erwin Data Modeler

DM Connect for DI

Release 2020 R2 SP1

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DM Connect for DI Overview

erwin now offers an integration, **DM Connect for DI**, between two powerful products, erwin Data Modeler (DM) and erwin Data Intelligence Suite (DI Suite). This offering enables you to maintain a single metadata and glossary source across erwin DM and erwin DI Suite using erwin Mart Administrator as an interface. Apart from this, DM Connect for DI offers the following benefits

- Use data models as a foundation for data governance initiatives
- Automatically update data catalog
- Maintain a business glossary based on naming standards

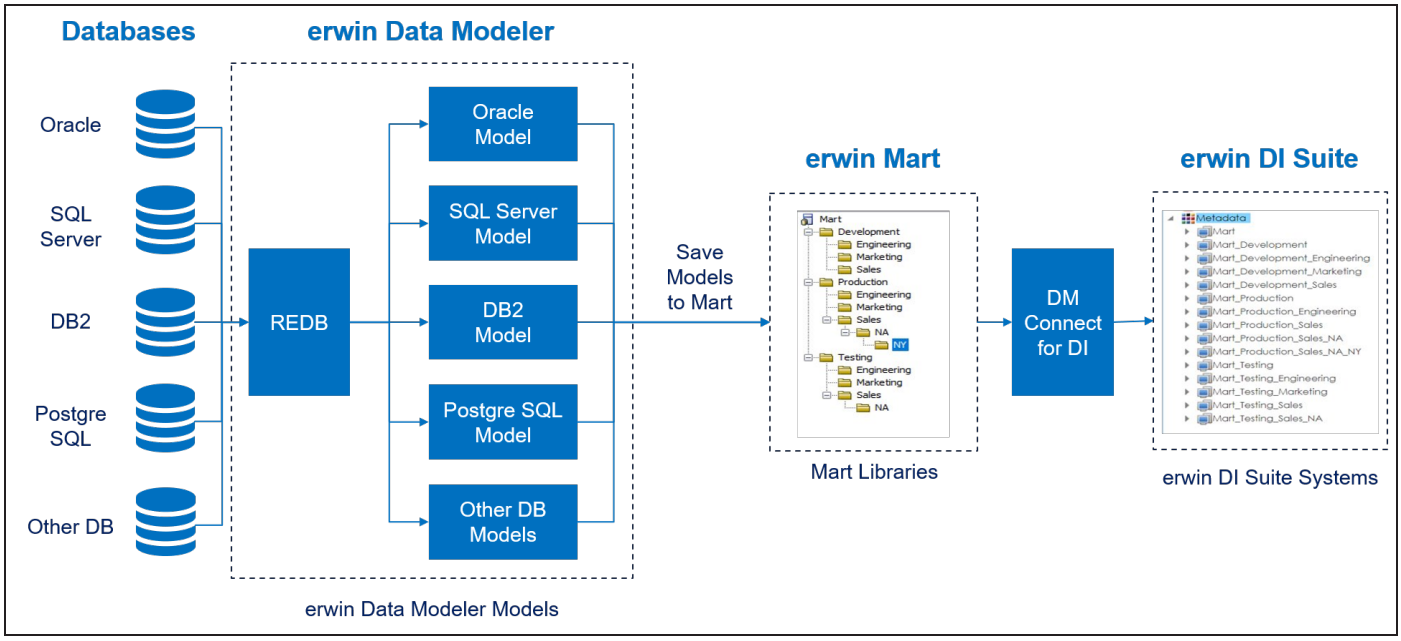
Workflow

erwin DM supports several target databases. It provides a powerful and robust workspace to create rich data models based on these target databases. Further, it provides connectivity to erwin Mart Server (MS); where you can store your rich data models in a mart repository.

erwin Mart Administrator (MA) provides you with a way to interact with erwin MS. It also acts an interface between erwin DM and erwin DI Suite. It enables you to schedule jobs to export data models and data sources from your mart repository to erwin DI Suite's Data Catalog. Further, it integrates the naming standards set up on your models into the Business Glossary Manager.

erwin DI Suite enables you to use your data models as a foundation for your data governance initiatives. It enables you to maintain a semantic lineage between metadata and business objects.

To summarize, erwin Data Modeler, erwin Mart Administrator, and erwin DI Suite work together as follows.


Databases
erwin Data Modeler
Oracle
SQL Server
DB2
Postgre SQL
Other DB
REDB
Oracle Model
SQL Server Model
DB2 Model
Postgre SQL Model
Other DB Models
erwin Data Modeler Models
Save Models to Mart
erwin Mart
Mart Libraries
DM Connect for DI
erwin DI Suite
erwin DI Suite Systems

Prerequisites

Before configuring erwin DM Connect for DI, ensure that the prerequisites for erwin Mart Server and erwin Data Intelligent Suite (DI Suite) are in place:

- System requirements:
  - erwin Mart Server
  - erwin DI Suite
- Permissions:
  - erwin Mart Server
  - erwin DI Suite
- erwin DI Suite DocumentsPath

erwin Mart Server System Requirements

Refer to the following tables for minimum system requirements.

