from acquiring an Exclusive Lock on the entry. You can apply Existence Lock, Shared Lock, or Update Lock, with the existing Existence Lock, to the catalog entry.

#### Shared Lock

Prevents other users from editing the catalog entry. When you have a Shared lock, other users can read, but cannot update or delete the catalog entry. You can open a model with Shared Lock in read-only mode; you cannot edit the model. The presence of a Shared Lock prevents anyone from acquiring Update Lock or an Exclusive Lock on the entry. You can apply Existence Lock with Shared Lock to a catalog entry.

#### Update Lock

Lets only the lock holder to edit the catalog entry. When you have an Update lock, other users cannot read, update, or delete the catalog entry. The presence of Update Lock on an entry prevents other users from acquiring any other locks, except Existence Lock.

#### Exclusive Lock

Lets only the lock holder to edit a catalog entry. When you have an Exclusive lock, other users cannot read, update, or delete the catalog entry. In addition, no other user can add any type of lock on the entry.

#### Unlock Entry

Lets only the lock holder to unlock an entry.

Depending on the type of lock, you can move any entry in the catalog. Acquire Update Lock on a catalog entry before you move that entry.

## Lock a Catalog Entry

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You cannot move or copy a catalog entry if any of the following conditions is true:

- the entry has any lock other than Existence Lock or Shared Lock
- the parent of that entry has any lock, other than Existence Lock
- the destination library or mart has any lock, other than Existence Lock

### Lock Behavior

When you edit a catalog entry, locks are applied automatically to appropriate levels in the catalog to prevent other users from editing the entry. When the edit is complete, the locks are removed or downgraded automatically.

The following scenarios apply to locks when you edit a catalog entry:

- When you load a model, Shared Lock is applied to the model and Existence Lock is applied to the parent entry up to the mart. After the model is loaded, Shared Lock is replaced with Existence Lock.
- When you initially save a model, Update Lock is applied to the model automatically. After the model is saved, Update Lock is replaced with Existence Lock automatically. If you apply the Update Lock manually, the lock is retained until you release it manually, or until the model is closed.
- When you incrementally save a model, Update Lock is applied to all the versions created between the opened version and the newly created version. After the model is saved, Update Lock is replaced with Existence Lock.
- When you delete a model, Exclusive Lock is applied to the model. After the model is deleted, the lock is dropped.
- When you delete a user, all the locks that the user had applied are deleted.
- When you rename a library, Update Lock is applied to the library. After the library is renamed, the lock is removed.
- When you load models for version compare, Shared Lock is applied to the root model. After the model is loaded, Shared Lock is removed.
- When you merge or import objects during version compare, Update Lock is applied to the root model. When the merge or import is complete, Update Lock is removed.

## Workgroup Modeling Reports

Modelers typically work from a common set of libraries and models, and share information about these objects with other users. One way to share information is by using reports, which details the information and definitions for a model. You can generate predefined reports to view the contents of specific libraries and models, view the changes and conflicts for specific models, and view the security structure for the database.

You can generate Mart reports using either the Report Designer, the Query Tool, or a third-party reporting tool.

### Report Designer

Report Designer lets you create a wide variety of mart administrative reports and cross-model reports. You can create report templates for frequently used reports and you can export reports to the HTML, CSV, and PDF formats. You can create report solutions and include multiple report templates. For more information about the Report Designer, see the Online Help.

### Reporting Tool

You can create custom reports using a third-party reporting tool. For more information about generating custom reports, see the Creating Custom Mart Reports using a Reporting Tool guide.

erwin Data Modeler Workgroup Edition includes the following predefined reports:

### Cross Model Reports

The following table describes the cross-model reports that you can run against Mart:

| Report Name          | Description                                                                       |
|----------------------|-----------------------------------------------------------------------------------|
| Attributes/Columns   | Provides information about attributes/columns of the mart models                  |
| Design Layer Lineage | Provides information about the model sources of the mart models                   |
| Domains              | Provides information about Domains and Datatypes of Attributes of the mart models |



## Workgroup Modeling Reports

|                         |                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------|
| Entities/Tables         | Provides information about the entities/tables of the mart models                 |
| Naming Standard         | Provides a list of mart models that have active naming standard objects           |
| Relationships           | Provides relationship information, such as parent and child tables of mart models |
| Subject Areas           | Provides information about the subject areas of the mart models                   |
| User Defined Properties | Provides information about the UDPs present in the mart models                    |
| Views                   | Provides information about the views present in the mart models                   |

The following table describes the filters available for the above reports:

| Report Name        | Filter By                              | Description                                               |
|--------------------|----------------------------------------|-----------------------------------------------------------|
| Attributes/Columns | Only The Attributes Within Entity      | Filters attributes that are only part of entities         |
|                    | Only The Attributes Without Comment    | Filters columns without Comments                          |
|                    | Only The Attributes Without Definition | Filters attributes without Definition                     |
|                    | Only The Attributes Without Domains    | Filters attributes whose domain is a default domain       |
|                    | Specify Attribute Name at Run Time     | Filters the attribute whose name is specified at run time |
|                    | Specify Model                          | Filters the model whose name is spe-                      |

## Workgroup Modeling Reports

|                      |                                        |                                                           |
|----------------------|----------------------------------------|-----------------------------------------------------------|
|                      | Name at Run Time                       | cified at run time                                        |
| Design Layer Lineage | Specify Model Name at Run Time         | Filters the model whose name is specified at run time     |
| Domains              | Search Domain Name at Run Time         | Filters the domain whose name is specified at run time    |
|                      | Specify Model Name at Run Time         | Filters the model whose name is specified at run time     |
| Entities/Tables      | Only The Attributes Without Comment    | Filters columns without Comments                          |
|                      | Only The Attributes Without Definition | Filters attributes without Definition                     |
|                      | Specify Attribute Name at Run Time     | Filters the attribute whose name is specified at run time |
|                      | Specify Model Name at Run Time         | Filters the model whose name is specified at run time     |
| Naming Standard      | NSM_Option-Show Only Active NSM        | Filters NSM Objects that are Active in Mart Models        |
| Relationships        | Exclude Relationship On View           |                                                           |
|                      | Specify Model Name at Run Time         | Filters the model whose name is specified at run time     |

## Workgroup Modeling Reports

|                         |                                       |                                                                                                 |
|-------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------|
|                         | Specify Relationship Name at Run Time | Filters Relationship Names that are present in the Mart and whose name is specified at run time |
| Subject Areas           | Search Subject Area Name at Run Time  | Filters the subject area whose name is specified at run time                                    |
|                         | Specify Model Name at Run Time        | Filters the model whose name is specified at run time                                           |
| User Defined Properties | Search UDP Name at Run Time           | Filters the UDP whose name is specified at run time                                             |
|                         | Specify Model Name at Run Time        | Filters the model whose name is specified at run time                                           |
| Views                   | Search View Name at Run Time          | Filters the view whose name is specified at run time                                            |
|                         | Specify Model Name at Run Time        | Filters the model whose name is specified at run time                                           |

The filters available are mutually exclusive. Therefore, you can select only one of them at a time.

