

# Metadata Management Tutorial

Data Governance  
Using Meta Integration® Metadata  
Management (MIMM)

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## 1 Introduction

The need for more sophisticated and precise metadata management is a growing concern for most large organizations. Nearly all components that comprise modern information technology, from CASE tools, ETL engines, Warehouses, BI, EAI environments, as well as metadata repositories, contain, and often derive their processing from, metadata. The metadata for these environments is distributed and duplicated, often times active, and generally represented in a variety of methodologies, depending upon the underlying technology they represent.

Meta Integration® Metadata Management (MIMM), provide strikingly expansive set of capabilities in many facets of metadata management, including:

- Business Glossary
- Data Governance
- Metadata comparison, integration, and mapping
- Version and configuration management
- Data life cycle related metadata management
- Lineage and impact analysis
- Enterprise architecture development, management and deployment.
- Data documentation
- Data Mapping Specifications, design and forward-engineering

This document is the culmination of more than fifteen years of experience in supporting the enterprise metadata management and integration requirements of numerous clients. It presents in detail and with supporting tutorials metadata management process and methods, best practices, as well as, many strategic scenarios that leverage the Meta Integration® Metadata Management (MIMM) suite. These examples are comprehensive and directed at real-world examples tied to business-oriented goals and return on investment. In all, anyone who completes the exercises in this document should find it straight-forward to implement and deploy an effective and comprehensive metadata management environment.

### Disclaimer

Some of the features detailed in this document may not apply and/or be available for the particular Meta Integration® Metadata Management (MIMM) edition you may have.

## 1.1 How to use this document

It is certainly possible to skip through the tutorials, and thus simply glean an “management-level understanding” of Meta Integration® Metadata Management (MIMM) and its use within a metadata management environment. However, it is not recommended that one try to skip parts of the tutorials and then try to go through later parts. When following through the tutorial sections, it is very important to respect the order of the steps (and the order sections/labs within each section). The results of preceding tutorials are re-used and built upon in each successive lesson.

In addition, it is important to ensure complete understanding of the conceptual background provided in the sections leading up to and supporting the tutorial material. Thus, one should not simply jump into the tutorials with carefully reviewing the concepts presented in that section.

As this document include hand-on tutorials, a great deal of specificity is required. This detail includes specifying particular CASE, ETL, BI, etc., vendor’s tools. While Meta Integration® Metadata Management (MIMM) environment itself is capable of working with over 100 different versions of third-party tools (see <http://www.metaintegration.net/Products/MIMB/SupportedTools.html>), it is necessary for the clarity conciseness of the tutorials to limit the cadre of tools that will be referred to. Please note that it is not necessary to have these tools on-hand to get the full benefit of the tutorials. Remember also, though you may intend to use Meta Integration® Metadata Management (MIMM) suite of tools with many of the supported third-party tools not specified in the tutorial, it is still quite valuable to learn the processes, methods and best practices presented here. Then one may reuse what one has learned and apply that knowledge and skill to the particular set of tools that are critical to one’s own enterprise.

NB: This is a self-contained tutorial. However, it assumes you have at least an understanding of how to use Meta Integration® Metadata Management (MIMM) for basic Metadata Management activities. Thus, it is best to have worked through the Metadata Management Core Concepts Tutorial first.

## 1.2 Conventions used in the tutorial

The following font conventions will be used throughout the tutorial.

- User Interface item – New
- Submenu item – New › Folder
- Terminology item – *model content* item
- Name or label reference – [Accounts Payable](#)

## 2 Simple Data Governance with Business Glossary

Data Governance can play a major role in developing a well managed data architecture, which in turn is reflected in a flexible and efficient technical architecture. A metadata management system, in particular, is a key tool in any governance process. In particular, Meta Integration® Metadata Management (MIMM) provides:

- A central portal into your technical architecture and how it interrelates
- Web based tools to support development, deployment/implementation and management of a complete data architecture, such as
  - o An ISO 11179 based business glossary to capture, define, maintain and implement an enterprise business glossary of terminology, data definitions, code sets, domains, validation rules, etc.
  - o Semantic model harvesting from existing models and simple incorporation into glossaries and including in the semantic mappings
  - o Logical/Conceptual Data Documenter to bring undocumented assets “into the fold” and provide logical names, definitions, domains, business rules and code set definitions to otherwise undocumented data stores in the technical architecture
  - o Semantic Mapper to define relationships among the semantic layer assets such as glossaries and model and the technical architecture
  - o Data Flow Mapper to define and/or document data processes which are or will be a part of the technical architecture
  - o Full support for change management migration or forward and reverse engineering
  - o Semantic usage and impact analysis and definition/lineage tracing and reporting
- Collaboration acceleration capabilities in all facets Meta Integration® Metadata Management (MIMM) to facilitate administration, management and interaction within the data governance process and the entire information management and technology environment.

While the methods and processes of data governance can have a great many features in common, in practice the actual business goals behind any data governance initiative vary widely. While many governance initiatives have the long term goal of an on-going effort to ensure that all the hard work early on is not lost, it is also critical to remember that immediate (and agile) returns on investment are provided. It can also be the case that the initiative truly is a one-time effort, solving a specific, high profile or profitable business goal, which cannot be “bogged down” by a more rigorous and hopefully future proof process or environment.

Because of these realities, Meta Integration® Metadata Management (MIMM) is designed with a very flexible and optional set of organizational, inter-relationship methods. It emphasizes:

- The strength of a rigorous metadata definition with flexible extensibility of attribution

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- The power of tight integration, re-use and forward-reverse engineering with the technical and semantic architecture that is the bread and butter of Meta Integration® Metadata Management (MIMM).

In particular, Meta Integration® Metadata Management (MIMM) focuses the data governance process in a business glossary.

This document is designed to help users navigate all of the features provided with the business glossary and determine the best practice for them, based upon their own specific requirements and current assets and capabilities. Instructions covering how to use full features of the business glossary are provided in detail and through example in the Metadata Management Tutorial.

However, here is a brief overview of how the business glossary works.

## 2.1 Overview of the business glossary features

In Meta Integration® Metadata Management (MIMM), a business glossary is a self-contained collection of categories and the terms sub-categories contained within each category. In turn, the terms may be semantically mapped to objects throughout the rest of the repository, such as tables and columns in a data model. Once mapped, one may perform semantic lineage traces such as definition lookups and term semantic usage across any configurations containing the business glossary, mappings and mapped objects.

Populating a business glossary can be as simple as dragging in an existing well documented data model, via import from other sources via a CSV file format, or can be populated directly via the user interface as well as during the process of classifying objects in other data store models. In general, a combination of such methods are employed in conjunction with one another.

In order to ensure that the business glossary is accurate, up-to-date, available to all who need access to it and integrated properly with the rest of the metadata in the repository, Meta Integration® Metadata Management (MIMM) also provides a robust collection of Data Governance tools and methodologies.

The Business Glossary may be part of your lineage, will appear in the repository panel and when you open a Business Glossary, you will be presented with a different UI than for other (harvestable) models.

An important consideration when producing any semantic model (including a business glossary) is to take advantage of the metadata sources with the most well defined business metadata such as descriptions, domains, business rules, relationship definitions, generalizations, etc. When populating a business glossary based upon one of these metadata sources, Meta Integration® Metadata Management (MIMM) will look for all of these types of metadata and create equivalents within the business glossary. In addition, it can create a new semantic mapping and create individual mappings between the newly created business glossary equivalents and the specific metadata objects from which they were constructed. In this way, one may perform sophisticated impact (where used) and reverse lineage (show definition or meaning) type of lineage analysis.

In this case, we will use several methods for populating a glossary

## 2.2 Setting Up the Tutorial

This tutorial assumes you already have the full Metadata Management Core Concepts Tutorial completed. In order to create the structure in the repository for the tutorial, a Javascript based backup of the Metadata is provided to you. To execute this script, sign in as **Administrator** (generally with password “Administrator” in a new installation), open Meta Integration® Metadata Management (MIMM) and right-click on the top of the *Repository Tree* (far left panel). Select More... > Scripts > Metadata Management Tutorial – Core Concepts Completed (Create the Metadata Core Concepts Tutorial Completed) from the list of scripts.

Figure 1 - Selecting the tutorial restore script

Click on the **Run Script** button in the Run Custom Script dialog that is presented.

Once the script has completed close the dialog. You may need to click on the Refresh control (🔄) at the top of the *Repository Tree* panel. Note how the metadata cataloged in the previous section are reflected in the tutorial repository structure under the [folder]s **Tutorial/Metadata Management**.

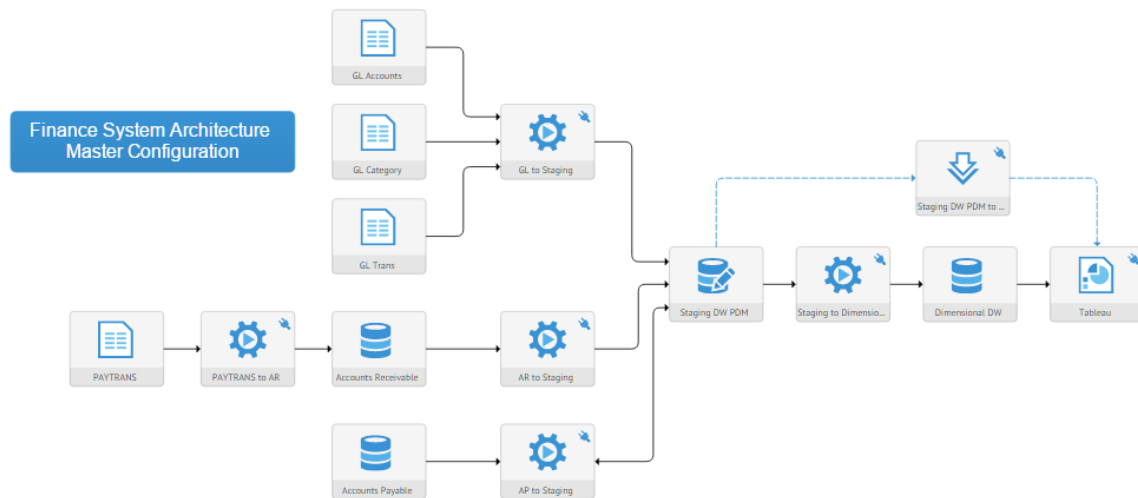


Figure 2 - Tutorial configuration structure after executing the restore script

### 2.3 Creating an abstract Business Glossary

If you have an external source of business glossary metadata that is not accessible via the bridges (not harvestable), then you may use the CSV format import capability. In this case, you may import categories terms and domains and all their properties. Many of these external sources (e.g., on-line data dictionaries or other glossary type products) will have additional properties or attribution on the objects that will become categories terms and domains in the business glossary after import. You may extend the business glossary with any number of such addition custom attributes/attributes to support these in the original source.

The actual format of the CSV file is provided in a sample in the Meta Integration® Metadata Management (MIMM) installation directory on the application server at:

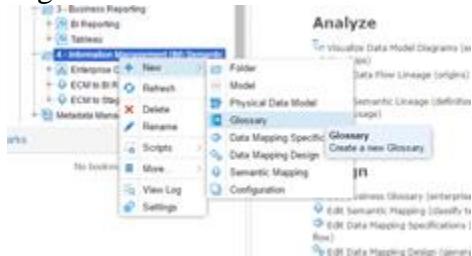
conf\Glossary\GlossaryImportSample.csv

And is fully documented inside.

First, we will create and populate the business glossary that is highly abstract. In general, as a quick start or the business glossary definition process, one may import directly from an existing CSV file.

#### 2.3.1 Create the Business Glossary

Right-click on the Information Management (IM) Semantic [folder]



and name the new business glossary “Enterprise Glossary”. Then click on the **Create** button.

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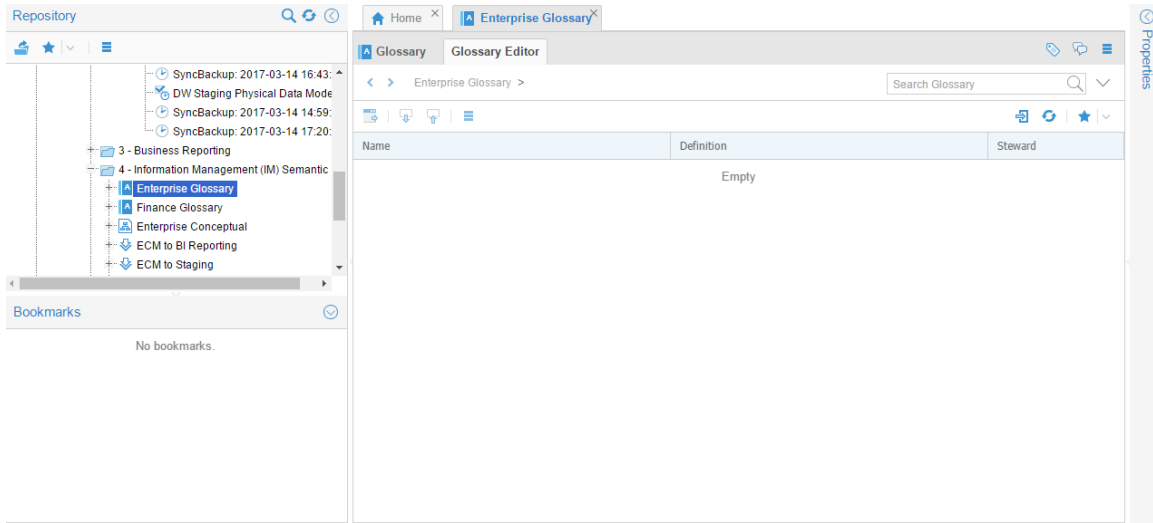


Figure 3 - Enterprise Glossary

## 2.3.2 Populate the Business Glossary

To populate the business glossary, we are going to use an existing spreadsheet that is already defined for by our data governance and data administration staff. We will do this from the Metadata Explorer UI. Thus, include the new Enterprise Glossary in the Published configuration.