Parameter	Requirement
Hardware/Workstation	• 2 GHZ or higher dual core processor • 4 GB RAM (8 GB or more for large marts) • 10 GB of disk space or more as required to support your specific mart
Operating System	• Microsoft Windows 8.1 • Microsoft Windows 10 • Microsoft Windows Server 2012, R2 • Microsoft Windows Server 2016 • Microsoft Windows Server 2019 • Microsoft .NET Framework 4.0 and above • All current Microsoft Windows critical updates
Database	• Microsoft SQL Server 2016 SP2 or the certified versions 2017 and 2019 **Note**: For DM Connect for DI, the minimum SQL Server version requirement is SQL Server 2016 SP2 • Oracle 12c or the certified versions 12c R2, 18c, and 19c

	• PostgreSQL through V9.6.2 and certified on 9.6.15, 10.10, and 11.5. Additionally, PostgreSQL is certified as follows: ▪ version 11.6 for Amazon RDS and Amazon Aurora ▪ version 12.3 for Amazon RDS
erwin Mart Administrator Web Client - Browser	• Microsoft Internet Explorer v10 or newer • Mozilla Firefox v30 or newer • Google Chrome v30 or newer • Apple Safari 6 or newer
Tomcat Memory	In the C:\Program Files\erwin\Mart Server r9\Tomcat64\bin\startup.bat file, update the following setting to increase the RAM in MBs: set "CATALINA_OPTS=-Xms256m -Xmx1028m"
Tomcat Memory (Large Mart)	In the C:\Program Files\erwin\Mart Server r9\Tomcat64\bin\startup.bat file, update the following setting to increase the RAM in MBs: set "CATALINA_OPTS=-Xms1024m -Xmx12288m" That is, (1GB - 12GB)

erwin DI Suite System Requirements

Parameter	Requirement

Hardware/Workstation	• VM or Dedicated Physical Server
	• Processor - 64-bit, minimum 4 cores
	• RAM:
	  • 16 GB for limited user POCs
	  • 32-64 GB for enterprise production deployment
	• Hard Disk Drive - 200-300 GB

Operating System	• Microsoft Windows - Windows 10, Windows Server 2012 and above • CentOS 7 • RHEL 6.6 and 7.2 • Amazon Linux 2
Database	• SQL Server 2016 SP2 and higher

	Note: For DM Connect for DI, the minimum SQL Server version requirement is SQL Server 2016 SP2 • Oracle 11g and higher
Browser	• Google Chrome v28.0 or higher • Mozilla Firefox v16 or higher • Microsoft Edge
Web Servers	Apache Tomcat v8.5.35/41
Web Server Memory Allocation	Allot at least 50 percent of available memory. For example, if available memory is 16GB, allot at least 8GB.
Web Client Workstation	• Processor - i3 or higher • RAM - 8GB minimum

In case of enterprise deployment, for the best performance, it is recommended to allot at least 0.5 GB space per user on the application server. For example, if 30 users log on simultaneously, the application server must have at least 15 GB of RAM allocated to it.

Note: The above RAM allocation does not indicate the RAM of the server machine. It indicates the physical RAM allocation to the application server.

Database Server Specifications

The following table lists database server specifications:

Parameter	Requirement
Server Type	Dedicated standalone server
Processor	64-bit, minimum 4-8 cores
RAM	16-32 GB
Hard Disk Drive	250-500 GB
Tablespace	50 GB, minimum

Note: erwin DI Suite requires a dedicated schema/database (SQL Server or Oracle) with at least 50 GB tablespace allocated to it, which increases exponentially based on usage.

Permissions

To use DM Connect for DI, you need certain permissions on erwin Mart Administrator and erwin Data Intelligence Suite (DI Suite).

Minimum erwin Mart Permissions

You can use DM Connect for DI only if your account has been assigned the following profiles:

- Administrator
- Architect

Minimum erwin DI Suite Permissions

Metadata Manager
Create System
Systems/System Tabs/View System Details
List Systems
Systems/Add Environment
Systems/List Environments
Systems/System Environments/Import Environment
Systems/System Environments/New Version
Systems/System Tabs/View Environment Details
Systems/Configure Expanded Logical Name
Systems/System Environments/Environment Tabs/Extended Properties/Edit Extended Properties

Mapping Manager
Projects/Create Project
Projects/Mappings/Create Mapping
Projects/Project Tabs/Project Details/View Project Details

Business Glossary Manager

Custom Objects/Catalog/Create
Custom Objects/Catalog/Edit
Custom Objects/Catalog/View
Custom Objects/Catalog/Custom Objects/Create
Custom Objects/Catalog/Custom Objects/Edit
Custom Objects/Catalog/Custom Objects/View
Custom Objects/Import Catalog

erwin DI Suite DocumentsPath

To be able to export data from erwin Data Modeler (DM) to erwin DI Suite, ensure that you update the **iccdocuments.properties** file in erwin DI Suite as follows:

- **Windows**: If you change the default installation location, follow these steps:

  1. Open the **iccdocuments.properties** file from the following location:
     Apache Software Foundation\Tomcat 8.5\webapps\<Application Name>\WEB-INF\configuration\properties\iccdocuments.properties
  2. Change the **DocumentsPath** value to the current installation location:
     <drivename>:/<application name>

  For example, consider you changed the installation location from the default location to:
  D:\Apache Software Foundation\Tomcat 8.5\webapps\erwinDISuite\WEB-INF\-configuration\properties.
  Then, change the **DocumentsPath** to:
  D:/erwinDISuite

- **Linux**: Ensure that you follow these steps:

  1. Open the **iccdocuments.properties** file from the following location:
     /opt/tomcat/webapps/<<erwinDISuite>>/WEB-INF/-configuration/properties/iccdocuments.properties
  2. Change the **DocumentsPath** value to:
     opt/tomcat/<application name>

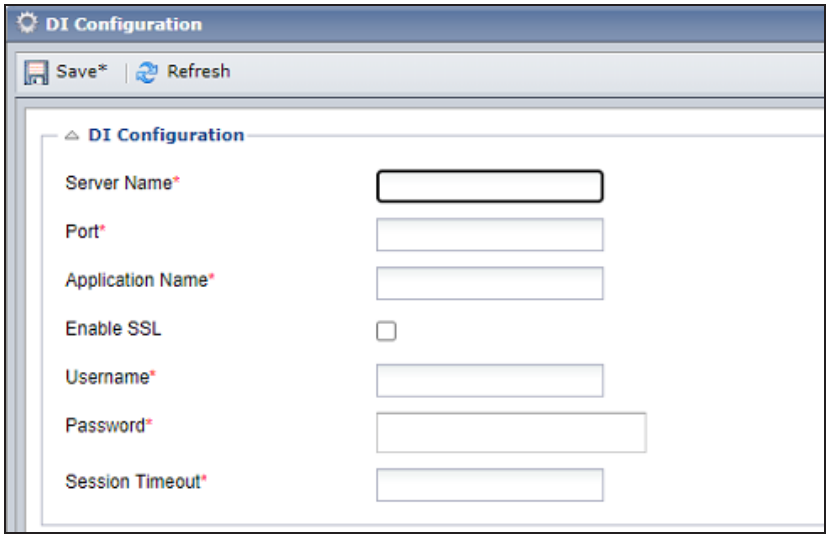
For example, change the **DocumentsPath** from *C:/MappingManager* to: opt/tomcat/erwinDISuite

Configuration

To use DM Connect for DI, you need to configure your erwin Data Intelligence Suite (DI Suite) application in erwin Mart Administrator. This is the application to which DM Connect for DI would export data models, data sources, and naming standards.