## Mart Administrative Reports

The following table describes the mart administrative reports that can be run against models in the mart:

| Report Name | Description                                                       |
|-------------|-------------------------------------------------------------------|
| Libraries   | Provides information about libraries present in the mart          |
| Locks       | Provides information about locks present in the mart, such as the |

## Workgroup Modeling Reports

|                  |                                                                               |
|------------------|-------------------------------------------------------------------------------|
|                  | models and catalogs that are locked                                           |
| Models           | Provides information about the models saved in the mart                       |
| Profiles         | Provides information about the profiles present in the mart                   |
| Sessions         | Provides information about the mart user sessions, such as the session status |
| User Logs        | Provides information about the actions performed by mart users                |
| User Permissions | Provides information about the permissions present for mart users             |
| Users            | Provides information about mart users, such as the user type                  |

The following table describes the filters available for the above reports:

| Report Name | Filter By                                     | Description                                                                                      |
|-------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------|
| Libraries   | No Filter                                     |                                                                                                  |
| Locks       | No Filter                                     |                                                                                                  |
| Models      | No Filter                                     |                                                                                                  |
| Profiles    | No Filter                                     |                                                                                                  |
| Sessions    | Active Session                                | Filters active user sessions                                                                     |
|             | Current User                                  | Filters all information of the user that is logged on currently or the user that runs the report |
| User Logs   | User-Exclude Deleted Users                    | Filters log result of users, excluding the deleted users                                         |
|             | User-Specify Users at Runtime                 | Filters the user whose name is specified at runtime                                              |
|             | Session_Log-Filter By Category-Authentication | Filters log-in, log-out, and authentication failure logs                                         |

## Workgroup Modeling Reports

|                  |                                            |                                                                                                                                                   |
|------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | Session_Log-Filter By Category- Catalog    | Filters actions performed on the Catalog Manager, such as open and close, initial save, incremental save, create catalog, and delete catalog      |
|                  | Session_Log-Filter By Category- Log        | Filters users that cleared logs using the Log Management pane of the erwin Mart Portal                                                            |
|                  | Session_Log-Filter By Category- Misc       | Filters logs of miscellaneous actions that are not covered under any category. For example, report execution                                      |
|                  | Session_Log-Filter By Category- Permission | Filters logs of actions performed using the Permissions pane of erwin Mart Portal                                                                 |
|                  | Session_Log-Filter By Category- Profile    | Filters logs of actions performed using the Profile Management pane of the erwin Mart Administrator                                               |
|                  | Session_Log-Filter By Category- User       | Filters logs of actions performed using the User Management pane of the erwin Mart Portal                                                         |
|                  | Session_Log-Filter By Type- Error          | Filters logs of actions that are registered as errors                                                                                             |
|                  | Session_Log-Filter By Type- Info           | Filters logs of actions that are registered as information. This is the default level for all actions except for actions that result into errors. |
| User Permissions | Exclude Delete Users                       | Filters permission information of users, excluding deleted users                                                                                  |
| Users            | Exclude Delete Users                       | Filters information of users, excluding deleted users                                                                                             |

The filters available are mutually exclusive. Therefore, you can select only one of them at a time.

### Bulk Editor

The Bulk Editor provides the selection, validation, and maintenance of model object metadata, permits reusable customization (option sets), and realtime access to model

## Workgroup Modeling Reports

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changes. Export results or selected rows to a CSV file. You can use the Bulk Editor to edit a small set of properties over a large number of objects. Changes and updates are immediately committed as you make them, field by field.

For more information, refer to the [Using the Bulk Editor](#) topic.

## Query Tool

The Query Tool is used to query the repository through executing SQL SELECT statements against a local model or a model in the mart. You can use the Query Tool to create your own .QRY report file. Save your option set locally to the model or as an XML file. Export your results to a CSV file. You can execute a query against the objects and properties in the model, the metadata defining those objects and properties, and the action log that records the changes that are made to your model during the modeling session. You can create new queries or paste text from another source (such as a .SQL file) into a query. Although the Query Tool provides a built-in query interface in erwin Data Modeler, you can also use any third-party reporting tool that has ODBC capability to query erwin Data Modeler modeling data.

For more information, refer to the [Query Tool](#) topic.

# Create Reports Using Report Designer

Report Designer lets you create a wide variety of reports and on the current data available in your data models. If you are working in the Workgroup Edition, you can create Mart administrative reports and cross-model reports. You can create report templates for frequently used reports and you can export reports to HTML, CSV, and PDF formats. You can create report solutions and include multiple report templates.

You cannot reuse the .RTB reports that were created using Report Template Builder, because the metamodel objects are changed. You must recreate the reports in Report Designer.

Several sample (pinned) reports are included with the application and they are available in the following location:

```
%Installdir%\erwin\Data Modeler r9\BackupFiles\Report Solutions
```

Also at the following location:

### Windows 7

```
C:\Users\\AppData\Local\erwin\Data Model-
er\9.8\Report Solutions
```

The pinned reports are created using a Logical-Physical model. If you use the pinned reports with a Logical-only or a Physical-only model, it may result in inappropriate results.

### Follow these steps:

1. Click Tools, Report Designer. The erwin Report Designer window opens.
2. To create a report solution, click Create new solution for reports on the toolbar.  
If the current report solution is not saved already, you are prompted to save it. A new blank workspace appears.
3. To create a report template, follow these steps:
  - a. Click Create a Report on the toolbar. The Report Editor dialog appears.
  - b. Enter a name for the report.
  - c. Select the model type that you want to report on. Select Mart to create a report on the Mart data.

## Create Reports Using erwin Report Designer

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The items in the Select Report Subject pane change according to the Report Type that you select.

You must have the Reports: View permission to create Mart reports.

- d. In the Select Report Subject pane, select the item on which you want to generate the report.
- e. In the Select Report Fields pane, select the fields that you want to include in the report.
- f. To create a report that filters specific objects and includes them in the report, use the Filter by option. This option is available only for entities, tables, attributes, columns, subject areas, and indexes.
- g. Click Run Report.

If you are creating a report on your Mart and you have selected an option under Filter By, the Mart Report Filter dialog opens.

- h. Select the specific models that you want to get the results from. Enter the specific model object name. Use wildcard characters, if necessary.

The report is generated and displayed. If you do not specify any model or entity, the generated report includes all the models. If you have used a wildcard, by default, the wildcard is applied to all the names. For example, if you type ID, the report includes Cust\_ID and ID\_For\_Category. If the result is very large for Mart reports, the report is displayed in multiple pages (data grid). Use the navigational icons in the toolbar to view the subsequent pages.

- i. (Optional) Click the Clear data in data grid icon to clear the results in the grid.
4. To configure report preferences, follow these steps:
    - a. Click Edit, Preferences. The Report Designer Preferences dialog appears.
    - b. Complete the following fields and click OK:

### **Add object type as prefix for the properties 'Name' and 'Physical Name'**

Prefixes the object type to only the Name and Physical Name columns. For example, you are generating a report on entities and the corresponding attribute names and data types. The column names in the report are displayed as Entity Name, Attribute Name, and Attribute Logical Data Type.



## Create Reports Using erwin Report Designer

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### Add object type as prefix for all other properties

Prefixes the object type to all columns.

These options work only when they are selected at the time of creating a report. If these options are selected at the time of modifying an existing report, they do not work.

### Apply optimization mode if row count is more than

Specifies the number of rows at which the computer resources are optimized to display the report. If the row count in your report exceeds the number that you specify here, the report is displayed in optimization mode. In this mode, the group and sort options are not available in the result grid. If no value is entered, the row count for optimization mode is considered as equal to the total row count of a report.

### Number of top rows to display

Specifies the number of top rows that you want to display. This option displays the first few rows that match a report criteria, when the result contains more rows than the number specified here.