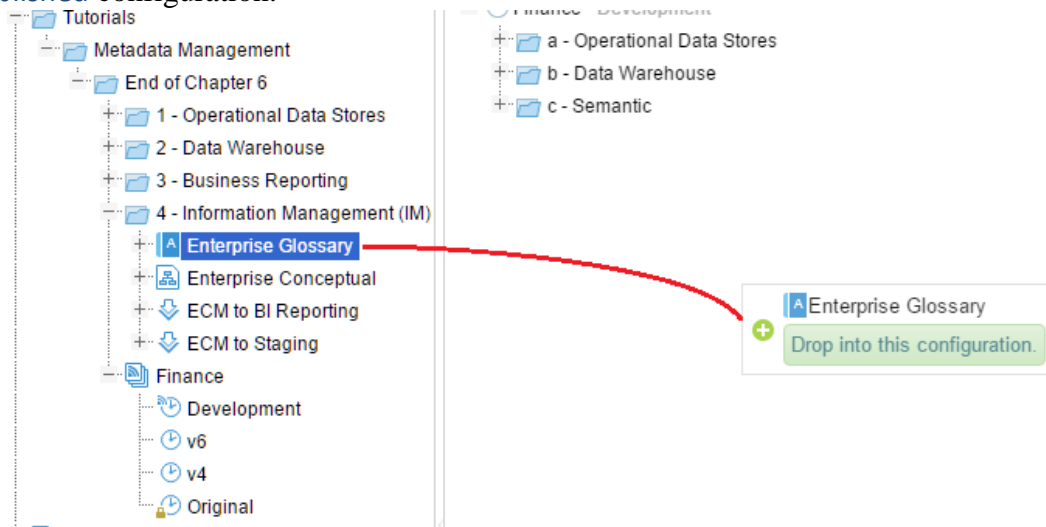


Figure 4 - Drag and drop

Then, open the Enterprise Glossary in the Metadata Explorer UI

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

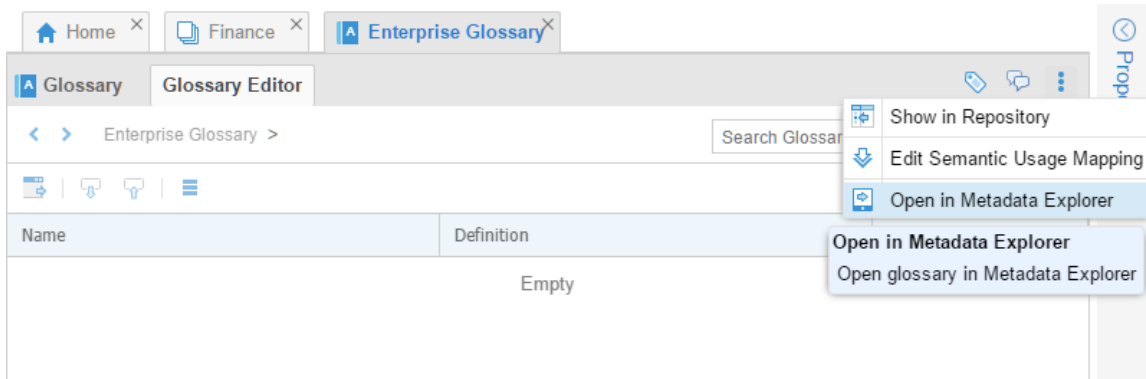


Figure 5 - Open in Explorer UI

and click on the More (⋮) icon and select Import Glossary Objects:

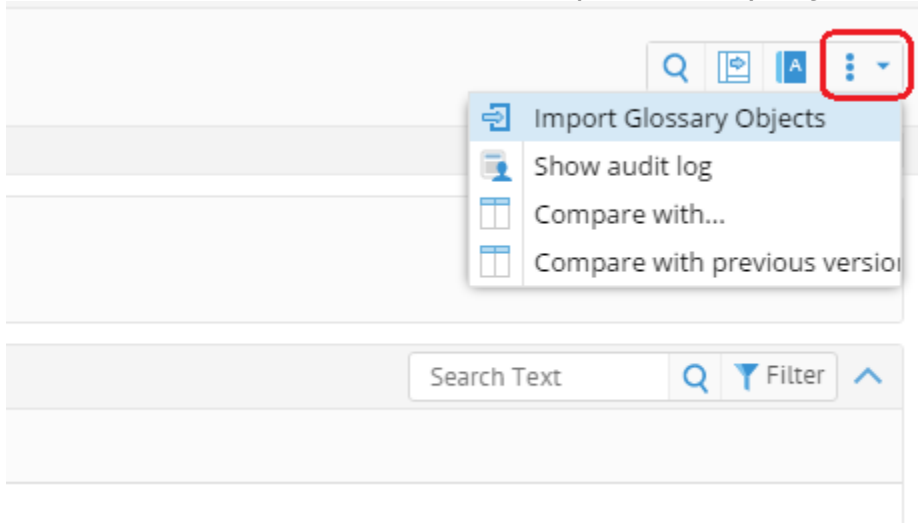


Figure 6 - Import Glossary from a CSV file

Click the **Browse...** button, then navigate to “C:\temp\Models\MetadataManagement\Finance\GlossaryCSV\Enterprise.csv” as the location and click on the **Import** button.

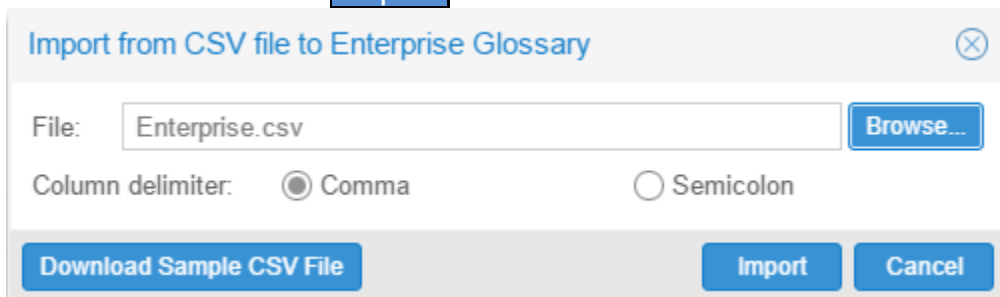


Figure 7 - Import dialog

The CSV looks like this:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

	A	B	C	D	E	F	G	H	I	J
1	Type	Parent Category Path	Name	Description	Term Type	Term Data	Term Abb	Term Alte	Document	Object Id
2	Category	/	Enterprise Conceptual Model							
3	Category	/Enterprise Conceptual Model	<Main Subject Area>							
4	Term	/Enterprise Conceptual Model	Account	Finance account used to assign and track funds	Entity					
5	Term	/Enterprise Conceptual Model	Contact	Point of contact	Entity					
6	Term	/Enterprise Conceptual Model	Customer Purchase Order	Financial document detailing a purchase request	Entity					
7	Term	/Enterprise Conceptual Model	Finance Document	Document specifying information about a monetary ac	Entity					
8	Term	/Enterprise Conceptual Model	General Ledger Account	Monetary account tracking a fund within the General L	Entity					
9	Term	/Enterprise Conceptual Model	Our Payment		Entity					
10	Term	/Enterprise Conceptual Model	Payable Account	Finance account where this organization will pay for gc	Entity					
11	Term	/Enterprise Conceptual Model	Purchase Order	Request for goods and services in exchange for a mon	Entity					
12	Term	/Enterprise Conceptual Model	Vendor	Outside organization which provides goods and or serv	Entity					
13	Term	/Enterprise Conceptual Model	Status		Attribute					
14	Term	/Enterprise Conceptual Model	State	State abbreviation as part of an address	Attribute					
15	Term	/Enterprise Conceptual Model	Role	Role of the contact in relationship to the Party they are	Attribute					
16	Term	/Enterprise Conceptual Model	Document Title	Title assigned to a document	Attribute					
17	Term	/Enterprise Conceptual Model	Finance Account Amount	Amount currently controlled by the account	Attribute					
18	Term	/Enterprise Conceptual Model	Date Posted	Date document is posted	Attribute					
19	Term	/Enterprise Conceptual Model	Count	Count of the number of units in this line item	Attribute					
20	Term	/Enterprise Conceptual Model	DateTimeStamp		Attribute					
21	Term	/Enterprise Conceptual Model	Amount Funded	Dollar amount actually available for expenditure in a fi	Attribute					

This is a specific format that one must put the input in before importing.

The result is:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Enterprise Conceptual Model | Category

Context: Enterprise Glossary

**Properties**  
Steward(s): *add value*

**Categories**

< 1 - 1 of 1 > [Settings] [List] [Grid] [Print] [Download] [Add]

<Main Subject Area>

**Terms**

< 1 - 10 of 66 > [Settings] [List] [Grid] [Print] [Download] [Add]

- Account**  
Finance account used to assign and track funds
- Account Description**  
Descriptive information about the finance account
- Account Identifier**  
Finance account, e.g., General Ledger account
- Account Name**  
Name of the finance account
- Address**  
Address associated with a contact
- Address String**

Figure 8 - Glossary import from CSV

The import from CSV produces a flat structure, but the glossary has the ability to cross-link or reference terms with other others. Let's do so for a few terms.

This activity, like all glossary editing functions, is to be performed in the Explorer UI. Thus, we will need to include this glossary in our configuration.

Let's start with the term [Account](#). Navigate to [Account](#) Then we see the Account term:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

HOME BROWSE SEARCH

**Account** | Term  
Finance account used to assign and track funds

Context: Enterprise Glossary > Enterprise Conceptual Model Labels: +

**Properties**

Status:	Published	Type:	Entity
Abbreviation:	add value	Alternative Abbreviation:	add value
Data Type:	add value	State:	Published
Steward(s):	add value	Used:	false

**Documentation**

**Relationships** Search Text Filter

< No data > +

Empty

**Comments**

Empty

Figure 9 - Account term

Expand the **Relationships** panel. Then click on the plus sign to add a relationship and choose the **More Specific** relationship type.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

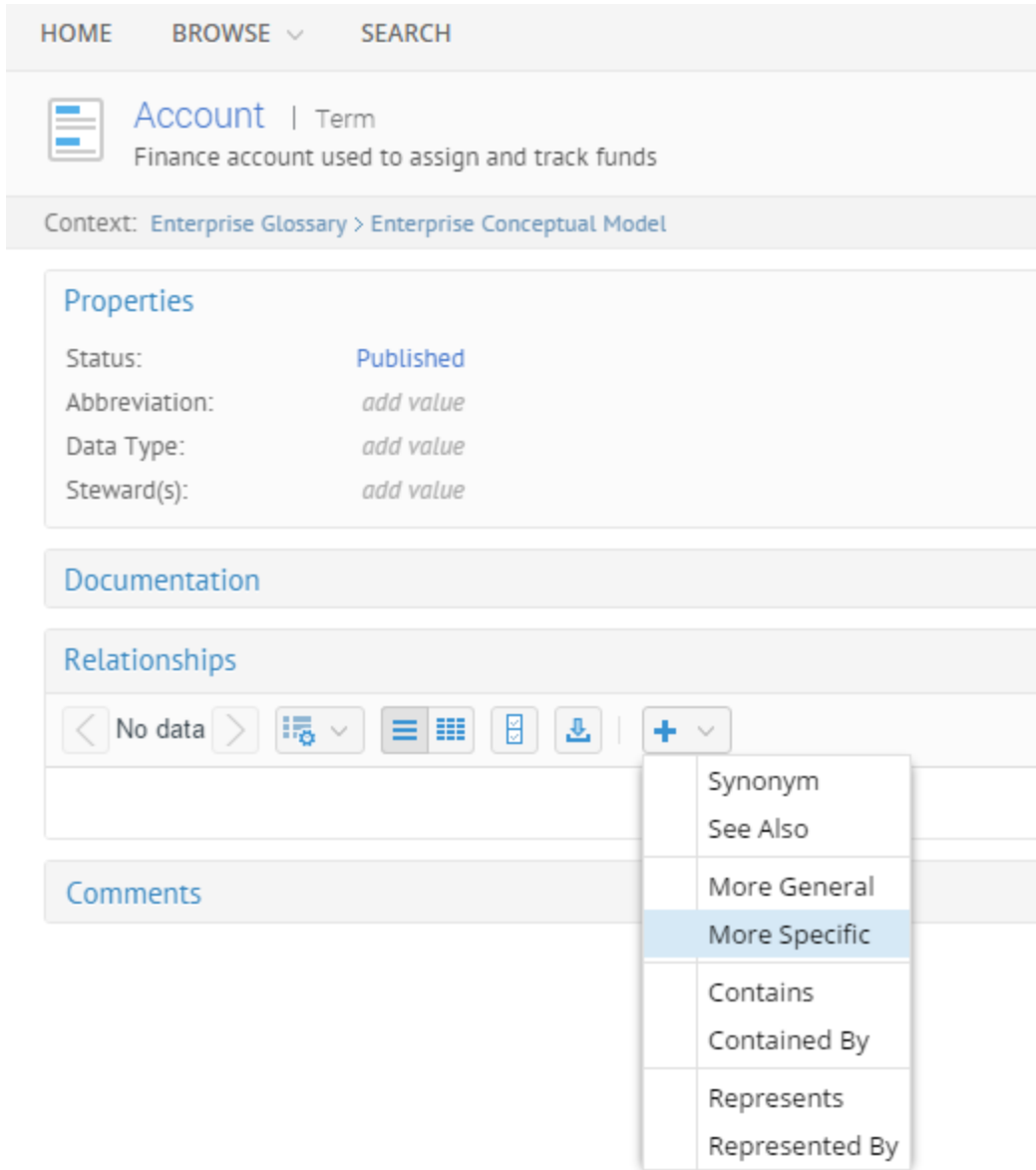


Figure 10 - Editing the relationship of a term

You are presented with a glossary navigation dialog, which allows you to select all the terms that are more specific. In the Search box, type “Account” into the search and press Enter (these are logical names, or term names, and thus unlikely to require wildcards as there are spaces between words).