To configure erwin DI Suite, follow these steps:

1. On the Admin Panel, click **DI Configuration**.
   The DI Configuration page opens.



2. Configure your erwin DI Suite's connection parameters as follows:

   Server Name

   Specify the server address, where erwin DI Suite is installed.

   Port

   Specify the port on your server that is used for erwin DI Suite.

   Application Name

   Specify the name of your erwin DI Suite Application.

   Enable SSL

   Specify whether you want to connect to the server through a secured connection

Username

Specify your erwin DI Suite user name.

Password

Specify your erwin DI Suite password.

Session Timeout

Specify the erwin DI Suite's session time out duration in minutes.

3. Click **Save**.
   Your connection is tested and saved.

Scenario: Schedule Jobs to Export Data Models to erwin DI Suite

A job converts a model to erwin DI Suite compatible format and then,

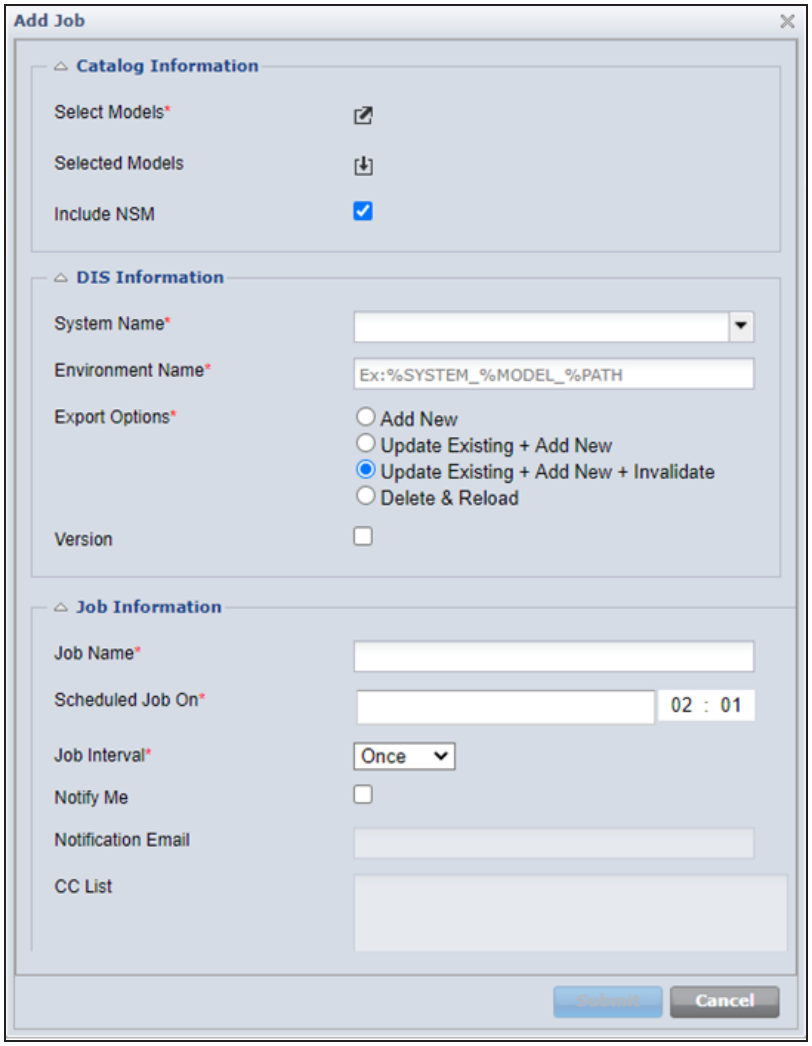
- exports the model to the Metadata Manager
- exports the source and target column data from a dimensional model into the Mapping Manager

  Note: Once source and target column data is exported, any updates made to them are not exported when the job runs again.
- If the model has an associated NSM file, it exports the file to the Business Glossary Manager

For more information about data sharing between erwin Data Modeler (DM) and erwin Data Intelligence Suite (DI Suite), refer to the Data Sharing topic.

To schedule a job, follow these steps:

1. Click **DM Connect for DI** > **Add Job**.
   The Add Job page opens.



2. Set up job parameters as follows:

Select Models

Select models from mart catalog to export. To view selected models, click the **Selected Models** icon.

Include NSM

Select whether naming standards must be exported. A catalog named by the NSM file is created under **Business Glossary Manager** > **DM NSM Files** custom asset.

Note: Ensure that the DM NSM Files asset is enabled in **erwin DI Suite** > **Business Glossary Manager Settings**.

System Name

Enter a system name. This corresponds to System in Metadata Manager.

Environment Name

Use the predefined macros to set the environment name. This corresponds to Environment in Metadata manager.

Note: For system and environment names, following special characters are allowed:

- **System**: - (hyphen), _ (underscore), and space
- **Environment**: @ (at sign), $ (dollar sign), & (ampersand), / (slash mark), - (hyphen), _ (underscore), and space

  All other special characters are replaced with _ (underscore).