5. To generate a report from an existing report template, select the template, right-click, and click Run.
6. To modify an existing report template, select the template, right-click and then click Properties. After you finish modifying, restart erwin DM. Your changes will take effect when you run the report again.

When you modify an existing report template and select more properties for the existing report subject, the selections are retained. If you select a different report subject, the previous report subject and its properties are not included in the report.

7. To customize the appearance of the report at the node-level, follow these steps:
  - a. Right-click the node and click Properties. Complete the following fields:

#### **Name**

Specifies the name of the node. By default the name of the selected

## Create Reports Using erwin Report Designer

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object is displayed.

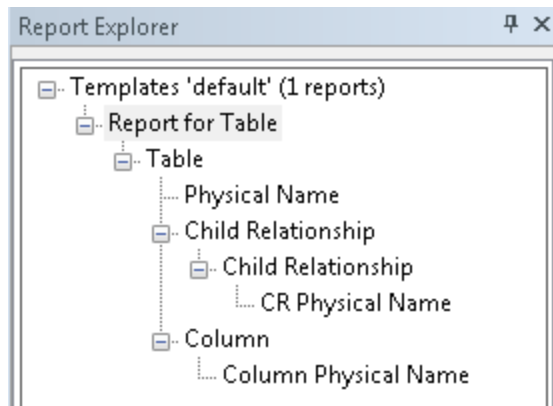
### HTML Style

These settings apply to both HTML and PDF reports.

Font Family: Specifies the font for the selected node.

Size: Specifies the font size for the selected node.

PDF Page Breaking: Specifies that you want to display the details of each node on a new page. The node for which this option is selected and the subsequent nodes are displayed on a new page. This option is not effective when the report has only one node. When the report has multiple nodes, do not set this option on the main node. Suppose your report nodes look like the following illustration:



If you apply the PDF Page Breaking option to the Child Relationship (above CR Physical Name) node, the CR Physical Name and Column Physical Name nodes are displayed on a new page.

Foreground: Specifies the text color.

Background: Specifies the background color.

Template Color: Specifies that the color that is specified in the template is used.

Bold/Italic/Underline/Strikeout: Specifies the effect for the text.

Width: Specifies the width of the selected node (report column). You can specify the width for any node and it is applied when the report is exported to HTML or PDF.

However, the width is not applied to the last node (last column in the report) in a PDF

## Create Reports Using erwin Report Designer

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report. This is because, the remaining length of the fixed page width is considered as the actual width of the column.

Alignment: Specifies the alignment of the text.

8. To export a report solution to HTML, follow these steps:
  - Right-click the report solution and click Export All to HTML. The Report Export dialog appears.
  - Click Browse and select the folder to which you want to export the report.
  - Go to the HTML tab and add the title in the Solution Title in HTML field.
  - Click OK. The report is generated in the specified folder.
9. To export a report to HTML, follow these steps:
  - a. Click the Clear data in data grid icon and clear the result grid.

This is a best practice and helps the application export the report without consuming much of the computer resources.
  - b. Right-click the report and click Export to HTML. The Report Export dialog appears.
  - c. Click Browse and select the folder to which you want to export the report.
  - d. Go to the HTML tab and complete the following fields:

### Select the template for exporting to HTML

Specifies the templates that you want to use with the HTML report. You can use customized templates, provided the formatting is similar to the default templates. After you finish modifying, restart erwin DM. Your changes will take effect when you run the report again.

The default templates are available in the following folder:

C:\Program Files\erwin\Data Modeler r9\Report\Template\Template-Default

### Solution Title in HTML

Specifies the title for the entire report solution.

### Report Header in HTML

Specifies the text that appears between the report title and the first line of the report.

### Report Footer in HTML

Specifies the text that appears at the bottom of the report.

- e. Click OK. The report is generated in the specified folder. If the report data spans multiple page grids in the Report Designer, the data is segregated into multiple sections in the HTML. The sections are first divided by model name and then by object name. This means that a section may include objects from different models, which are sorted by model name and object name.
10. To view the HTML report on a different computer, include the computer name in the path to the filename. For example, if you have published the report to c:\erwin\reports folder on a computer that is named Comp001, use the following path to access it:

```
\\comp001\erwin\reports\index.htm
```

The computer from which you are accessing the report must be in the same domain as the one in which the report is published. In addition, the user who is accessing the report must have at least the read-only privileges on the corresponding folder.

11. To export a report or a report solution to CSV, follow these steps:
- a. Right-click the report and click Export to CSV. Or, right-click the report solution and click Export All to CSV. The Report Export dialog appears.
  - b. Click Browse and select the folder to which you want to export the report.
  - c. Go to the TEXT tab and select the following options:

#### Format

Specifies whether you want to include the first-level object names multiple times. For example, you have included entity names and attribute names in your report and you have selected No Duplicates. The entity name appears only once for all the corresponding attribute names. If you have selected Duplicates, the entity name appears as many times as the corresponding attribute names appear.

#### Text Qualifier

Specifies the symbol that you want to use to indicate the column headers.

#### Delimiters

## Create Reports Using erwin Report Designer

---

Specifies how you want to separate two columns in the exported report. The option Comma Delimited creates a .CSV file and the remaining options create .TXT files.

- d. Click OK. The report is generated in the specified folder.
12. To export a report to PDF, follow these steps:
- a. Click the Clear data in data grid icon and clear the result grid.  
This is a best practice and helps the application export the report without consuming much of the computer resources.
  - b. Right-click the report and click Export to PDF. The Report Export dialog appears.
  - c. Click Browse and select the folder to which you want to export the report.
  - d. Go to the PDF tab and enter values/set the following fields:

### **Solution Title in PDF**

Specifies the title for the entire report solution.

### **Report Header in PDF**

Specifies the text that appears on the first line of every page of the report.

### **Report Footer in PDF**

Specifies the text that appears at the bottom of every page of the report.

For each of these options, you can specify the font, size, color, and alignment.

### **Image Orientation**

Specifies the direction of the images that are generated in the report. Images are generated for the Subject Area and ER Diagram reports, when you select properties under Graphical Members.

### **Font & Color**

Specifies the styles to be used with respect to the font and its color.

### **Table of Contents**

Indicates whether the report should contain a table of contents.

### **Index**

## Create Reports Using erwin Report Designer

---

Indicates whether the report should contain an index.

### **Comprehensive Report**

Indicates whether the report should contain comprehensive tabular information based on the items selected for the report. Selecting this option lets you avoid information duplication in the report.

- e. Go to the Advanced tab and enter values/set the following fields:

### **Report Logo**

Lets you add a logo to the report. Also, lets you link the logo to a URL of your choice.

### **Logo Position**

Specifies the position of the logo in the report.

### **Alignment**

Specifies the alignment of the logo at the selected position in the report.

### **Custom Report**

Lets you set custom colors to the various sections of the report. Select the Use Custom Colors check box to be able to select colors of your choice.

### **Select ER Diagram Format**

Specifies the format of the ER diagram.

### **Page Size**

Specifies the page size that would be used for printing the PDF copy of the report.

- f. Click OK. The report is generated in the specified folder. If the report data spans multiple page grids in the Report Designer, the data is segregated into multiple sections in the PDF. The sections are first divided by model name and then by object name. This means that a section may include objects from different models, which are sorted by model name and object name.
13. To add a report from another report solution, follow these steps:
    - In the Report Designer dialog, right-click the template name and click Add Report.