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

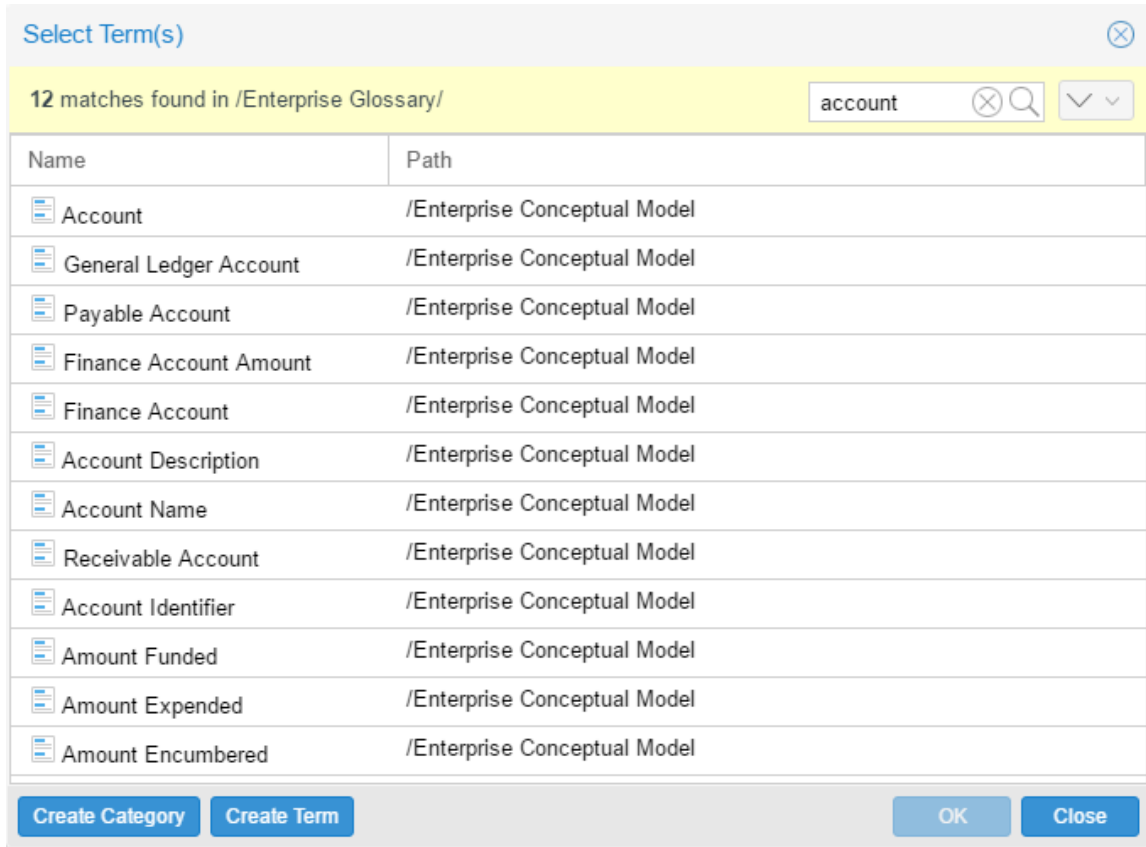


Figure 11 - More specific

There are many options, and as one might imagine this is an activity for a subject matter expert or even data administrator. However, in this case the more specific examples might include [Finance Account](#), and then more specific even so would be [Payable Account](#) and [Receivable Account](#).

Thus, select [Finance Account](#) and click OK. Then, click on [Finance Account](#) to navigate to that term.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Finance Account** | Term  
A financial (monetary) account

Context: [Enterprise Glossary](#) > [Enterprise Conceptual Model](#)

**Properties**

Status:	Published
Abbreviation:	<a href="#">add value</a>
Data Type:	<a href="#">add value</a>
Steward(s):	<a href="#">add value</a>

**Documentation**

**Relationships**

1 - 1 of 1

More General [Account](#) from [Enterprise Glossary](#) > [Enterprise Conceptual Model](#)  
Finance account used to assign and track funds

Figure 12 - Finance Account Term

Note, the More General link back to [Account](#). Now, we can add the More Specific links to the other two terms [Payable Account](#) and [Receivable Account](#).

**Finance Account** | Term  
A financial (monetary) account

Context: [Enterprise Glossary](#) > [Enterprise Conceptual Model](#)

**Properties**

Status:	Published	Type:	Entity
Abbreviation:	<a href="#">add value</a>	Alternative Abbreviation:	<a href="#">add value</a>
Data Type:	<a href="#">add value</a>	State:	Published
Steward(s):	<a href="#">add value</a>	Used:	false

**Documentation**

**Relationships**

1 - 3 of 3

More General [Account](#) from [Enterprise Glossary](#) > [Enterprise Conceptual Model](#)  
Finance account used to assign and track funds

More Specific [Payable Account](#) from [Enterprise Glossary](#) > [Enterprise Conceptual Model](#)  
Finance account where this organization will pay for goods and or services from an outside vendor as requested in a purchase order, as requested and defined in a vendor invoice, and as made through paym...

More Specific [Receivable Account](#) from [Enterprise Glossary](#) > [Enterprise Conceptual Model](#)  
Finance account where a customer will pay for goods and or services from an this organization as requested in a customer purchase order, as requested and defined in an invoice, and as made through custo...

Taking you back to the Metadata Manager UI is as simple as clicking on the action icon in the upper right:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

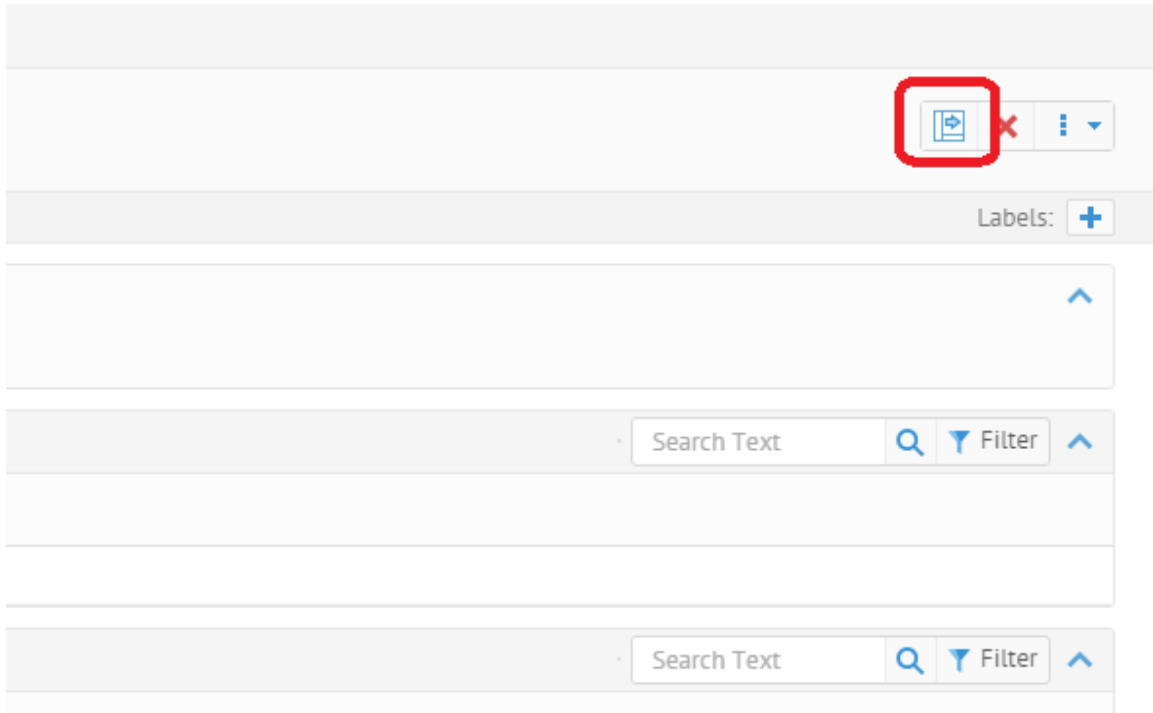


Figure 13 - Open in Metadata Manager

Now, if you expand the Properties panel you may click on any item in the list and see the detailed properties for that element:

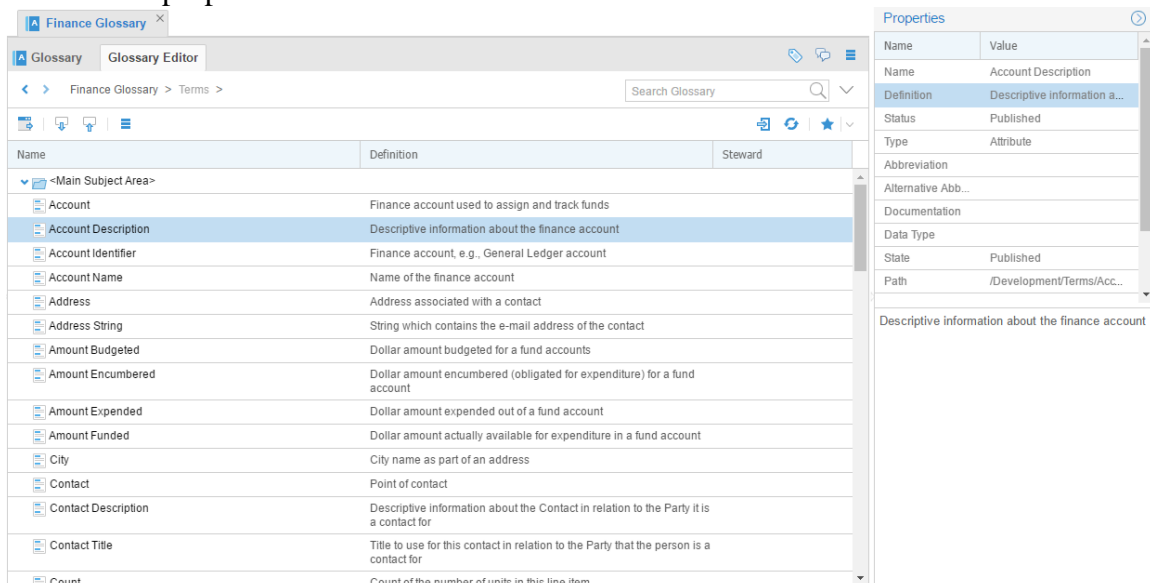


Figure 14 - Detailed business glossary element properties

Alternatively, or in addition, one may simply show or hide columns in the list:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

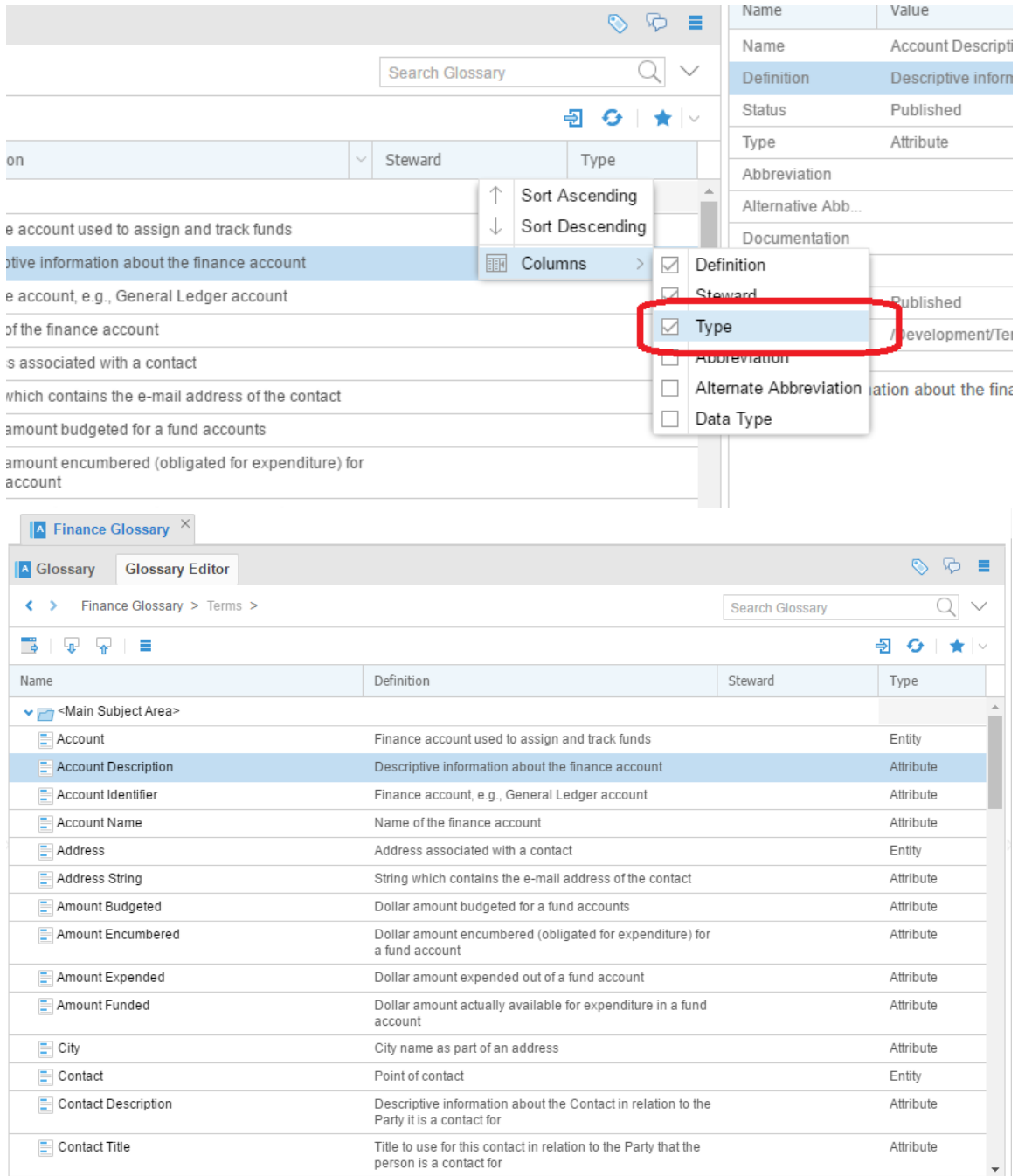


Figure 15 - Show/Hide columns in the business glossary

You have now defined a glossary.