Export Options

Select a suitable export option:

- **Add New**:
  - If an environment exists, this option adds any new tables or columns to it.
  - If an environment does not exist, this option creates an environment and adds tables and columns to it.
- **Update Existing + Add New**:
  - If the existing model objects have changed, this option exports the updates to the existing model objects in erwin DI Suite.
  - Also, it exports any new objects in the model to erwin DI Suite.
- **Update Existing + Add New + Invalidate**:

  Along with the functionality of Update Existing + Add New option, this option invalidates any deleted tables or columns.
- **Delete & Reload**:

  This option deletes all the tables and columns. Then, it exports them again.

Version

Select whether a version of an existing environment must be created. This archives the existing environment.

Job Name

Specify a job name.

Scheduled Job On

Select the date and time at which the job must run.

Job Interval

Select a suitable frequency at which the job must run. You can set the job to run once or recur daily, weekly, monthly, or yearly.

Notify Me

Select whether a notification is sent to you when the job status changes.
This enables the Notification Email and CC List fields.

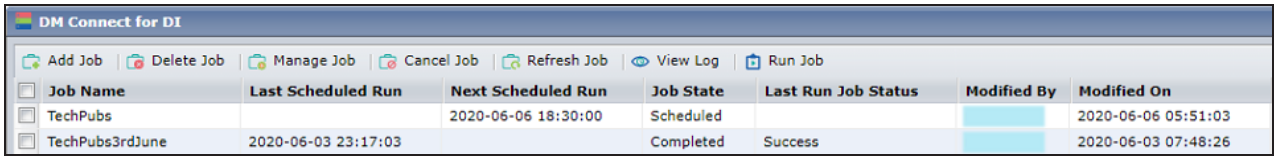
Notification Email

Specify the email address at which you want to receive the notification.

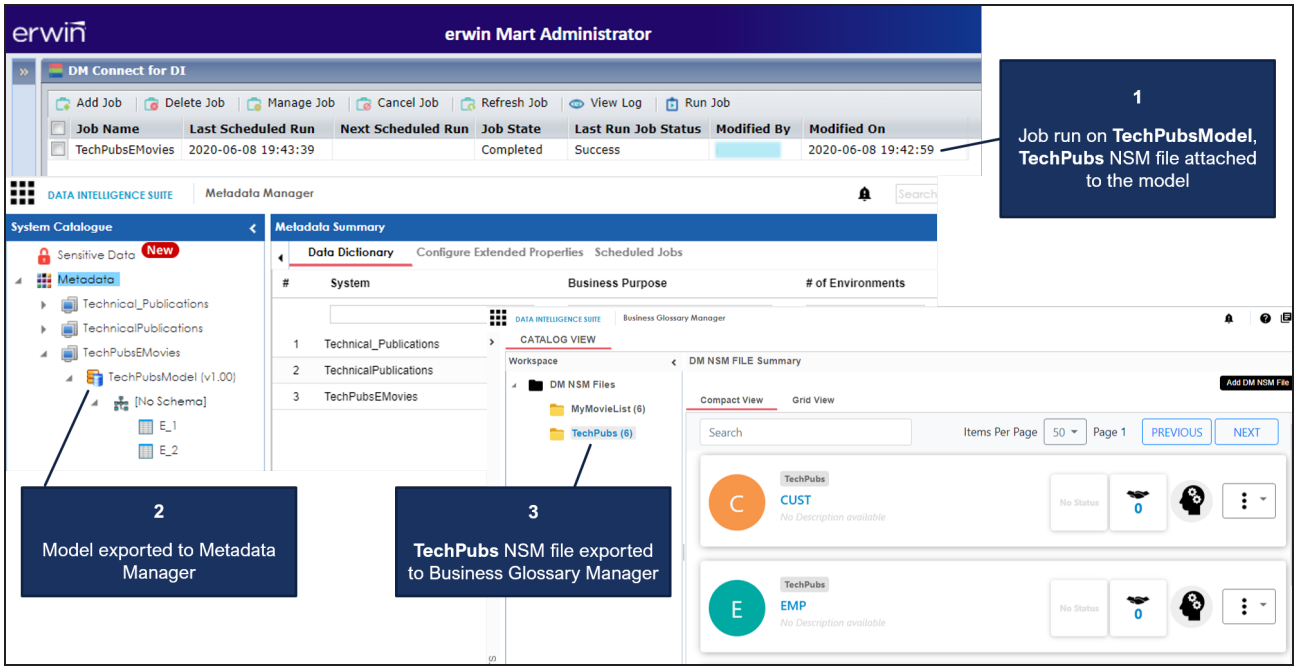
CC List

Specify a semi-colon-separated list of email addresses that must receive the job notification