## Create Reports Using erwin Report Designer

---

- Select the report that you want to include (.erpt file) and click OK.
- Save the report solution.

This section contains the following topics

[Mart-Level Reports in Report Designer](#)


[Cross-Model Reports](#)

## Mart-Level Reports in Report Designer

You can now generate reports on the Mart. The reports that you generate could be administrative or about the model objects. For example, you can generate a report on the profiles that are attached to users, or on the list of entities without primary keys. When you generate the report, you can use the filter to search within specific objects. The filter supports SQL wildcard characters such as ? and %.

You must have the Reports: View permission to create Mart reports.

### Follow these steps:

1. Open erwin  Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Enter a name for the report and click Mart.
4. Select the report subject in the Select Report Subject pane.
5. [Optional] In the Select Report Fields pane, select Specify Attribute Name at Run Time or Specify Model Name at Run Time check box.
6. Select the properties that you want to include in the report and click one of the following buttons:

- a. Click Run Report.

If you have selected an option under Filter By, the Mart Report Filter dialog opens.

Select the specific models that you want to get the results from. Enter the specific model object name. Use wildcard characters, if required.


The report is generated and displayed. If you do not specify any model or entity the generated report includes all the models. If you have used a wildcard, by default, wildcard is applied to all the names. For example, if you type ID, the report includes Cust\_ID and ID\_For\_Category.

- b. To add the report to the current Report Solution, click OK.

## Cross-Model Reports

You can now generate a report on the properties of attributes and columns present across multiple models in a Mart. When you generate the report, you can use the filter to search within specific models. The filter supports SQL wildcard characters such as ? and %.

**Follow these steps:**

1. Open erwin  Data Modeler and log in to the Mart.
2. Click Tools, Report Designer.
3. Enter a name for the report and click Mart.
4. Click Attribute/Column in the Select Report Subject pane.
5. In the Select Report Fields pane, select Specify Attribute Name at Run Time or Specify Model Name at Run Time check box.
6. Select the properties that you want to include in the report.
7. Click Run Report.
8. Select the specific models that you want to get the attributes from. Enter the attribute or column name.

By default, wildcard is applied to all the names. For example, if you type ID, the report includes Cust\_ID and ID\_For\_Category.

9. Click OK.

The report is generated and displayed.



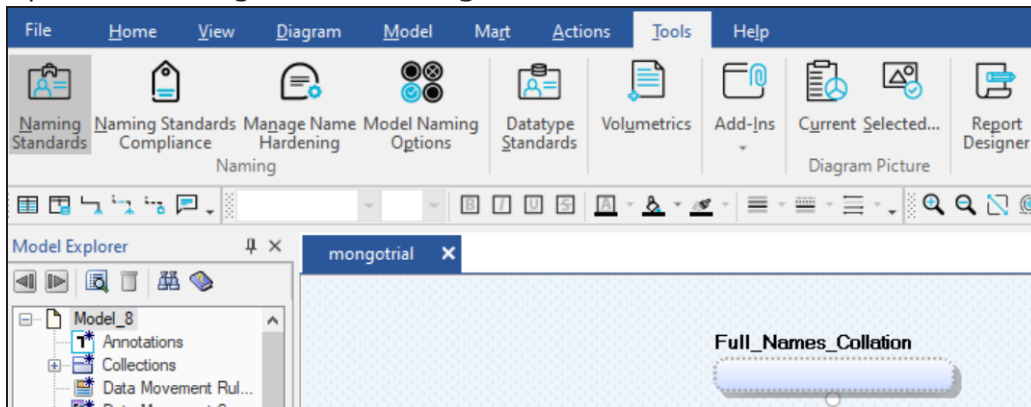
# Generate the Current Diagram Picture

You can generate a picture of model diagrams in erwin Data Modeler into multiple formats. This function allows you to generate a picture report of the entire model in the following formats:

- Enhanced Metafiles (.emf)
- PNG (.png)
- JPG (.jpg)
- SVG (.svg)
- PDF (.pdf)

To generate a picture of the current model diagram, follow these steps:

1. Open the model, go to **Tools > Diagram Picture** section.



2. On the Diagram Picture section, click the **Current** option.  
The Save As dialog opens.
3. On the Save As dialogue box, specify a name, and location for the file.
4. In the **Save as type** list, select a format. Then, click **Save**.  
Once the picture is generated, you can view the complete diagram in the saved file format.  
The generated file can be saved in EMF, PNG, JPG, SVG, and PDF file formats.

## erwin® Data Modeler Workgroup Edition Performance

This section contains the following topics:

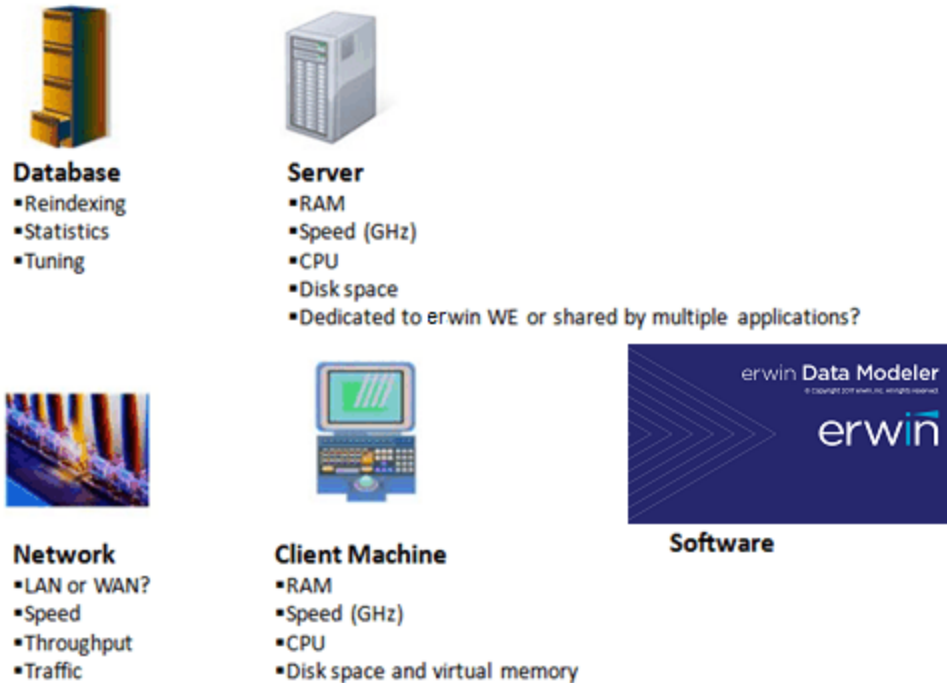
[Optimize the Performance](#)

[Reindex the Database](#)

[Run the Database Statistics](#)

## Optimize the Performance

The performance of erwin Data Modeler Workgroup Edition depends on many factors. This appendix outlines some steps you can take to improve your performance. The five main components where a slow down can occur are the database, the server, the network, the client PC, and the erwin Data Modeler Workgroup Edition software.



You should regularly reindex the database and run the database statistics. Sometimes running the database statistics alone does not affect the performance, however it is good practice to run the database statistics on a regular basis to ensure the maximum performance of your database.

If you have many domains in a model, they consume a lot of memory and file space. Having too many domains can slow down erwin Data Modeler Workgroup Edition. If you need to use many domains, we suggest you create a template model to house them, and then import the specific domains that you need, to each of your individual models. If you are using the domains to enforce unique attribute or column naming standards, you can alternatively use the erwin Glossary for that purpose.