To look at a term in detail, double-click or right-click and Open a term, e.g., Account Description:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

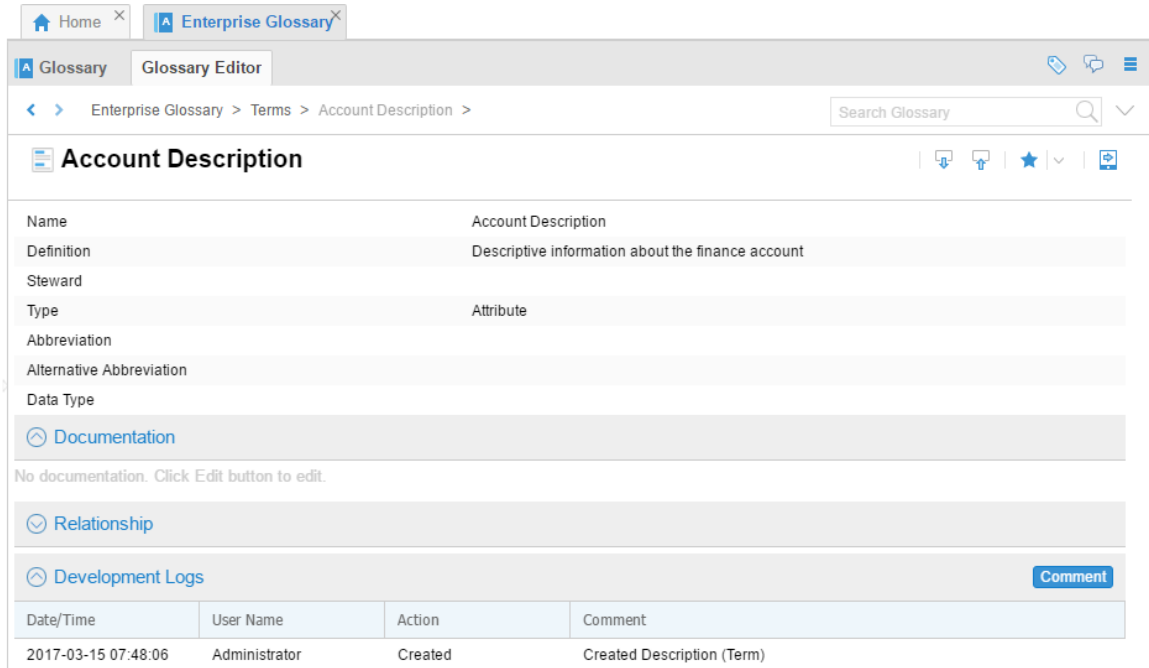
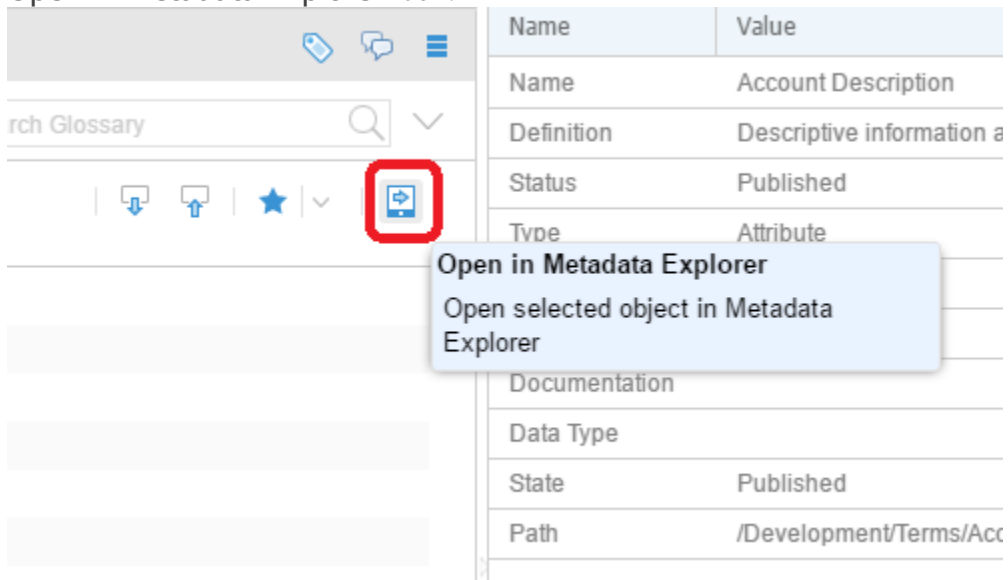


Figure 16 - Account Description term

Note, the same properties are available, but in addition, one can add full wiki-like documentation, Relationships among terms, and see the edit log history for the term. These are all available in the Explorer UI, as well. To go there, again, simply click on the Open in Metadata Explorer icon:



And we have:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

HOME BROWSE SEARCH

Account Description | Term  
Descriptive information about the finance account

Context: Enterprise Glossary > Terms Labels: +

**Properties**

Status:	Published	Type:	Attribute
Abbreviation:	add value	Alternative Abbreviation:	add value
Data Type:	add value	State:	Published
Steward(s):	add value	Used:	false

**Documentation**

**Relationships**

Search Text Filter

1 - 1 of 1

Contained By Account from Enterprise Glossary > Terms  
Finance account used to assign and track funds

**Comments**

Note, although the **Enterprise Glossary** is now a part of the configuration, it is not semantically linked to the rest of the architecture. We will next produce a glossary that is linked directly to a physical data model in the system, which we will then semantically link to from this existing glossary.

## 2.4 Glossary derived from a physical data model

Another way to define a glossary is to “bootstrap” it from a physical data model.

### 2.4.1 Import data model and populate Physical Data Model

To do so, we will create a new physical data model that will be based upon the exiting Dimensional DW DDL based model.

---

Note: For those without the erwin DM bridge, please simply restore the backup at:  
C:\Temp\Models\MetadataManagement\ModelContentBackupScripts\PDMs\DimensionalDw

Then proceed to the next section.

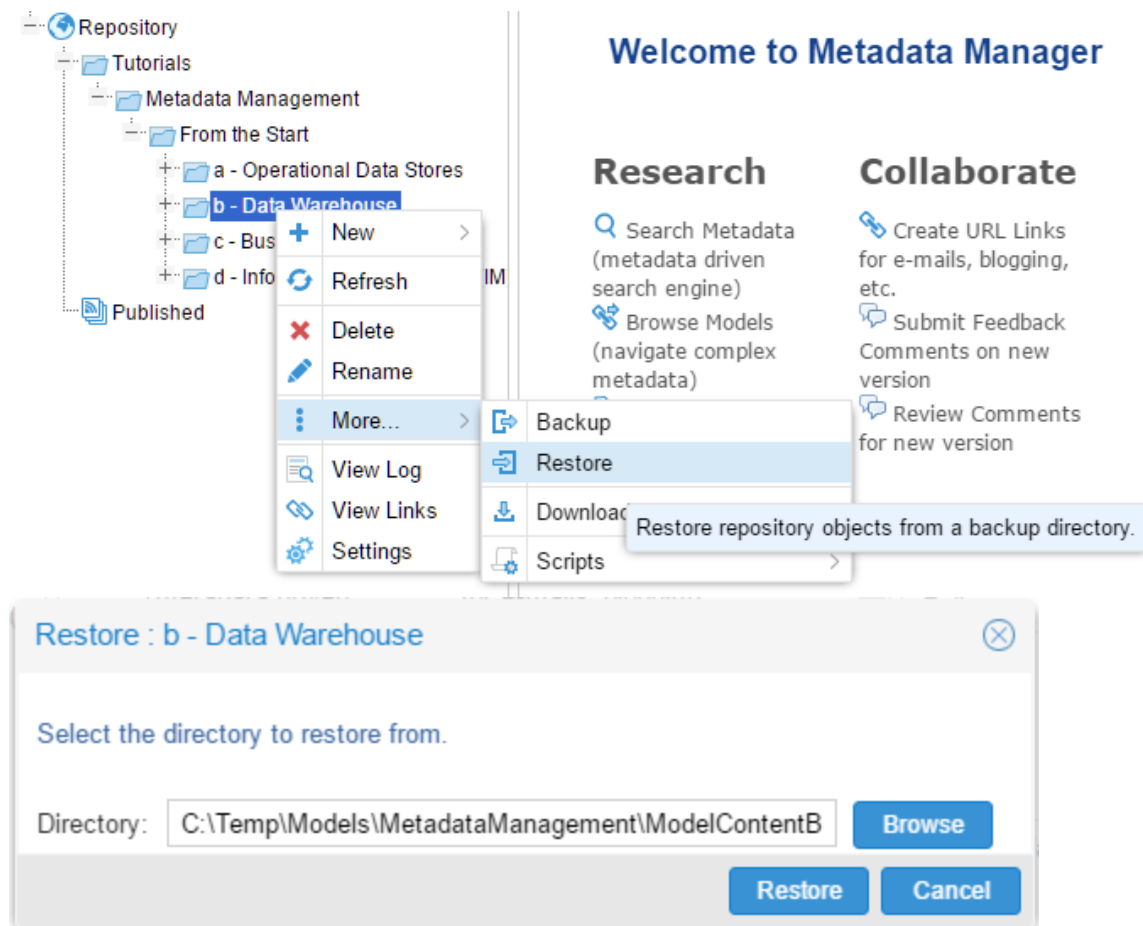


Figure 17 - Restore

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

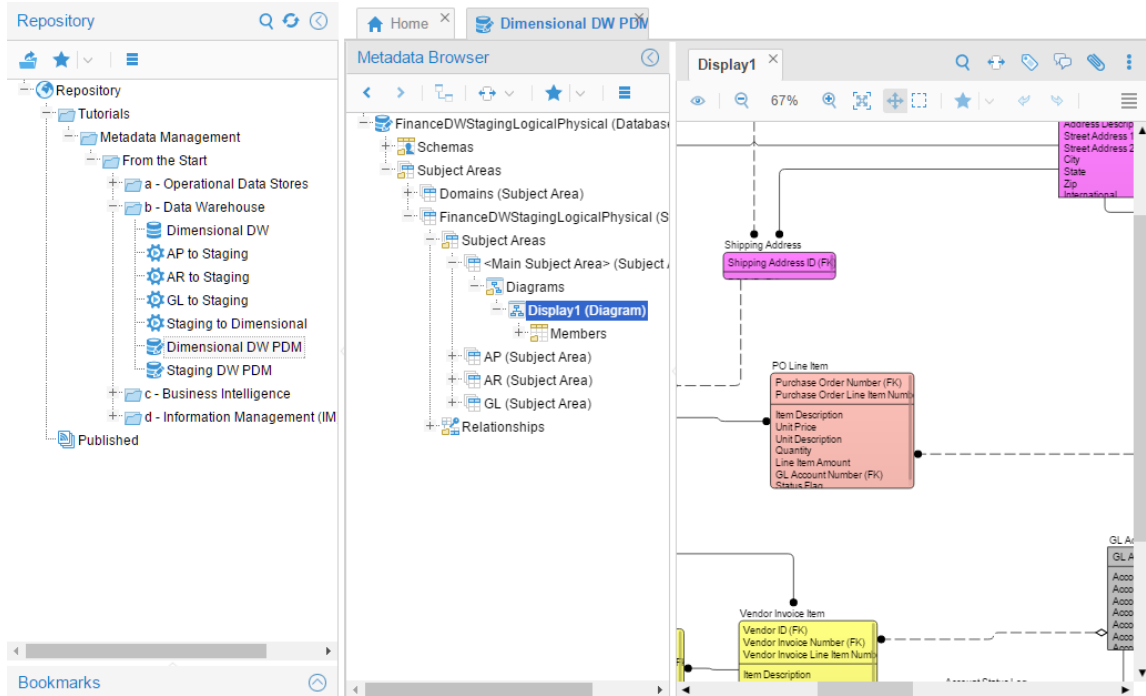


Figure 18 - Dimensional DW PDM Restored

Right-click on the 2 – Data Warehouse folder and select New → Physical Data Model, and provide the following information:

## Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Create Physical Data Model**

**Properties** | Import Setup | Naming Standard | Security

Enter the name and a description for this Physical Data Model:

Name: Dimensional DW PDM

Description:

Stewards: Select steward(s)

Select the Database Type of the model. This setting cannot be changed after the model is created. You may optionally select from where to import the database by picking the Import Server.

Database Type: Microsoft SQL Server Database SQL DDL - Beta Bridge

Import Server: Default Server

Additional Model options:

Create Copy on Database Sync:  Send Sync Notification:

Select a Glossary to reuse or create terms and domains for documenting this data store:

Glossary: Select a Glossary Content

Create Cancel

Figure 19 - Create Dimensional DW PDM

Note, in particular, you must use the browse button to select the Database Type and this time we will uncheck Create Copy on Database Sync (if displayed) so that the PDM is simply maintained with one version each time we harvest a new version of the database, this in order to save space and unnecessary versioning. This is already it works with the single version editions of Meta Integration® Metadata Management (MIMM).

Go to the Import Setup tab and specify the file location

C:\Temp\Models\MetadataManagement\Finance\DatabaseDDL\FinanceDWDimensional\FinanceDWDimensional.sql

and the default schema (dbo):

## Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

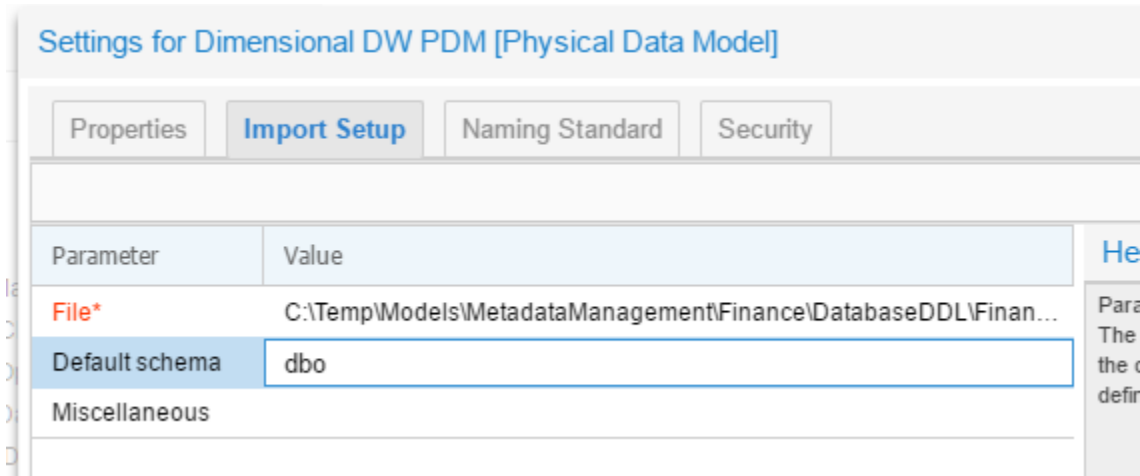
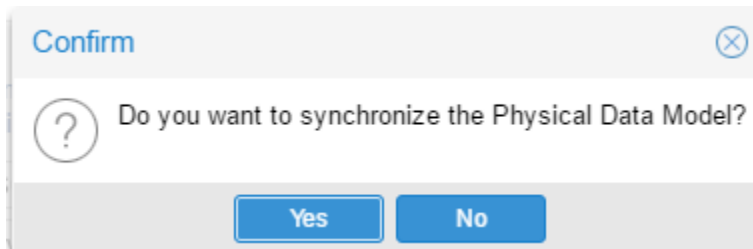


Figure 20 - Import tab

Click the **Create** button.



Click the **No** button.

Now, we need to populate the physical data model with metadata. For this, we already have an erwin data model ready.