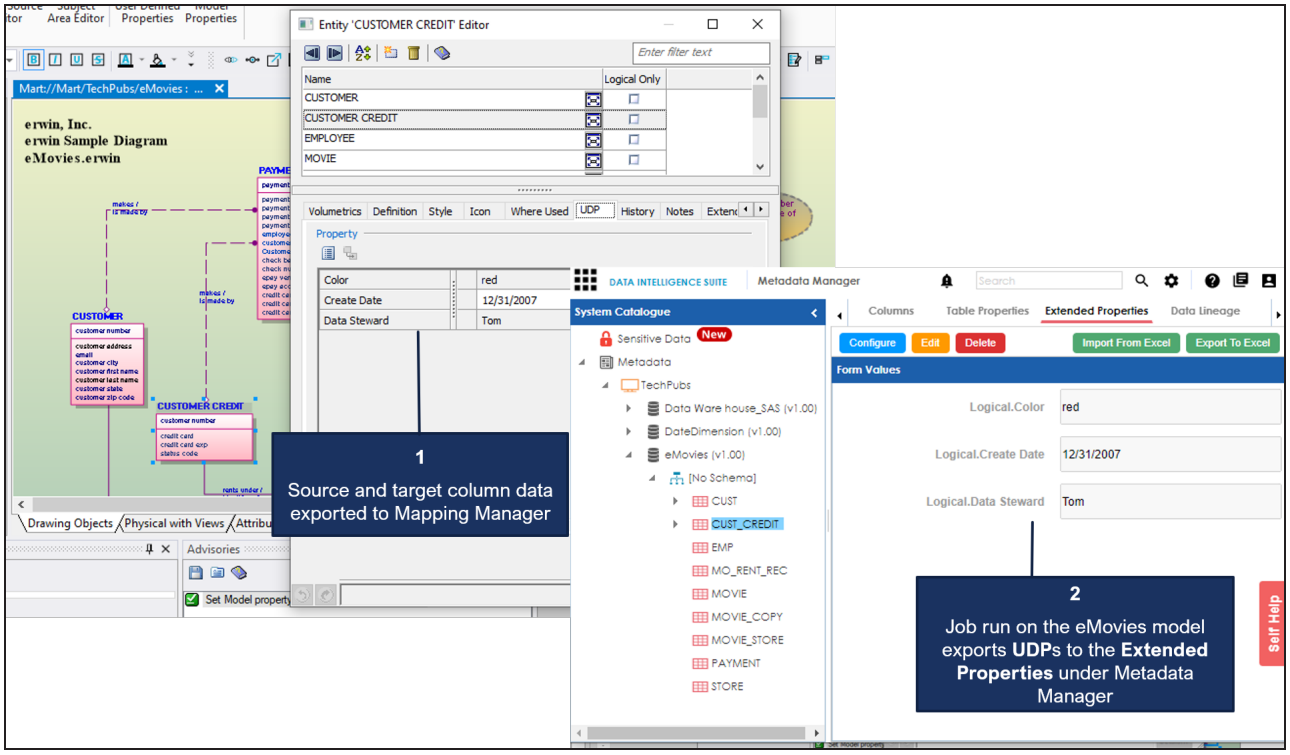
3. Click **Submit**.
   The job is added to the queue for execution with its **Job State** set to Scheduled.



The job runs according to the schedule and exports data model to Metadata Manager and naming standards to Business Glossary Manager.



Also, the UDPs in the model are exported to the Extended Properties tab in Metadata Manager.



Case I: Run Job

The Run Job option immediately runs a job. This option works only if the selected job is a recurring job in the scheduled state.

Case II: Modify Job

The Manage Job option lets you modify an existing scheduled job. If you modify a job:

- before its run schedule, the changes take effect when the job runs
- while it is running, the job is cancelled, and changes are saved. They take effect when the job runs next time.
- after it is past its schedule, the job runs according to the new schedule

Case III: Recurring Job-No Change in Models

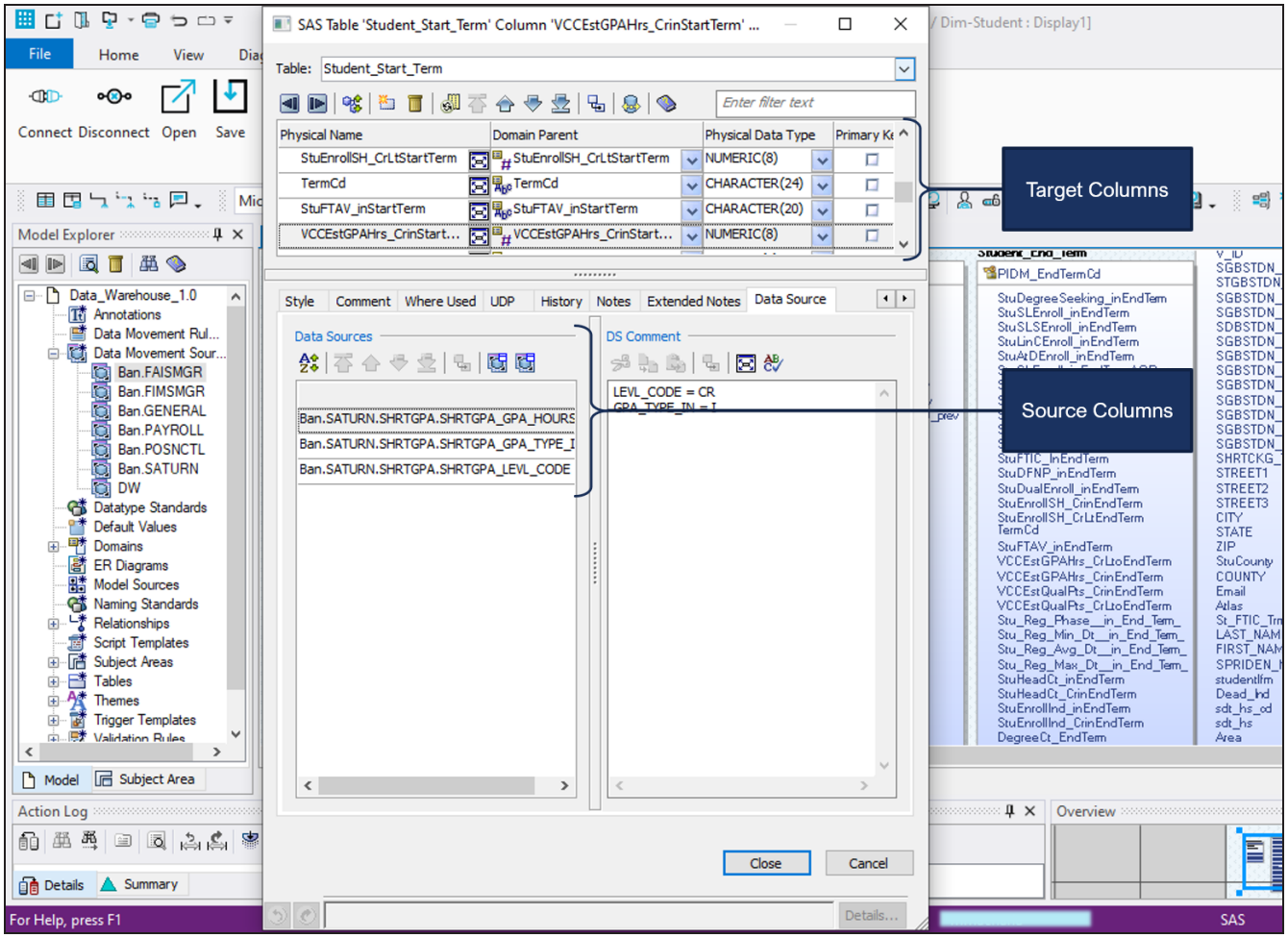
Recurring jobs run based on the Job Interval you set while scheduling them. If the models selected in the job have not changed between job intervals, the job still runs according to the schedule. However, no data is exported to erwin DI Suite.