## **Optimize the Performance**

---

Check the erwin Data Modeler Workgroup Edition Release Notes for the latest system requirements. Greater CPU speed, and more RAM and disk space result in better performance.

### Reindex the Database

Over a period of time, database indexes become fragmented. A large number of inserts and deletes can lead to significant performance degradation. The scripts provided in this appendix rebuild the indexes and fix them. In some cases, it can make a significant difference in the mart performance.

We recommend that you reindex your mart database nightly or during off-peak hours. As the index is recreated, the process can temporarily degrade the performance of your database. You can create an automated batch job to do the reindex. You should also reindex the database after a large model merge, a save to the mart, and right after a conversion of the mart when upgrading to a later version of the software.

### Run the Oracle DBMS Reindex Script

As the new index is being built, it coexists with the old index in the database. For this reason, you should plan for enough space to store both the old index and the new index. When the index is rebuilt, the new index becomes available, the old index is dropped, and the space is reclaimed by the database. If you encounter any errors while rebuilding the indexes, re-run the statements. If you require more space to rebuild those specific indexes, add more storage to your index tablespace, and then try rebuilding those specific indexes again.

To run the Oracle DBMS reindex script:

1. Create the mmreindex.ora script and copy it locally.
2. Edit the script and replace 'MODELMART' with the name of the mart schema-owner and 'MMINDEX' with the name of the mart index tablespace. Save your changes.
3. Connect to SQL\*PLUS as the user SYS.
4. Grant the 'ALTER ANY INDEX' privilege to the mart Schema Owner.
5. Run your Oracle query tool and execute the following at the SQL prompt:  
GRANT ALTER ANY INDEX TO <MART SCHEMA OWNER>;
6. Disconnect user SYS and Connect to your Oracle query tool as the Schema Owner.
7. Execute the following Script at the SQL Prompt:  
@c:\mmreindex.ora

#### Example: Oracle Reindex Script (MMReIndex.ora)

```


-- Object: MMReIndex.ora
-- Desc: Use this Procedure to ReIndex the MM ORACLE Repos-
-- itory whenever a
-- Merge/Save of big model is done to MM
-- Limitation(s) is specific to Oracle Releases >= 817
-- For ORACLE DBMS < 8i Modify the script to Use NOPARALLEL
--
```

You will need to change MMOWNER to the Mart schema owner name.

-- You will need to change MMINDEX to the Mart index tablespace.

-- Oracle indexes are not self-balancing. They become fragmented after a large

-- number of INSERTs and DELETEs which may lead to significant

## Run the Oracle DBMS Reindex Script

---

```
performance degradation.
-- This script rebuilds the Mart indexes and cures them.

set pagesize 1000
set linesize 2000
set verify off
set feedback off
set heading off
spool c:\mmreindex.ora
SELECT 'ALTER INDEX ' || USER || '.' || INDEX_NAME ||
' REBUILD PARALLEL NOLOGGING COMPUTE STATISTICS TABLESPACE
MMINDEX;'
FROM DBA_INDEXES
WHERE OWNER = UPPER ('MMOWNER')
AND (INDEX_NAME like 'XPK%' or INDEX_NAME like 'XAK%'
 or INDEX_NAME like 'XIE%')
order by index_name;
spool off
set heading on
set pagesize 24
set verify on
set feedback on
@c:\mmreindex.ora
/
```

## Troubleshooting the Reindexing Script

### Symptom:

The query tool responds as given below:

```
no rows selected
not spooling currently
```

### Solution:

You do not have the correct name for the mart schema-owner. Get the correct user name, replace 'MODELMART' with the user name, and re-run the script.

# Run the Database Statistics

Database statistics show the distribution of the data in the database, and how the data is stored. When a database executes a query, it uses an optimizer to determine the best path to access the data. The optimizer relies on execution plans that specify the order in which the database accesses the tables and the exact steps used to pull the data. The database bases the creation of the execution plans on the database statistics.

As the data grows and changes, the statistics quickly become outdated and no longer reflect the true condition of the database. As a result, the execution plans no longer apply and the optimizer makes poor decisions when processing queries. You should run statistics regularly to ensure the maximum performance of your database and, therefore, your mart. We recommend that you run the database statistics nightly, and create an automated batch job to simplify the process.



## Microsoft SQL Server Tuning Recommendations

This section contains the following topics:

[Physical Tuning Parameters](#)

[Server-Level Tuning Parameters](#)

[Named Cache Configuration](#)

[Database Tuning Parameters](#)

[Database and Log Sizing](#)

[How to Maintain an Efficient Database](#)

## Physical Tuning Parameters

The mart is dynamic, with many queries and data manipulations performed with each model save and load.

The configuration changes that must be made to Microsoft SQL Server for optimum performance with maximum fault tolerance and recoverability are provided.

### Database Placement

erwin◆ Data Modeler Workgroup Edition mart databases are written to in bursts of activity. Stored procedures and bulk insert statements are used to minimize overhead when saving data to Microsoft SQL Server. To optimize performance, place the database on low activity Microsoft SQL Server files. If possible, place the log and data segments on different physical drives to reduce contention between log writes and database reads.

### Data Redundancy

Make sure that you make a copy of the transaction log on a separate drive to maximize recoverability of the database. If the up-time of the database is considered critical, make a copy of the database and the transaction logs, and other Microsoft SQL Server files you consider important.

### Server-Level Tuning Parameters

You should perform the following server-level tuning tasks:

- Configure Microsoft SQL Server to use as much memory as possible. Allocating more memory to the Microsoft SQL Server caching mechanisms means less physical reads from the disk and improved database query performance.
- Allow several megabytes of disk space for the procedure cache because erwin Data Modeler Workgroup Edition uses many stored procedures.

The following table shows the recommended configuration parameters for a Microsoft SQL Server running erwin Data Modeler Workgroup Edition:

| Parameter Type   | Recommended Value                                               | Notes                                                              |
|------------------|-----------------------------------------------------------------|--------------------------------------------------------------------|
| memory           | 512 MB minimum<br><br>1 GB is recommended                       | More memory implies less physical I/O                              |
| procedural cache | Set the cache to grow to a fixed size, such as 50 MB or 100 MB. | erwin Data Modeler Workgroup Edition is stored procedure-intensive |

## Named Cache Configuration

For SAP ASE systems, consider setting up a 4 KB pool for the default data cache. SAP ASE writes I/O to the log more often in 4 KB increments than in 2 KB increments (the default). You can set up a 4 KB I/O pool using `sp_poolconfig`, but you must restart the server to enable the 4 KB I/O writes to the log. Set the pool up as a smaller subset of the cache.

Be careful when making changes to the data caching systems in SAP ASE. Monitor your changes with SQL Monitor or `sp_sysmon` to ensure that the changes you make do not starve the 2 KB I/O pool or other caches.

The following shows the recommended size of the 4 KB I/O pool for small, medium, and large servers:

| Server Size | Data Cache Size | 4 KB I/O Pool Size |
|-------------|-----------------|--------------------|
| Small       | 128 MB          | 4 MB               |
| Medium      | 512 MB          | 6 MB               |
| Large       | 1 GB            | 10 MB              |

## Database Tuning Parameters

You can make database tuning adjustments in three different areas:

- Transaction log
- Threshold procedures
- Database options

### Transaction Log

The transaction log keeps a before and after image of each change made in the database. Microsoft SQL Server keeps a transaction log for each database.