First we must import it.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Create Model Ⓢ ✕

**Properties** Import Setup Security Triggers

Enter the name and a description for this Model:

Name:

Description:

Stewards:

Select an import bridge for this model. Optionally, you may specify the server where the bridge should run. This setting cannot be changed after the model is saved.

Server:

Bridge:

Additional Model options:

Lightweight Version:  Send Import Notification:

## Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

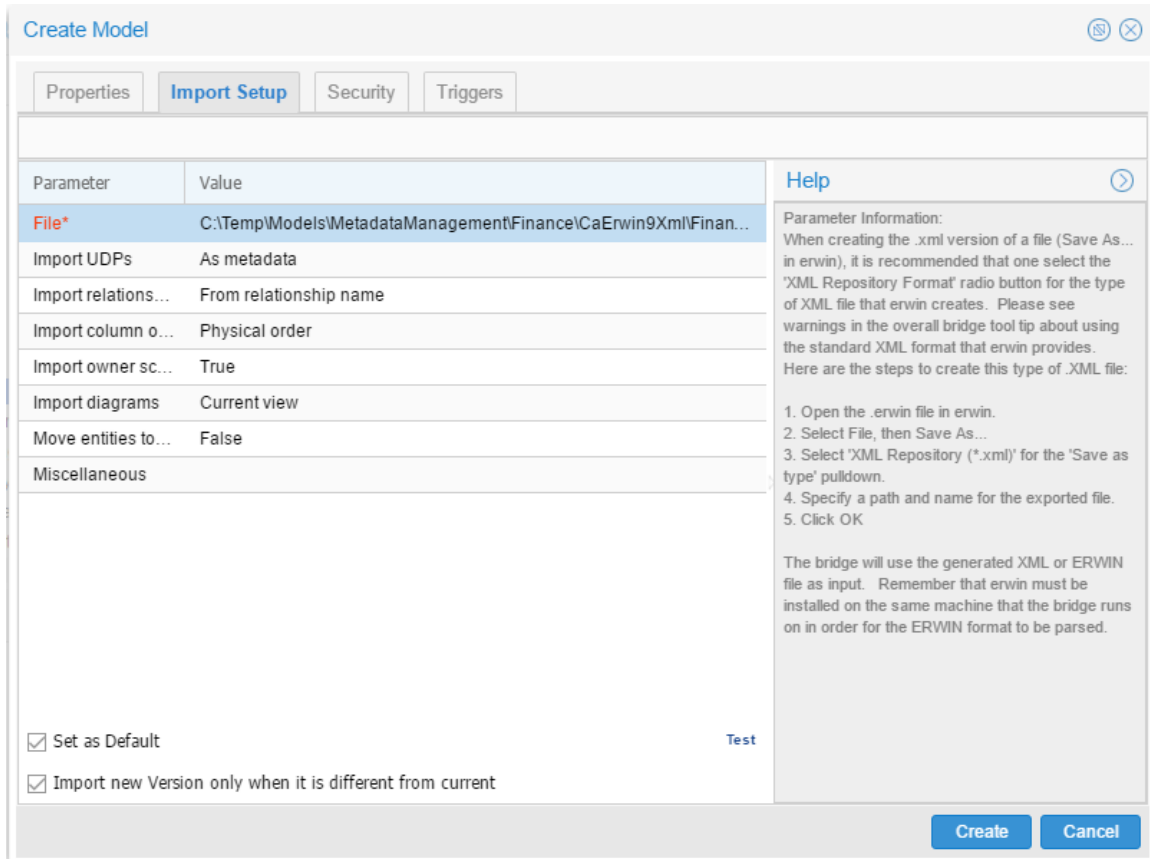


Figure 21 - New model from erwin DM

Be sure to:

- Not to specify the Lightweight, as these cannot be used to populate a glossary
- Enter this in the File location (or browse for it):  
C:\Temp\Models\MetadataManagement\Finance\CaErwin9Xml\FinanceWarehouseDimensional.xml

Import the model. The result is below (using the Show in Diagram option after selecting a table):

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

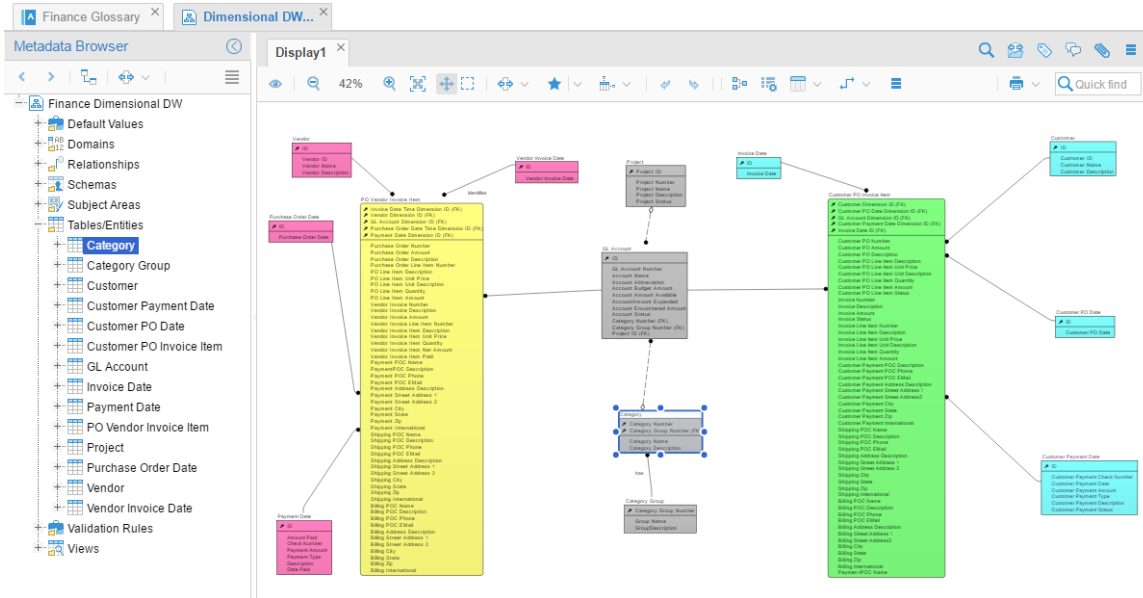


Figure 22 - Dimensional DW model from erwin DM

Now, the next step is to bootstrap the PDM with the model content. To do so, open the PDM and then drag the harvested (base) model into the PDM:

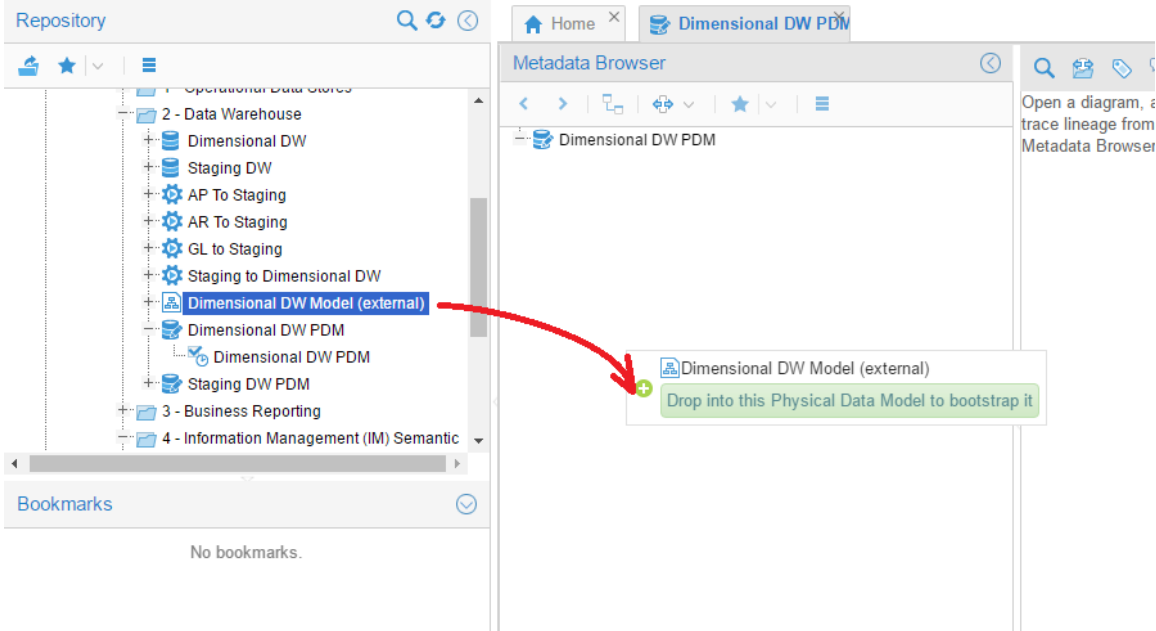


Figure 23 - Populating the PDM

You will then note that the full schema, tables and columns from the harvested model are now in the PDM.



# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

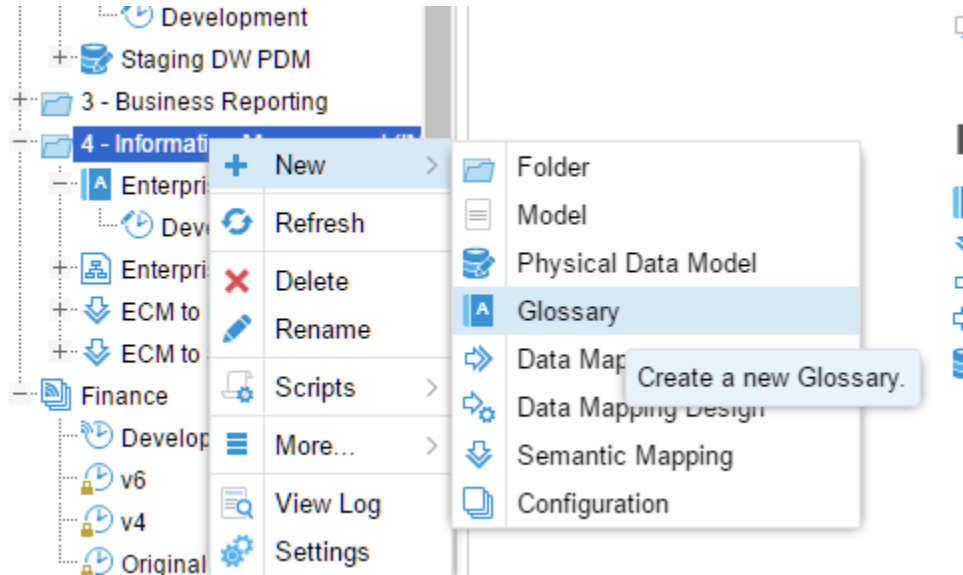


Figure 26 - Creating new glossary

Then, drag the Dimensional DW PDM physical data model into the Finance Glossary.

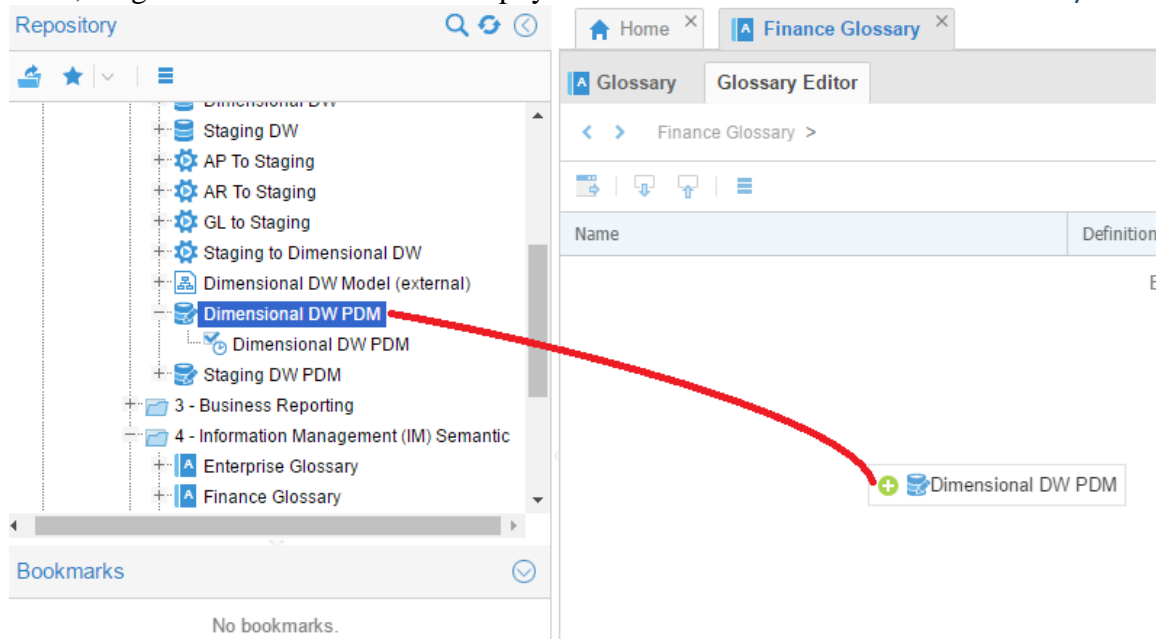


Figure 27 - Drag into the Finance Glossary

You will then be presented with a dialog box asking how to go about populating the business glossary from the model:

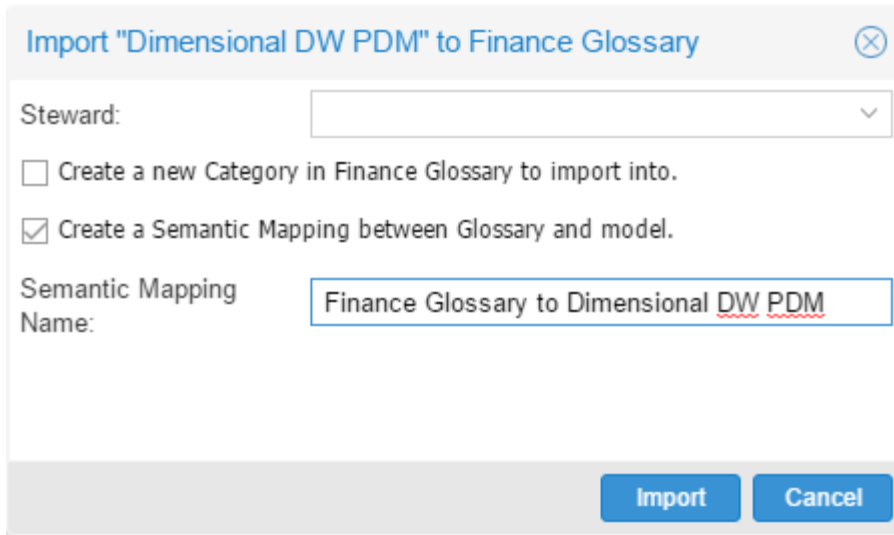


Figure 28 - Populate options

Here you may specify:

- **Steward:** the person (username) who is the point of contact on a term. We will not assign this value for now and simply use the three groups defined earlier.
- **Category Name** which is the name to provide the *category*, or organizational structure (similar in behavior to a [folder]) within the business glossary which will contain all of the populated elements. A business glossary may contain any number of categories, and a category may also contain any number of categories.
- **Semantic Mapping:** In addition, Meta Integration® Metadata Management (MIMM) will create a semantic mapping from this business glossary to the source model. This way, the terms in the business glossary are already classified (semantically mapped to the model elements), and will appear in the lineage reports. Of course, this is only true if the model you dragged in is to be a part of your configuration and lineage. In our case, that is not yet true, but will be.