Case IV: New Model in the Folder

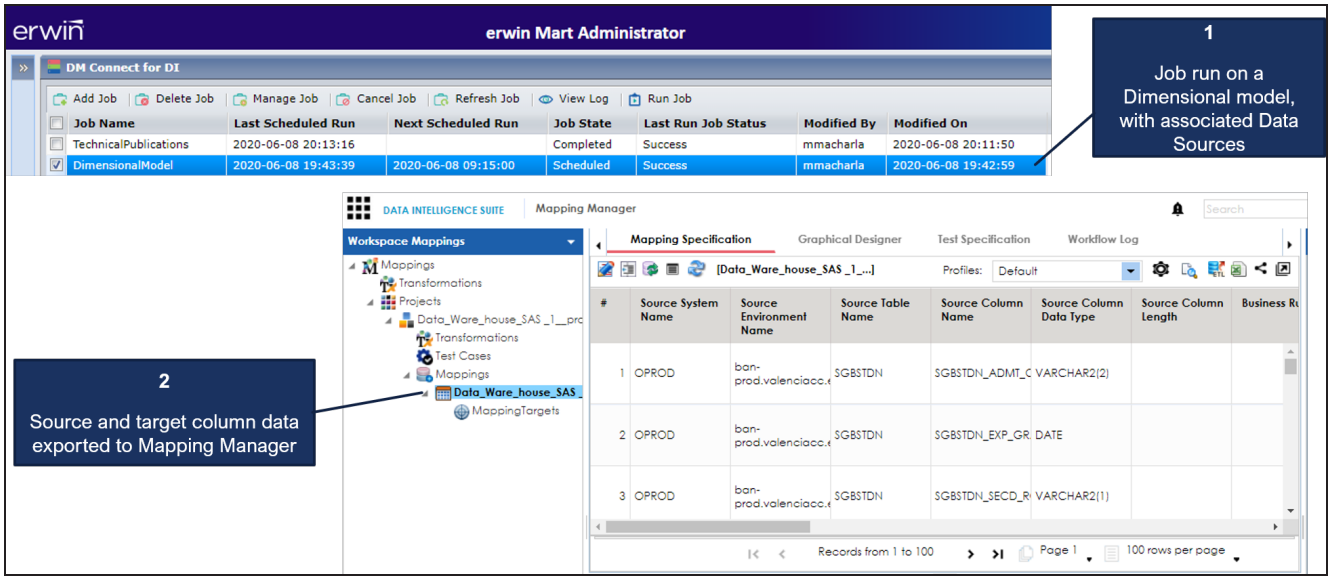
If a new model is added to an existing folder on which a recurring job has been scheduled, DM Connect for DI auto-syncs it to the job. The new model in included in the job automatically, when the job runs next.

Scenario: Import Source and Target Data into Mapping Manager

In case of dimensional model that has associated data sources, DM Connect for DI exports the source and target column data from the model into the Mapping Manager.



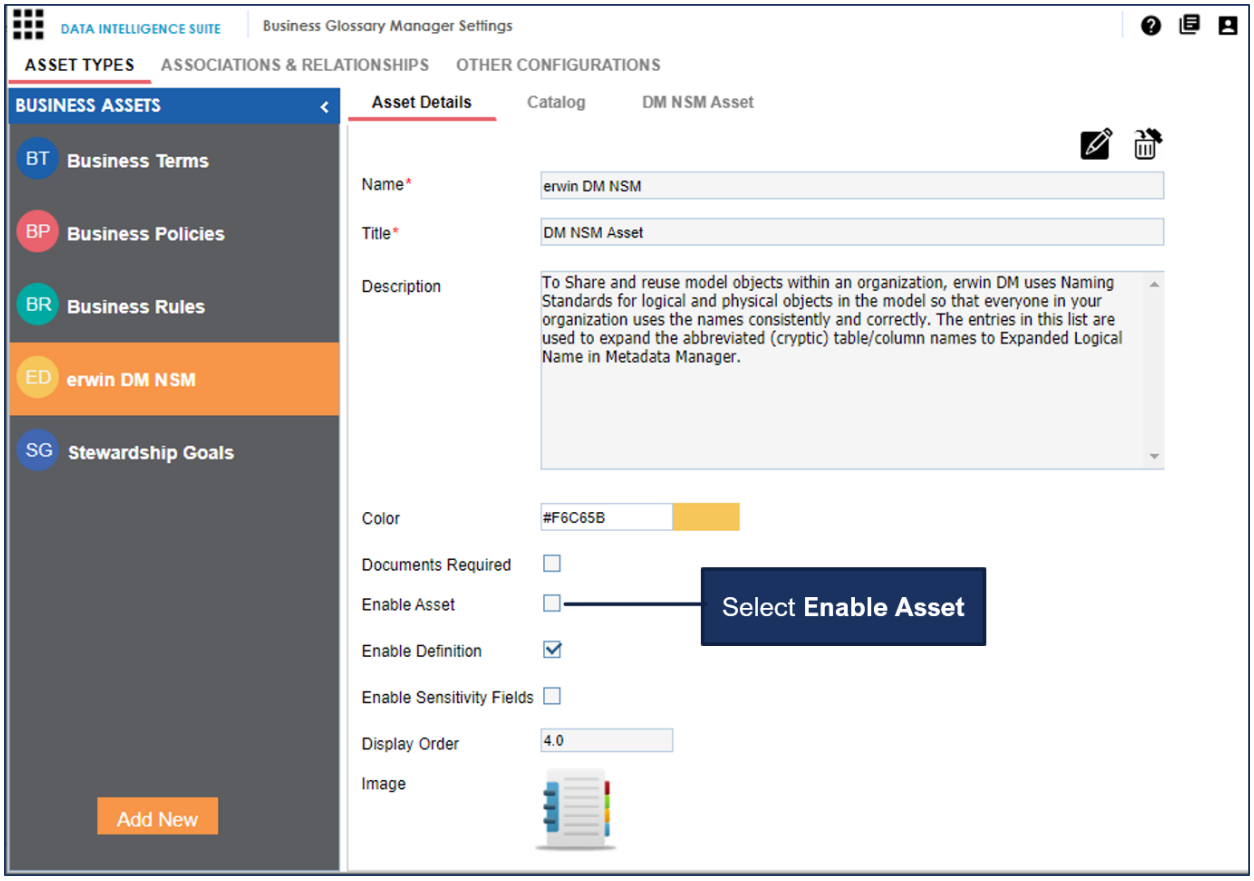
Schedule a job on your dimensional model. Once the job is completed successfully, DM Connect for DI creates a project. Under this project, it creates a mapping specification with the source and target column data from your model.