Back up the transaction log frequently. This keeps the transaction log small and reduces the amount of data lost in the event of a severe database corruption.



### Threshold Procedures

For SQL Server, the option to set a threshold procedure is not available. Ensure that you back up the log frequently to keep the log small.

## "trunc. log on chkpt" Option

To ensure maximum recoverability, do not enable the `trunc. log on chkpt` option, since the log is cleared automatically after each checkpoint operation. If the database device becomes damaged with the log device still active and this option is set, the database cannot be recovered using the log files since they are almost empty.

### Database and Log Sizing

Since the database is a dynamic environment, allow plenty of space for the models you create. Tests have shown that models generate between 10 KB and 20 KB of data per entity during initial save times. Log overhead per object is approximately 15 KB to 21 KB per entity. Allocate 50 to 65 percent of the database size to the log to avoid running out of room in the log for a typical model save.

An average mart can range in size between 200 MB and 1 Gig. Size the transaction log accordingly. A 50 MB data device can store several large models (about 2,500 entities and 100,000 total objects), but keep in mind that the database becomes more flexible and has less storage space issues when the data device is large.

The following table shows the recommended database size and log size for small, medium, and large marts:

| Database Size | Database Device | Transaction Log Device |
|---------------|-----------------|------------------------|
| Small         | 200 MB          | 100 MB                 |
| Medium        | 500 MB          | 200 MB                 |
| Large         | 1 GB            | 400 MB                 |

### How to Maintain an Efficient Database

To maintain an efficient database, perform the following maintenance tasks:

- Run `UPDATE STATISTICS` and execute `sp_recompile` frequently on every table in the database. This keeps the statistics up-to-date for the indexes, resulting in better overall performance.
- Periodically recreate the clustered indexes in the database to reduce fragmentation. Be sure to back up the database and transaction log daily.
- Run `DBCC CheckDB()`, `DBCC CheckCatalog()`, and `DBCC CheckAlloc()` or `DBCC NewAlloc()` on the database nightly, to check for corruption and inconsistencies in the database. Check the output of these queries and look for keywords like `corrupt`. Any problems detected by these commands are sent to the query output, so save the files and scan them regularly.

## Database and Log Sizing

---

The following table shows maintenance tasks and the recommended frequency for performing these tasks:

| Maintenance Task       | Recommended Frequency | Reason                                                                                    |
|------------------------|-----------------------|-------------------------------------------------------------------------------------------|
| DBCC Checkdb           | Nightly               | Check for corruption in databases.                                                        |
| DBCC NewAlloc          | Weekly                | Check for allocation corruption (Microsoft SQL Server only).                              |
| DBCC Check-Alloc       | Weekly                | Check for allocation corruption (Microsoft SQL Server only).                              |
| DBCC Check-Catalog     | Weekly                | Check for system table inconsistencies.                                                   |
| UPDATE STATISTICS      | Nightly               | Recreates the statistics page for each index.                                             |
| EXEC sp_recompile      | Nightly               | Tells which stored procedures have changed.                                               |
| Backup Database        | Weekly                | Full backup of database should be done at least weekly, if not nightly.                   |
| Backup Transaction Log | Daily                 | Backing up the transaction log daily saves all committed transactions and clears the log. |

### DBCC Commands

Use the following DBCC commands to perform maintenance tasks on the database:

```
DBCC CheckDB (mart)
go
DBCC CheckAlloc (mart)
go
DBCC CheckCatalog (mart)
go
```

## Oracle Tuning Recommendations

This section contains the following topics:


[Recommended Disk Configurations](#)


[Database Configuration](#)

[Storage Parameters](#)

# Recommended Disk Configurations

Oracle servers are available on many different platforms ranging from PCs to mainframes. To support the wide range of hardware platforms and application requirements, Oracle servers have a number of configuration options that you can use to tailor the behavior of an Oracle database. You can also use these configuration options to tailor your database. Some of the options documented in this guide only apply to specific Oracle versions. For further information, see the appropriate Oracle documentation.

If the Oracle server is not dedicated to the erwin  Data Modeler Workgroup Edition, as database administrator you must be careful to balance the requirements of all users on the server. This is particularly true for database servers that support OLTP (On Line Transaction Processing) applications that require tight response characteristics.

The layout of Oracle database files on physical disk drives plays a major role in the performance of the database. When used with erwin  Data Modeler Workgroup Edition, Oracle performs large bursts of database operations (fetches, inserts, updates, and deletes) in a short period of time. This usage pattern often requires Oracle to perform a significant amount of disk I/O operations. For good performance, it is important that as many I/O operations as possible be performed in parallel. This enables Oracle to retrieve data faster during fetches and to write data faster during inserts, updates, and deletes.

To maximize parallel I/O access, split the Oracle database files across many physical disks. Ideally, you should place the database on four physical disks. If this is not possible, you can use three, two, or one disk systems.

Installing Oracle on a single disk system causes significant performance degradation.

## Database Configuration

Proper database configuration is essential to the smooth operation and good performance of an Oracle database. You can use the configuration options described to optimize the processing of your Oracle server.



### Maximum Number of Processes

Oracle must be preconfigured at startup with a maximum number of processes that can access the database. The parameter that controls the maximum number of processes, called PROCESSES, is defined in the INIT.ora or INIT<SID>.ora file. It should be set to the maximum potential number of concurrent users plus seven. The additional seven are for Oracle background processes that must also access the database. Setting the number of processes at a lower value can prevent some users from accessing the server during peak usage times. Setting the number of processes at a higher value can waste a small amount of system memory resources.

### Shared Pool

The shared pool is an area of Oracle memory that includes two main structures:

- The library cache, which stores parsed SQL and PL/SQL statements
- The dictionary cache, which stores the Oracle data dictionary (or Oracle metadata)

The SHARED\_POOL\_SIZE parameter is defined in the INIT.ora or INIT<SID>.ora file and is used to regulate the size of the shared pool. Set the SHARED\_POOL\_SIZE parameter to a minimum of 3500000 (3.5 million). Setting the shared pool to a smaller value can degrade performance, forcing Oracle to do disk I/O to retrieve objects that cannot fit in the shared pool. A larger shared pool may be required, depending on the size and number of models and the number of users.

### Buffer Cache

The buffer cache serves as a memory cache for all data going to and from Oracle data files. When Oracle needs a block of data it first checks whether that block exists in the buffer cache. If it does, Oracle gets the data from the buffer cache, avoiding disk access. Having a large enough buffer cache lets the Oracle server bypass most I/O requests.

Buffer cache size is controlled by the DB\_BLOCK\_BUFFERS parameter defined in the INIT.ora or INIT<SID>.ora file. Set the buffer cache to a minimum of 4 MB. Values smaller than 4 MB force Oracle to do many more I/O requests and significantly degrades the performance. Values larger than 4 MB improve performance and should be used if memory is available.

In Oracle, the DB\_BLOCK\_BUFFERS parameter is specified as a number of database blocks instead of actual size in bytes. To compute the value of DB\_BLOCK\_BUFFERS, divide the desired buffer cache size in bytes by the database block size defined by the DB\_BLOCK\_SIZE parameter in the INIT.ora or INIT<SID>.ora file.