Update the Semantic Mapping Name to **Finance Glossary to Dimensional DW** and click on the **Import** button:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

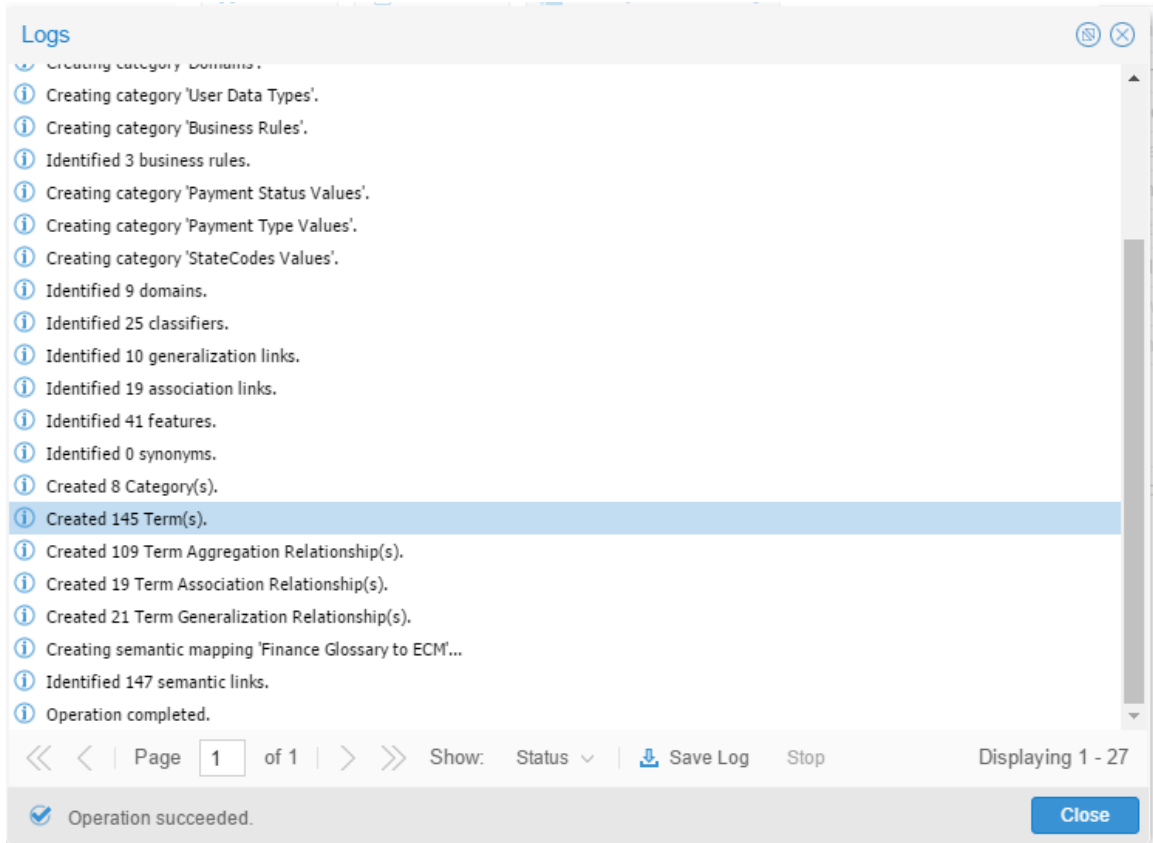


Figure 29 - Glossary import log

And we have:

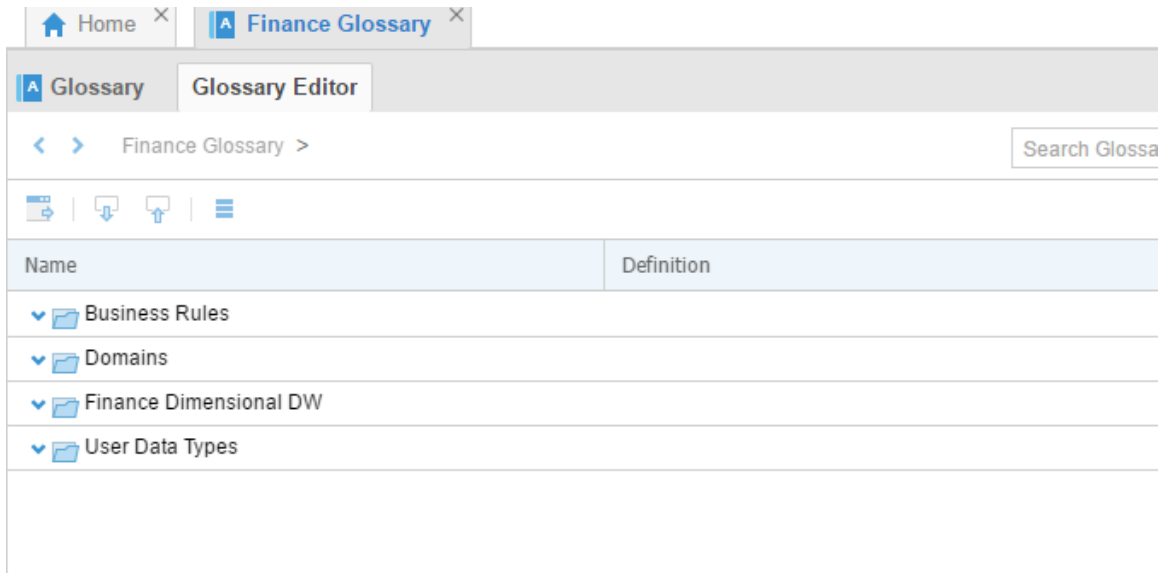


Figure 30 - Resultant glossary

You will see the import created four categories in the business glossary:

- **Business Rules** containing the *conceptual domains* based upon the validation rules defined for attributes and domains in the original **Dimensional** model

- **Domains** containing the *conceptual domains* based upon domain definitions including data type information in the original **Dimensional** model
- **Enterprise Conceptual Model** containing the terms derived from the attributes and entities in the original **Dimensional** model as well as subcategories for each subject area in the original model. The name is the internal name of the model in erwin Data Modeler.
- **User Data Types** which is empty for this model

## 2.4.4 Update the configuration

Now, we have a business glossary semantically mapped to the new Dimensional DW PDM Physical Data Model. However, this new Physical Data Model is not in the lineage of the current configuration. In fact, to move to this Physical Data Model rather than an ordinary model coming from the DDL of the database, we will need to perform a bit of “surgery”. It is a one-time activity, but must be done when making a major change to the architecture.

Open the **Finance** configuration and drag the new Dimensional DW PDM Physical Data Model in. Then drag the new Finance Glossary in and note you are prompted to include the semantic mapping, as both ends of that mapping have been added.

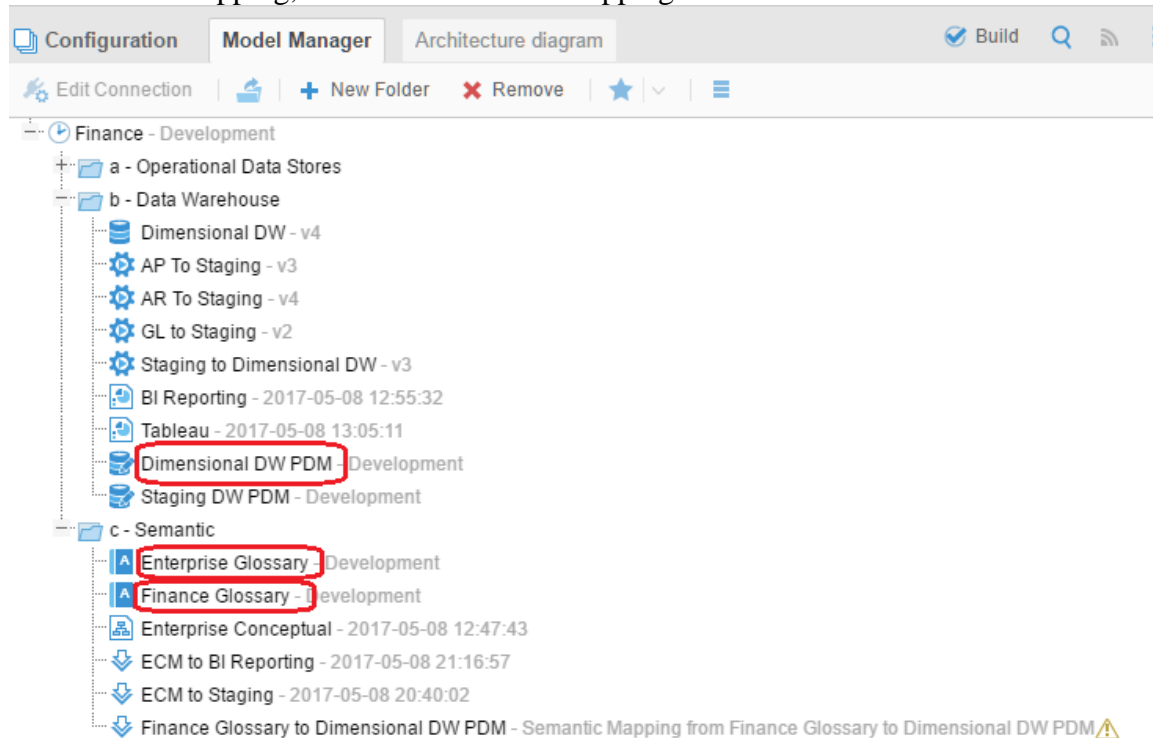


Figure 31 - New objects in configuration

Click on the Architecture diagram tab and let's put this all together.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

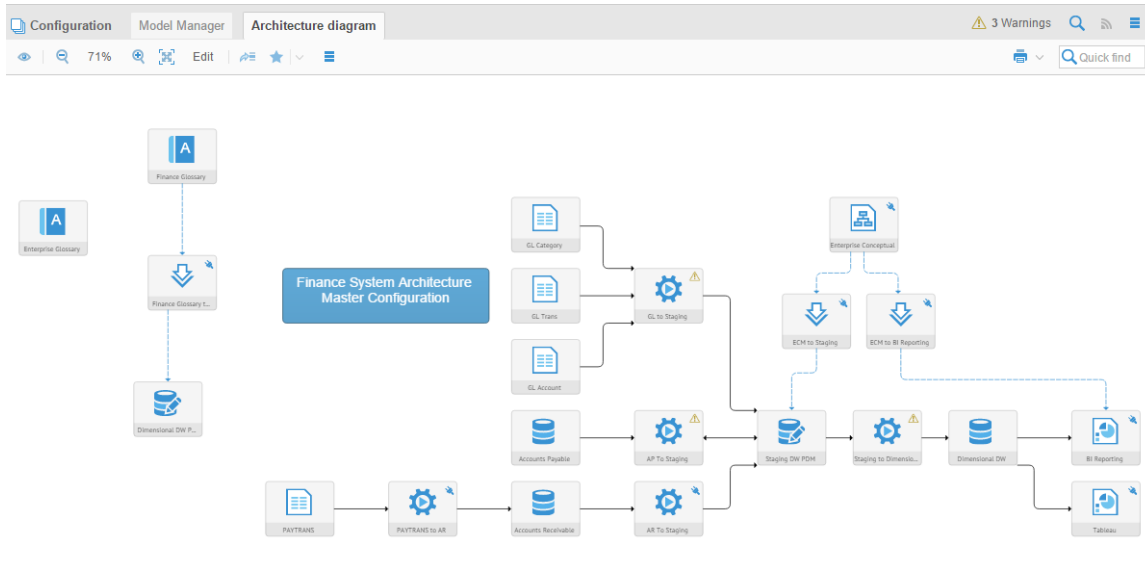


Figure 32 - Architecture diagram

Note, the glossary is already links to the Dimensional DW PDM, thus we need to replace the Dimensional DW (existing model in the lineage) with the Dimensional DW PDM.