erwin
erwin Mart Administrator
DM Connect for DI
Add Job
Delete Job
Manage Job
Cancel Job
Refresh Job
View Log
Run Job
Job Name
Last Scheduled Run
Next Scheduled Run
Job State
Last Run Job Status
Modified By
Modified On
TechnicalPublications
2020-06-08 20:13:16
Completed
Success
mmacharla
2020-06-08 20:11:50
DimensionalModel
2020-06-08 19:43:39
2020-06-08 09:15:00
Scheduled
Success
mmacharla
2020-06-08 19:42:59
1
Job run on a Dimensional model, with associated Data Sources
DATA INTELLIGENCE SUITE
Mapping Manager
Workspace Mappings
Mappings
Transformations
Projects
Data_Ware_house_SAS _1__prc
Transformations
Test Cases
Mappings
Data_Ware_house_SAS_
MappingTargets
Mapping Specification
Graphical Designer
Test Specification
Workflow Log
[Data_Ware_house_SAS _1_...]
Profiles:
Default
#
Source System Name
Source Environment Name
Source Table Name
Source Column Name
Source Column Data Type
Source Column Length
1
OPROD
SGBSTDN
SGBSTDN_ADMT_C
VARCHAR2(2)
2
OPROD
SGBSTDN
SGBSTDN_EXP_GR
DATE
3
OPROD
SGBSTDN
SGBSTDN_SECD_R
VARCHAR2(1)
Records from 1 to 100
Page 1
100 rows per page
2
Source and target column data exported to Mapping Manager

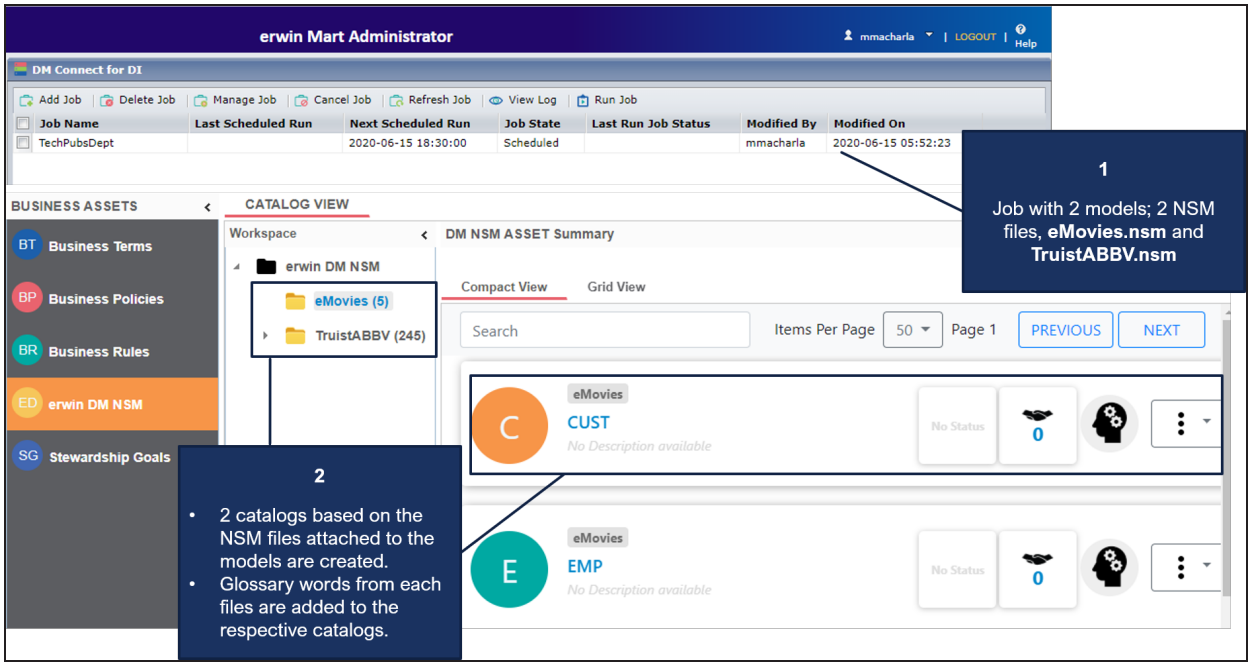
Scenario: NSM Files

If the models selected in a job have NSM files associated with them, DM connect for DI exports them to the Business Glossary Manager under the custom asset, erwin DM NSM.

Note: Ensure that the erwin DM NSM asset is enabled under **erwin DI Suite** > **Business Glossary Manager Settings**.



Under the erwin DM NSM asset, each unique NSM file is added as a catalog.



Case I: One NSM File, Multiple Models

In a job, if a single NSM file is associated with multiple models, a single catalog is created for both models. The contents of the corresponding catalog under the erwin DM NSM asset type in Business Glossary Manager are overwritten.