### Redo Log Files

Redo log files contain a record of all Data Manipulation Language (DML) commands (such as INSERT, UPDATE, and DELETE commands) performed on the database. As DMLs are performed, the Oracle engine writes them to sequential redo log files. Periodically, an Oracle background process retrieves the DMLs from the Redo log files and writes the actual changes to the Oracle tablespace files. This mechanism lets Oracle defer most of the I/O burden associated with DMLs to a background process that does not slow down the client processes.

Oracle Redo log files are treated by the database engine as a ring. When one file fills up, the engine performs a log switch and starts writing to the next log file in the ring. When that log file fills, the engine switches again.

The number and size of the Redo log files is an important performance consideration. If the log files are too small or if there are not enough of them in the ring, Oracle may have to stall on a log switch. If this happens, the DMLs in the next log in the ring may not have been written to the tablespace files, and therefore the next log file has not been archived by the background ARCH process. For more information about Redo log archiving, see the Oracle documentation.

Redo log files are created when the database is created. However, Redo log files can be added or deleted at any time using Data Definition Language (DDL) statements.

You should have at least four Redo log files, each 2 MB in size. A smaller number of Redo log files or a smaller Redo log file size can cause I/O bottlenecks. If the disk space is available, using more than four Redo log files further reduces the chances of delayed log switches. Larger Redo log files improve performance, but care must be taken to adequately schedule checkpoints that write DMLs stored in the Redo logs to the tablespace files.

If the number of disks permits, you should mirror Redo log files by creating Redo log groups with two mirrored members per group. This offers the database some protection against single disk errors.

### Increase Space in Redo Logs

The number and size of the Redo log files is an important performance consideration. Redo log files are created when the database is created.

#### To increase space in the Redo logs

1. Log in to Oracle using SQL\*Plus as SYSDBA or SYSOPER and run the following script to create eight Redo logs that are 2 MB each:

```
rem -- parml -- temp dir

rem Generate creation script
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_11.LOG' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
11.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_12.LOG' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
12.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_13.LOG' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
13.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_14.LOG' SIZE 2M ;'
```

## Increase Space in Redo Logs

---

```
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
14.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_15.LOG'' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
15.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_16.LOG'' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
16.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_17.LOG'' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
17.LOG')
 UNION
SELECT 'ALTER DATABASE ADD LOGFILE '''
 || SUBSTR (MEMBER , 1 , INSTR (MEMBER , '\' , -1 , 1))
 || 'REDO_18.LOG'' SIZE 2M ;'
 from V$LOGFILE
 where ROWNUM = 1
 and not exists (SELECT 1 from V$LOGFILE where MEMBER like '%REDO_
18.LOG')
.
Spool &1.AddLog.ORA
```

## Increase Space in Redo Logs

---

```
/
Spool Off
COMMIT ;

SELECT 'ALTER SYSTEM SWITCH LOGFILE ;' from V$LOG where ROWNUM < 5
.
 Spool &1.SwtchLog.ORA
/
Spool Off
COMMIT ;

rem Generate Deletion script
SELECT 'ALTER DATABASE DROP LOGFILE GROUP ' || TO_CHAR (GROUP#) || '
;' from V$LOG where BYTES < 2097152
.
 Spool &1.DropLog.ORA
/
Spool Off
COMMIT ;

@&1.AddLog.ORA
$Del &1.AddLog.ORA
COMMIT ;

@&1.SwtchLog.ORA
$Del &1.SwtchLog.ORA
COMMIT ;


@&1.DropLog.ORA
$Del &1.DropLog.ORA
COMMIT ;
```

2. Run the following query to verify the new Redo log configuration:

```
SQLWKS> select group#, status, bytes from v$log;
```

Oracle does not let you drop an older Redo log file that is still ACTIVE. If you must drop an older Redo log file that is still ACTIVE, drop that log file manually.

### Redo Log Buffer

The Redo log buffer is an area in memory that Oracle uses to collect DMLs before they are written to the Redo log files. The log file write occurs when either a transaction commits or a Redo log buffer is full. Because erwin  Data Modeler Workgroup Edition tends to generate fairly large transactions, use a log buffer size of 163840 bytes. (For single disk Oracle installations, use a log buffer size of 655360 bytes.) Setting the Redo log buffer size to a value smaller than the recommended value can degrade I/O performance. Using a larger value requires more memory.

The Redo log buffer size is defined using the LOG\_BUFFER parameter in the INIT.ora or INIT<SID>.ora file.

### Checkpoints

An Oracle checkpoint is an event that posts DMLs from the Redo log files to the tablespace files. Checkpoints always occur after a Redo log file switch and can also be configured to occur at predefined time intervals. For erwin Data Modeler Workgroup Edition, which generates large transactions, checkpoints should occur only after log switches to minimize I/O.

To ensure a checkpoint only after a log switch, *do not* set the LOG\_CHECKPOINT\_INTERVAL and LOG\_CHECKPOINT\_TIMEOUT parameters in the INIT.ora or INIT<SID>.ora file.



# Storage Parameters

Object storage parameters in Oracle determine the amount of space allocated for each object in the database. Setting these parameters correctly is critical to both operation and performance of the database. Incorrect storage allocations can cause a database object to run out of space, which prevents you from saving models to the repository. Inefficient selection of storage parameters can lead to performance problems by forcing Oracle to do time-consuming space management operations during DML statement execution.

Recommendations for storage parameter values differ based on the size of your model:

- Small data models: 1 to 50 Entities
- Medium data models: 51 to 100 Entities
- Large data models: over 100 Entities

### Rollback Segments

Rollback segments contain undo information for all changes performed by noncommitted transactions. Rollback segments are a shared resource used by all active transactions in the database. When a transaction starts, Oracle binds that transaction to a particular rollback segment. As DMLs in the transaction execute, rollback segment space is used. For large transactions, rollback segments may need to allocate new extents as the transaction continues. When the transaction ends, a properly configured Oracle database releases the additional rollback extents so that they can be used for other rollback segments. To ensure that the additional rollback extents are released, configure the OPTIMAL parameter for each rollback segment.

Use a maximum of five transactions per rollback segment by setting the TRANSACTIONS\_PER\_ROLLBACK\_SEGMENT parameter in the INIT.ora or INIT<SID>.ora file. Use the following rollback segment storage parameters for small, medium, and large models:

| Model Type | Initial Extent Size | Next Extent Size | Optimal Size                  |
|------------|---------------------|------------------|-------------------------------|
| Small      | 1 MB                | 1 MB             | ~ 2 MB x (# of transactions)  |
| Medium     | 6 MB                | 6 MB             | ~ 12 MB x (# of transactions) |
| Large      | 6 MB                | 6 MB             | ~ 12 MB x (# of transactions) |

The # of transactions is the maximum number of simultaneous erwin Data Modeler Workgroup Edition connections to Oracle.

In Oracle it is common to see the following error statement when the Rollback logs are not set up optimally:

**ORA-01562 failed to extend rollback segment number string**

### Set Optimal Configuration for the Rollback Logs

For large transactions, rollback segments may need to allocate new extents as the transaction continues. When the transaction ends, a properly configured Oracle database releases the additional rollback extents so that they can be used for other rollback segments. To ensure that the additional rollback extents are released, configure the OPTIMAL parameter for each rollback segment.