First we will right-click on the older model (Dimensional DW) and select Remove:

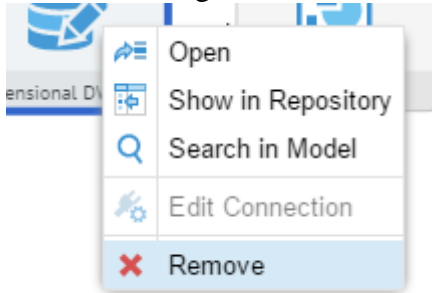


Figure 33 - Remove older model

Then, move the new Dimensional DW PDM into the same place in the diagram where the older model was.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

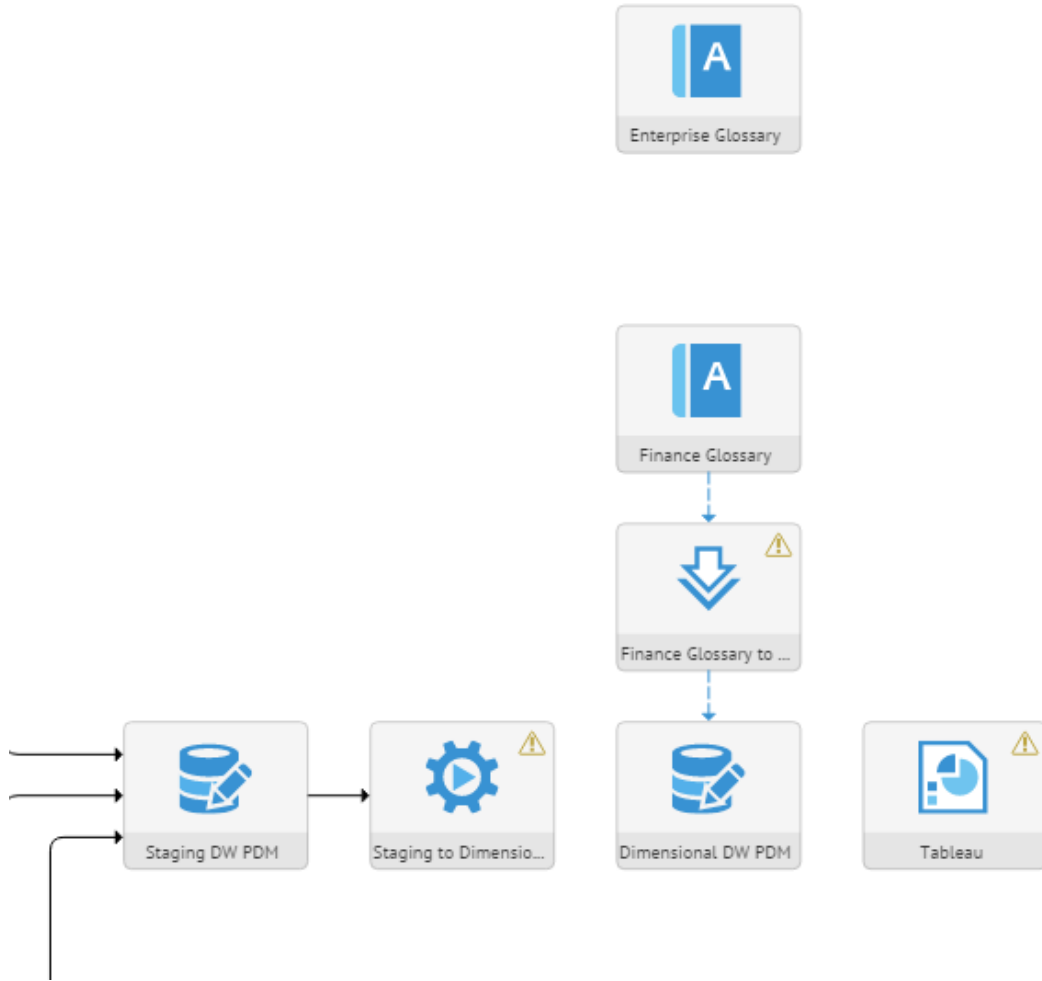


Figure 34 - New model in place

and select Edit Connection on the ETL in front of it:

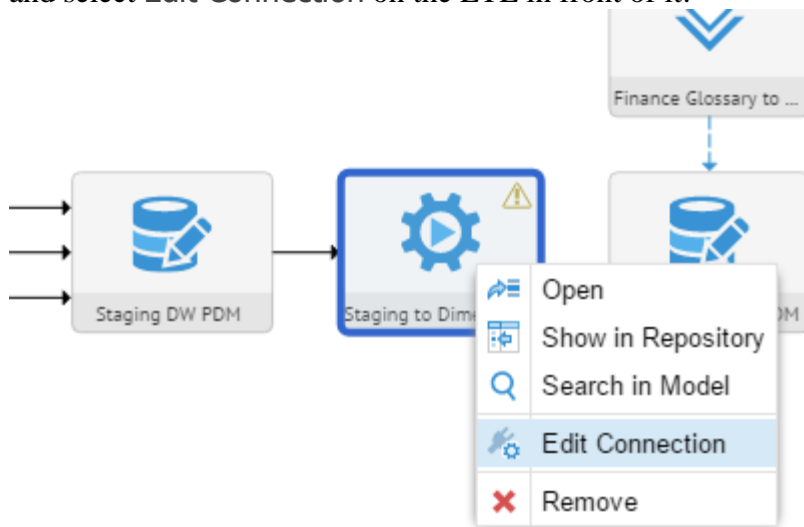


Figure 35 - Edit connection

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Then associate the new model in the connections:

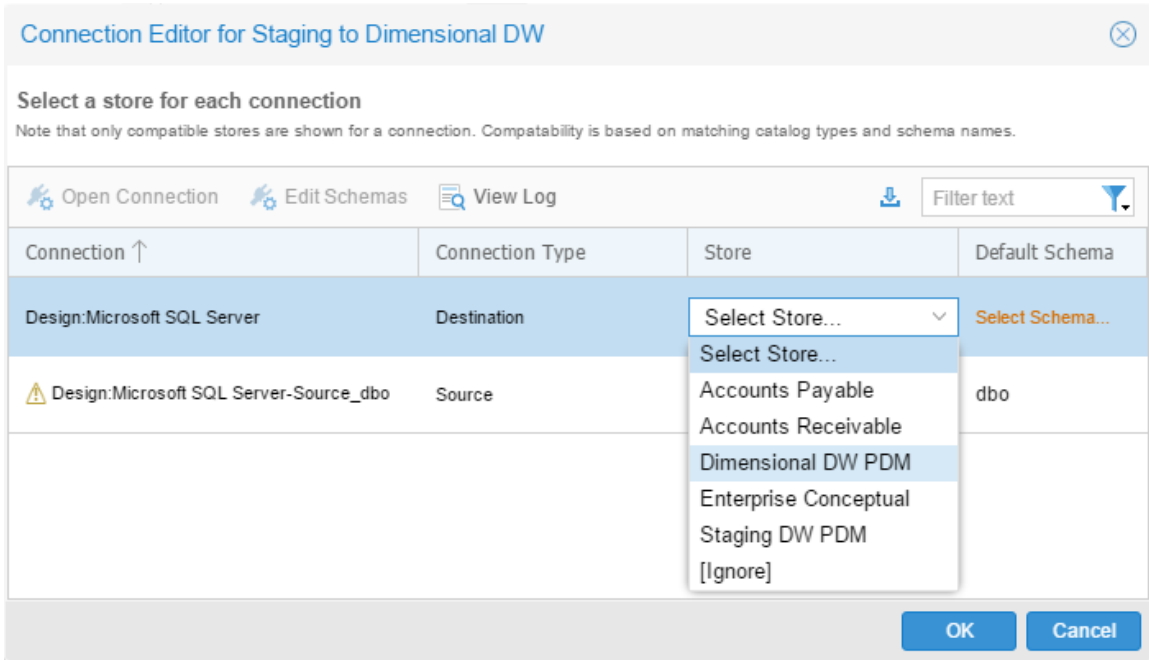


Figure 36 - Stitching to the ETL

Then select Edit Connection on the BI Reporting model after the new PDM:

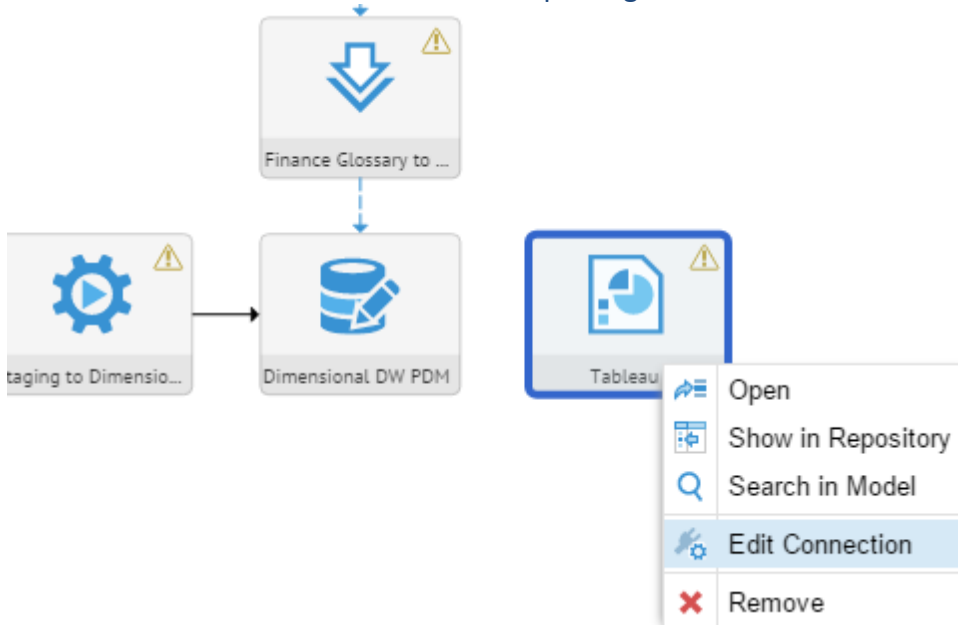


Figure 37 - Edit connection for BI Reporting

Then stitch the new model here:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

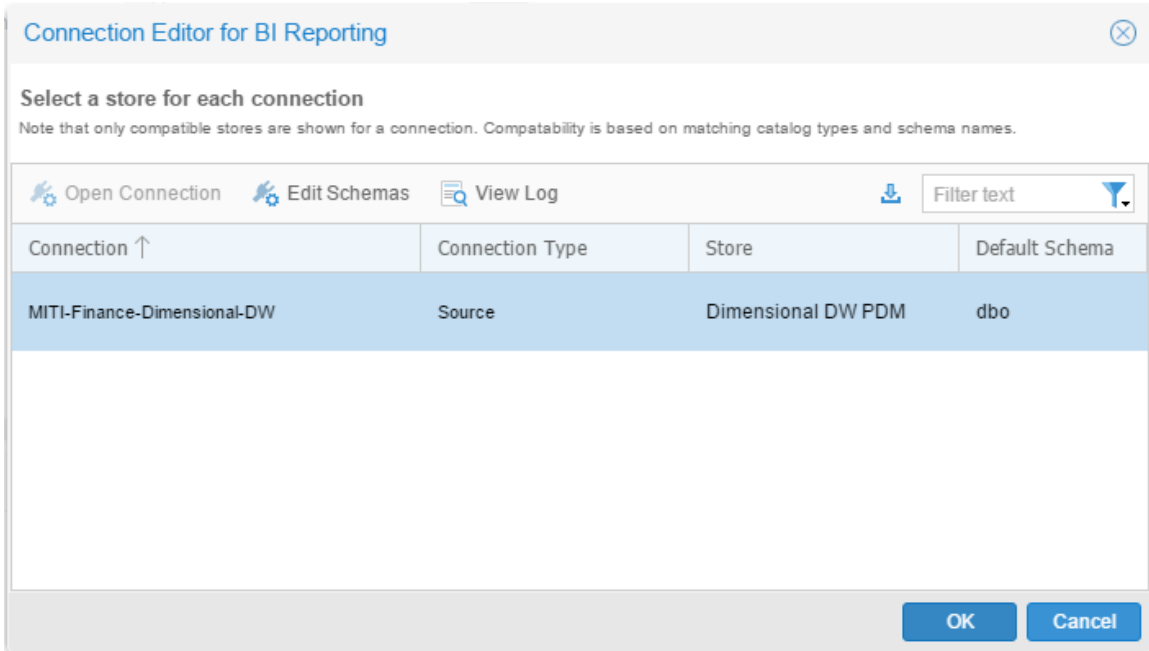


Figure 38 - Stitching BI Reporting

Then select Edit Connection on the Tableau model after the new PDM:

Figure 39 - Edit connection for Tableau

Then stitch the new model here:

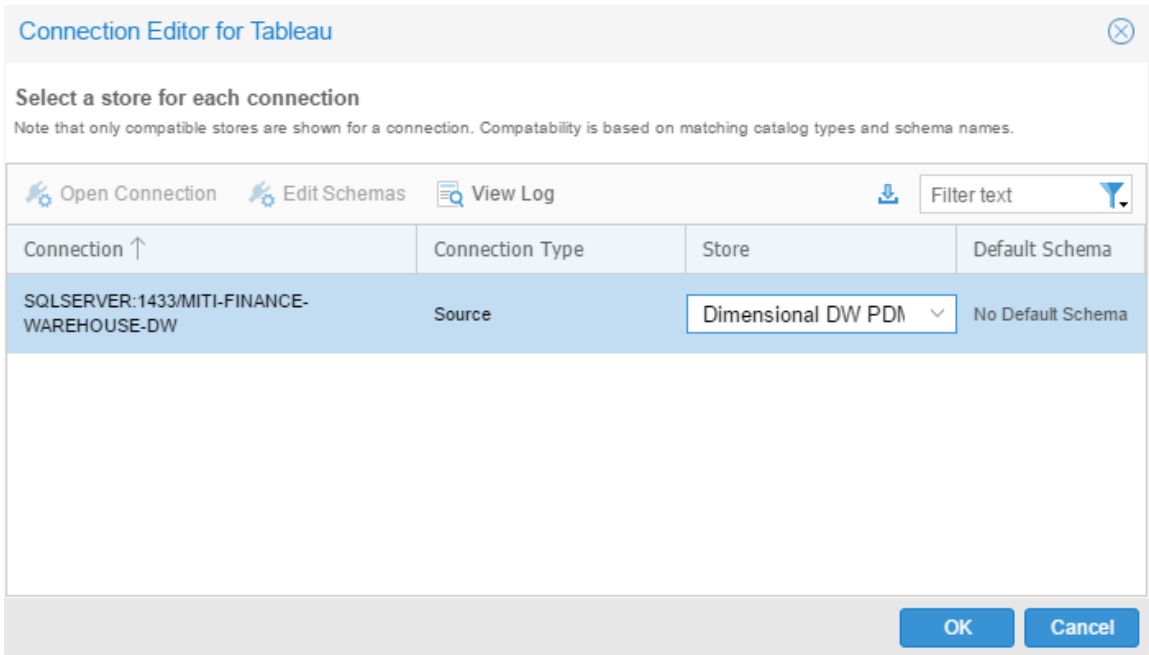



Figure 40 - Stitching Tableau

Click Edit again in order to save changes, then  Build the configuration and the result:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

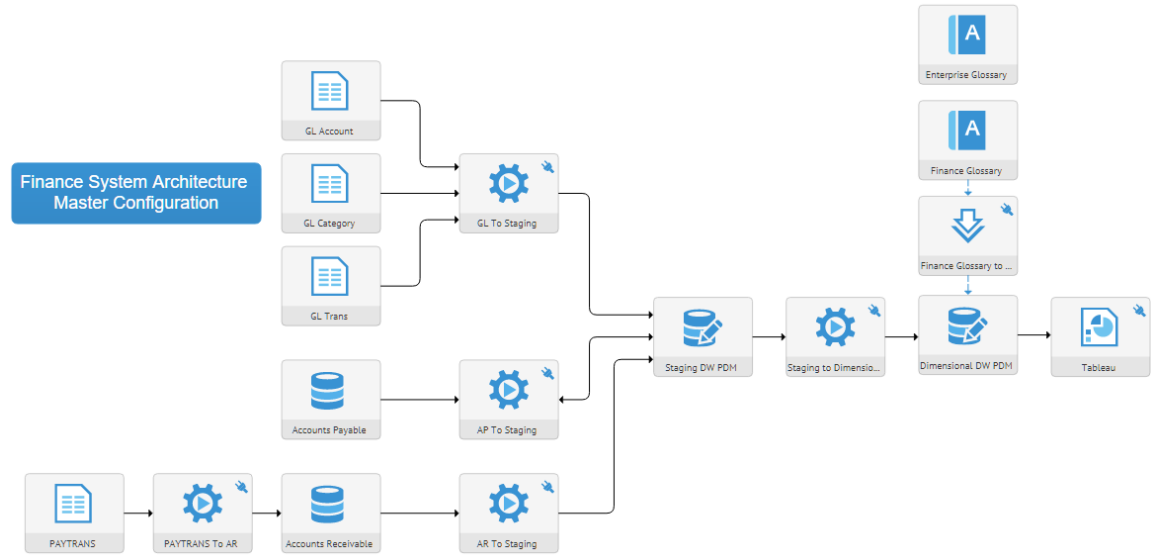


Figure 41 - Architecture

## 2.5 Embed the mapping

Now, in order to use the glossary as the associated one for the Dimensional DW PDM model, one may embed the mapping, removing it as a standalone mapping and embedding it in the documentation process for the Dimensional DW PDM.