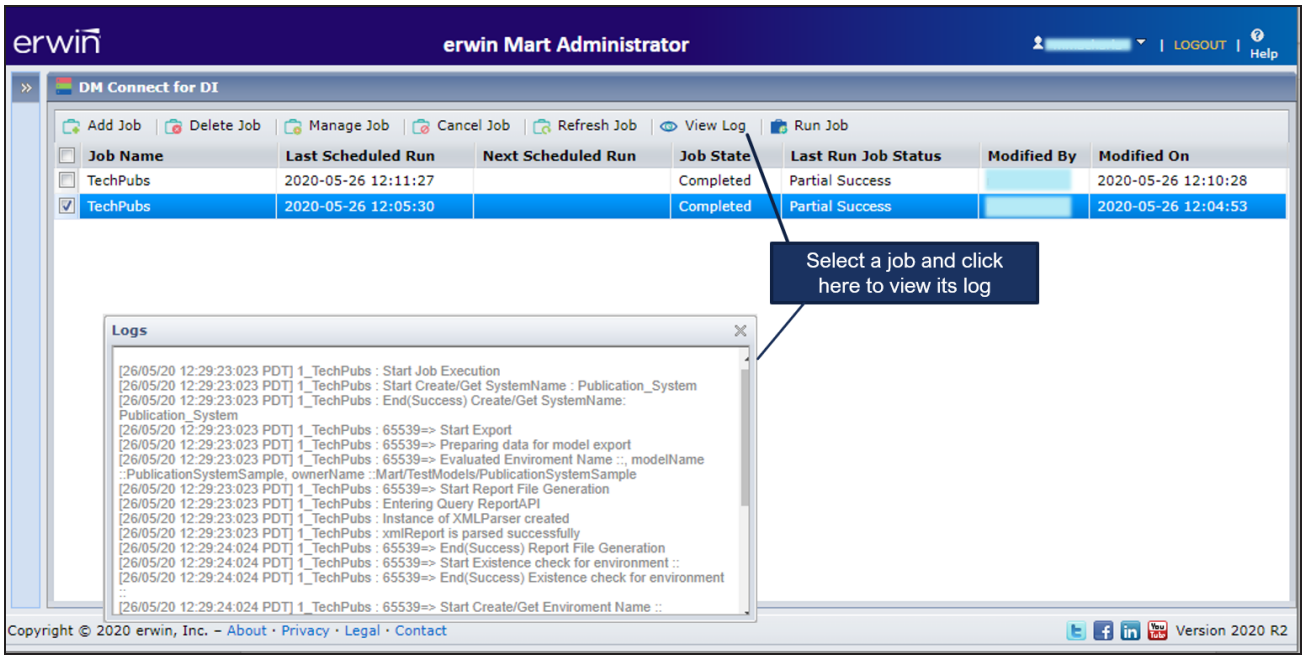
Case II: Multiple NSM Files, Multiple Models

In a job, if multiple NSM files are associated with multiple models, multiple catalogs, corresponding to the NSM files are created under the erwin DM NSM asset type in Business Glossary Manager.

Scenario: View Logs

After a job runs, you can view its log to understand more about the job status. In case of failures, you can then troubleshoot using the logs.

To view a job's log, select a job and click **View Log**.



Reference: Data Sharing between erwin DM and erwin DI Suite

For data to be shared between erwin Data Modeler (DM) and erwin Data Intelligence Suite (DI Suite), the attributes and properties of objects in both the applications must correspond to each other. Refer to the following tables to understand how erwin DM Connect for DI maps data between applications.

LIBRARY-SYSTEM	
erwin Data Modeler	**erwin DI Suite**
Library/Catalog Name	System Name
Description	Business Purpose

MODEL-ENVIRONMENT	
erwin Data Modeler	**erwin DI Suite**
Model Name	System Environment Name
Model Type	System Environment Type
Version	Version
Description	Intended Use Description

TABLE-TABLE	
erwin Data Modeler	**erwin DI Suite**
Model Name	Environment Name
Library Name	System Name
Entity Name	Logical Table Name
Comment	Table Comments
Schema_Name	Schema

COLUMN-COLUMN	
erwin Data Modeler	**erwin DI Suite**
Domain Parent	Data Domain
Physical Data Type	Data Type, Precision, Length, Scale
Null Option	Nullable Flag

Foreign Key	Foreign Key Flag
Primary Key	Primary Key Flag
Child Column Name	Foreign Key Column Name
Child Table Name	Foreign Key Table Name

UDP-EXTENDED PROPERTIES	
erwin Data Modeler	**erwin DI Suite**
UDP Name	Key Name
Value	Value
Description	Description

NSM-erwin DM NSM	
erwin Data Modeler	**erwin DI Suite**
NSM File Name	Catalog Name
Abbreviation	Asset Name
Glossary Word	Definition

Note: NSM files have multiple parameters. However, DM Connect for DI is configured to push only the Glossary Word and Abbreviation to erwin DI Suite.

DATA MOVEMENT SOURCE-MAPPING	
erwin Data Modeler	**erwin DI Suite**
Data Source DBMS Type	Database Type
DS Transformations	Business Rule
Library	Target System
Model	Target Environment
Table	Target Table
Column	Target Column
Datatype and Length	Target Column Datatype and length
Source Library (Or Data Source Name)	Source System
Source Model (Or Data Source Server)	Source Environment
Source Table (Or Data Move-	Source Table

ment Table)	
Source Column (Or Data Movement Column)	Source Column
Source Column Datatype (Or Data Movement Column Datatype)	Source Column Datatype and length **Note**: Check whether datatype and length are added to the corresponding fields. If not, you need to correct it manually.

Limitations

The following list summarizes the limitations of erwin DM Connect for DI.

- If table's or column's Definition property is updated in a model, the update is not exported when the job is run again. To export the updated Definition, set the job's Export Options to Delete & Reload.
- When you apply an NSM file to a model, it is applied at the model-level. Therefore, it is applied to all versions of the model.