#### To set the optimal configuration for the rollback logs of large databases

1. Log in to Oracle as SYS or SYSTEM and run the following query and check the result to view the current configuration of the Rollback Segments:

```
SQLWKS> select SEGMENT_NAME, INITIAL_EXTENT, NEXT_EXTENT, MIN_EXTENTS,
MAX_EXTENTS, STATUS from dba_rollback_segs;
```

The result is:

| SEGMENT_NAME | INITIAL_EX | NEXT_EXTEN | MIN_EXTENT | MAX_EXTENT | STATUS  |
|--------------|------------|------------|------------|------------|---------|
| SYSTEM       | 51200      | 51200      | 2          | 121        | ONLINE  |
| RB_TEMP      | 102400     | 102400     | 2          | 121        | OFFLINE |
| RB1          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB2          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB3          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB4          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB5          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB6          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB7          | 2097152    | 2097152    | 2          | 121        | ONLINE  |
| RB8          | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB9          | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB10         | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB11         | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB12         | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB13         | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB14         | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB15         | 2097152    | 2097152    | 2          | 121        | OFFLINE |
| RB16         | 2097152    | 2097152    | 2          | 121        | OFFLINE |

18 rows selected.

## Set Optimal Configuration for the Rollback Logs

In this example, there are sixteen rollback segments with 2 MB INITIAL EXTENT, 2 MB NEXT EXTENT, and MAX EXTENTS of 121 MB.

### 2. Run the following query for each Rollback Segment:

```
alter rollback segment rb1 offline;
drop rollback segment rb1;
create public rollback segment rb1
tablespace rollback_data
storage (initial 6M
next 6M
minextents 2
maxextents 121
optimal 12M);
alter rollback segment rb1 online;
alter rollback segment rb2 offline;
drop rollback segment rb2;
create public rollback segment rb2
tablespace rollback_data
storage (initial 6M
next 6M
minextents 2
maxextents 121
optimal 12M);
alter rollback segment rb2 online;
```

<Repeat for each Rollback Segment>

This query sets the optimal Rollback Segment configuration to 6 MB INITIAL EXTENT, 6 MB NEXT EXTENT, 2 MB MIN EXTENT, 121 MB MAX EXTENT, and 12 MB OPTIMAL.

### 3. Run the following query to verify the Rollback segment configuration changes:

```
SQLWKS> select SEGMENT_NAME, INITIAL_EXTENT, NEXT_EXTENT, MIN_
EXTENTS,MAX_EXTENTS, STATUS from dba_rollback_segs;
```

The result is:

| SEGMENT_NAME | INITIAL_EX | NEXT_EXTEN | MIN_EXTENT | MAX_EXTENT | STATUS  |
|--------------|------------|------------|------------|------------|---------|
| SYSTEM       | 51200      | 51200      | 2          | 121        | ONLINE  |
| RB_TEMP      | 102400     | 102400     | 2          | 121        | OFFLINE |
| RB1          | 6291456    | 6291456    | 2          | 121        | ONLINE  |
| RB2          | 6291456    | 6291456    | 2          | 121        | ONLINE  |

## Set Optimal Configuration for the Rollback Logs

|      |         |         |         |     |        |        |
|------|---------|---------|---------|-----|--------|--------|
| RB3  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB4  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB5  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB6  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB7  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB8  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB9  |         | 6291456 | 6291456 | 2   | 121    | ONLINE |
| RB10 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |
| RB11 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |
| RB12 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |
| RB13 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |
| RB14 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |
| RB15 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |
| RB16 | 6291456 | 6291456 | 2       | 121 | ONLINE |        |

18 rows selected.

## Tablespaces

To improve performance you can create more than one tablespace for indexes. Then, after you install the software, you can move some indexes to the other tablespaces.

The following table lists the suggested initial sizes for DATA and INDEX tablespaces:

| Tablespace | Small  | Medium | Large  |
|------------|--------|--------|--------|
| DATA       | 200 MB | 500 MB | 1 GB   |
| INDEX      | 200 MB | 250 MB | 500 MB |

DATA and INDEX tablespaces with these initial sizes can accommodate at least ten models or versions.



# Sample Files

This section contains the following topics:

[Sample workers.properties File](#)

[Sample isapi\\_redirect.properties File](#)

[Sample isapi\\_redirect.reg File](#)

[Sample uniworkers.properties File](#)

[Sample uriworkermap.properties File](#)

## Sample workers.properties File

The workers.properties file includes the following parameters:

`worker.list`

`worker.<workername>.host`

`worker.<workername>.port`

`worker.<workername>.type`

`worker.<workername>.connection_pool_size`

The descriptions of the parameters are as follows:

### **workers.list**

Lists all the workers that are defined. When you start the web server, the plug-in instantiates these workers.

### **worker.<workername>.host**

Defines the IP address of the computer where Tomcat (WA-OP) is installed.

### **worker.<workername>.port**

Defines the port that the AJP workers inside Tomcat listen to. By default, AJP13.Workers listen to port 8009.

### **worker.<workername>.type**

## Sample Files

---

Defines the type of worker. The type of the worker can be ajp13, ajp14, jni, lb, or status.

### **worker. <workername>.connection\_pool\_size**

Defines the number of connections made to AJP back-end.

The following is a sample workers.properties file:

```
This file provides minimal jk configuration properties needed to
connect to Tomcat.

#

The workers that jk should create and work with
#

worker.list=lb, jk-status

#

Defining a worker named nodel and of type ajp13

Note that the name and the type do not have to match.

#

worker.nodel.type=ajp13
worker.nodel.host=localhost
worker.nodel.port=8009

#

Defining a load balancer

#

worker.lb.type=lb
worker.lb.balance_workers=nodel

#

Define status worker
```

## Sample Files

---

```

worker.jk-status.type=status
```

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## Sample isapi\_redirect.properties File

The following is a sample isapi\_redirect.properties file:

```
extension_uri=/jakarta/isapi_redirect.dll

Full path to the log file for the ISAPI Redirector
log_file=<path to the native_iis folder>\native_IIS\logs\isapi_
redirect.log

Log level (debug, info, warn, error or trace)
log_level=info

Full path to the workers.properties file
worker_file=<path to the native_iis folder>\native_IIS\
workers.properties

Full path to the uriworkermap.properties file
worker_mount_file=<path to the native_iis folder>\native_IIS\uri-
workermap.properties
```

In this example, *jakarta* refers to the virtual directory you have added before you created the ISAPI filter.

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## Sample isapi\_redirect.reg File

The following is a sample isapi\_redirect.reg file:

```
REGEDIT4
```



## Sample Files

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```
[HKEY_LOCAL_MACHINE\SOFTWARE\Apache Software Foundation\Jakarta
Isapi Redirector\1.0]
```

```
"extension_uri"="/jakarta/isapi_redirect.dll"
```

```
"log_file"="<path to the native_iis folder>\\native_IIS\\-
logs\\isapi.log"
```

```
"log_level"="debug"
```

```
"worker_file"="<path to the native_iis folder>\\native_IIS\\-
workers.properties"
```

```
"worker_mount_file"="<path to the native_iis folder>\\native_
IIS\\uriworkermap.properties"
```

In this example, *jakarta* refers to the virtual directory you have added before you created the ISAPI filter.

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## Sample uniworkers.properties File

The following is a sample uniworkers.properties file:

```
/MartServer/*=node1
```

## Sample uriworkermap.properties File

The following is a sample uriworkermap.properties file:

```
This file provides sample mappings for example wlb
worker defined in workermap.properties.minimal
The general syntax for this file is:
[URL]=[Worker name]

/*=lb

Mount jkstatus to /jkmanager
For production servers you will need to
```

## Sample Files

---

```
secure the access to the /jkmanager url
```

```
#
```

```
/jk-manager=jk-status
```

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