Go to the Model Manager tab, right-click on the mapping that you just auto mapped and select Embed into PDM:

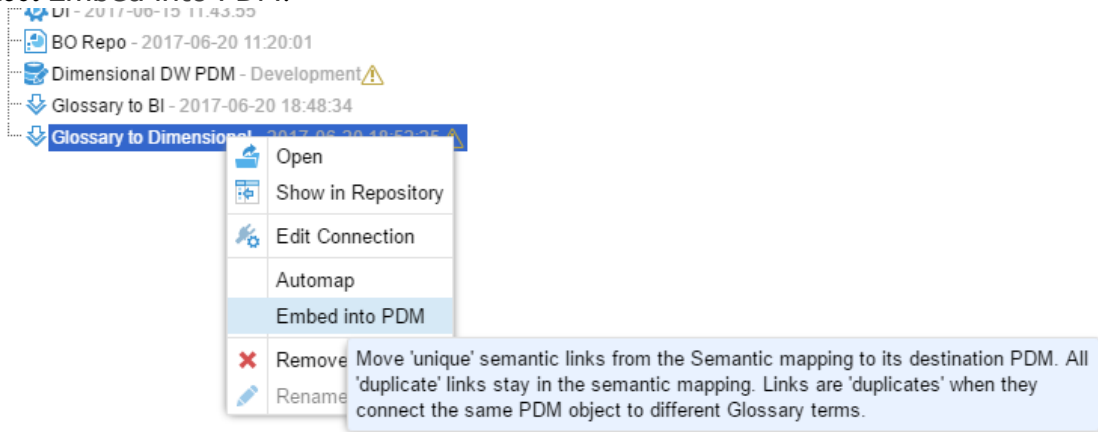


Figure 42 - Embed the mapping

Now, to clean up, remove the two semantic mappings:

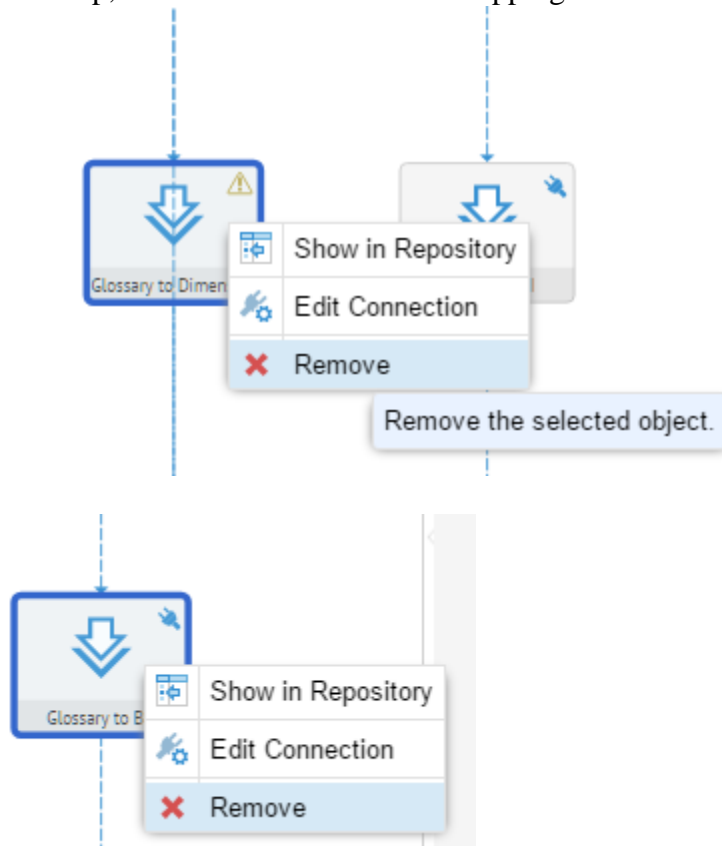


Figure 43 - Clean up the configuration.

## Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Build the configuration.

### **3 More Metadata Analysis**

Now, let's return to our analysis of the Finance system, this time taking advantage of the business glossary.

### 3.1 Terminology Usage (Impact) Analysis

One of the key use cases for any business glossary is to determine where a terms is “used” (has a semantic link to) by elements within the larger system configuration that is modeled in Meta Integration® Metadata Management (MIMM). In this case, it is the [Finance](#) configuration.

Unfortunately, the business glossary is not part of the configuration yet. We certainly created it and Meta Integration® Metadata Management (MIMM) automatically created a semantic mapping from it to the rest of our architecture, but we must add it to the configuration. This cannot be done in the Metadata Explorer UI, as is expected.

So, again we sign Out. Sign back in as the Administrator.

#### 3.1.1 Trace Semantic Usage

That is it. We are ready to trace semantic usage.

Recall that the use case is to determine where a terms is “used by” (has a semantic links to) elements within the larger system configuration that is modeled in Meta Integration® Metadata Management (MIMM).

So, we need to find a term.

Go to the Metadata Explorer UI.

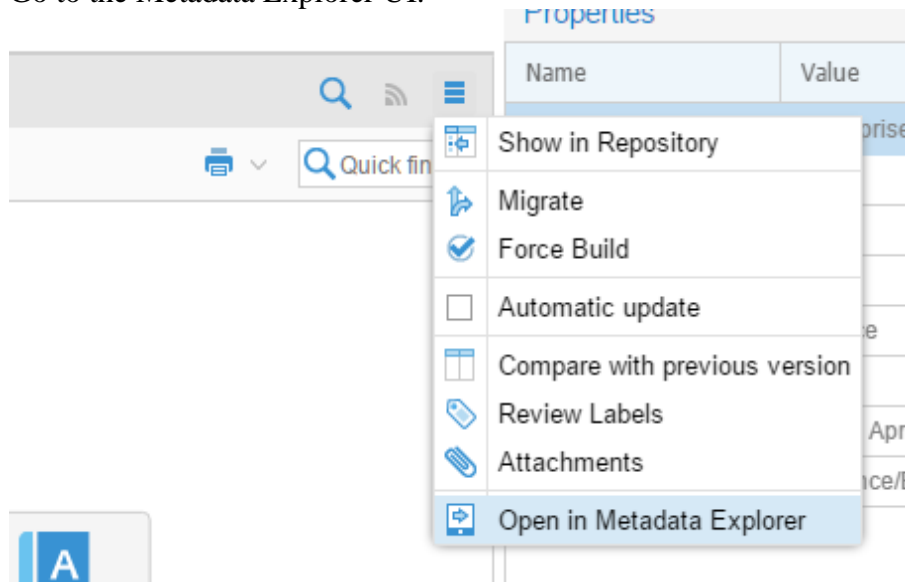
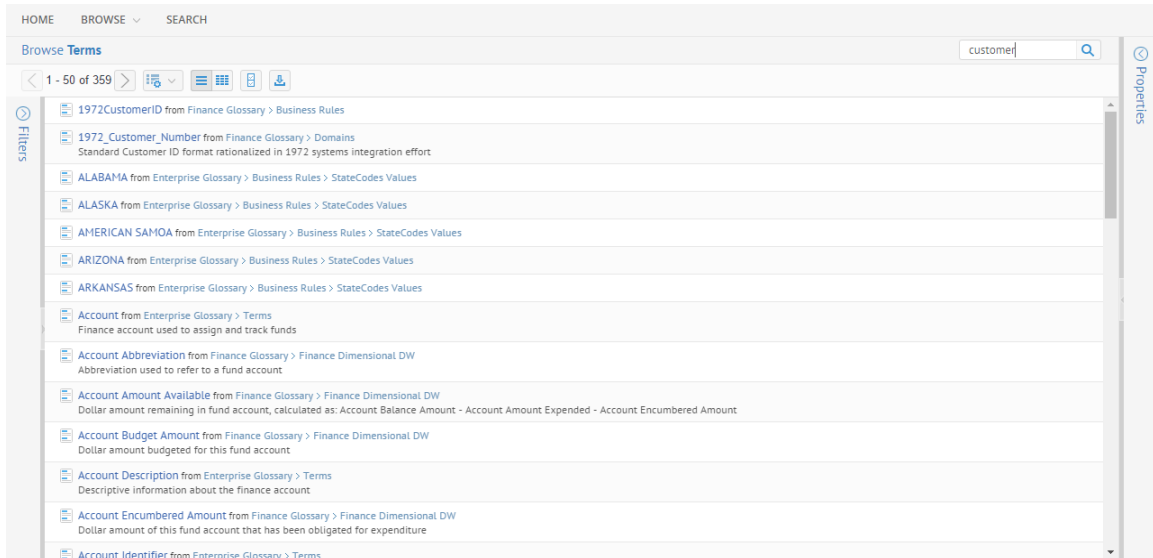


Figure 44 - Go to Metadata Explorer UI

Click on Browse → Glossary → Terms: and enter “Customer” in the search in the upper right:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)



Note, there are two Customer terms because we have two glossaries.

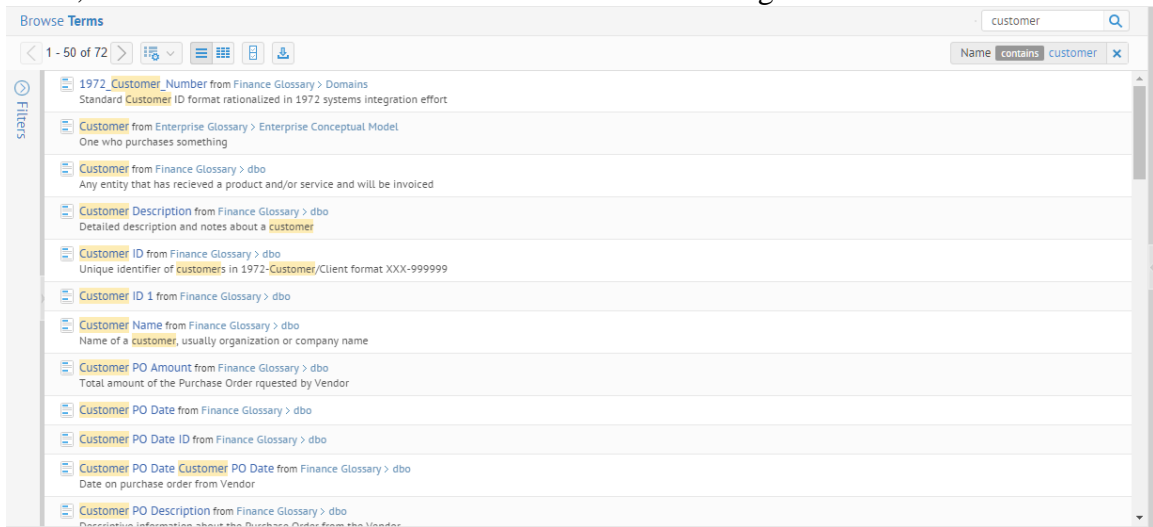


Figure 45 - Terms with "Customer" filter

Pick the one in the Finance Glossary:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

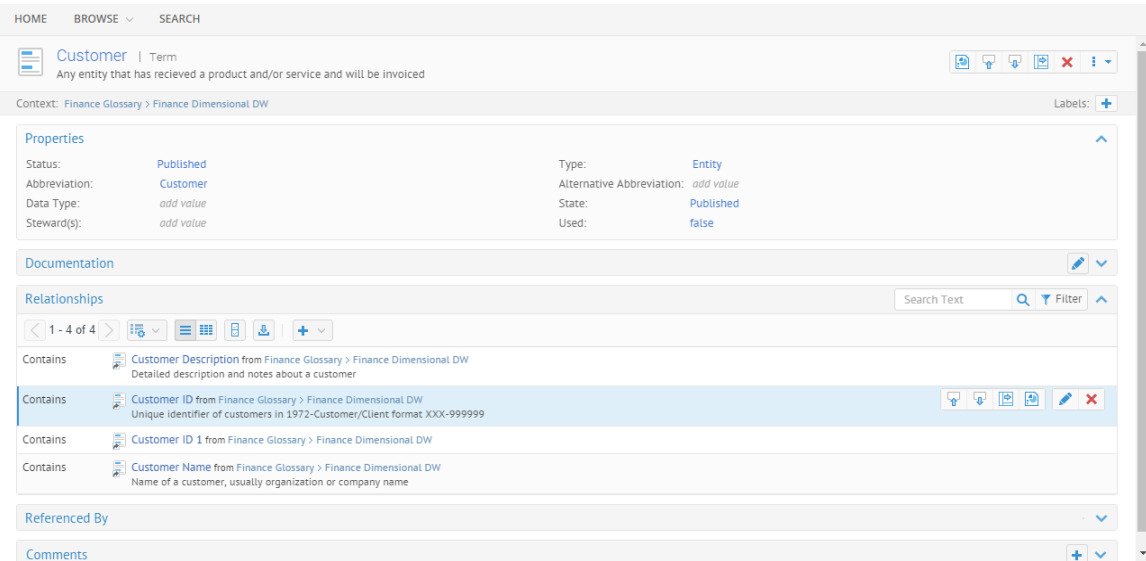


Figure 46 - Customer term

Now, click on the Trace Semantic Usage action icon in the upper right hand corner.

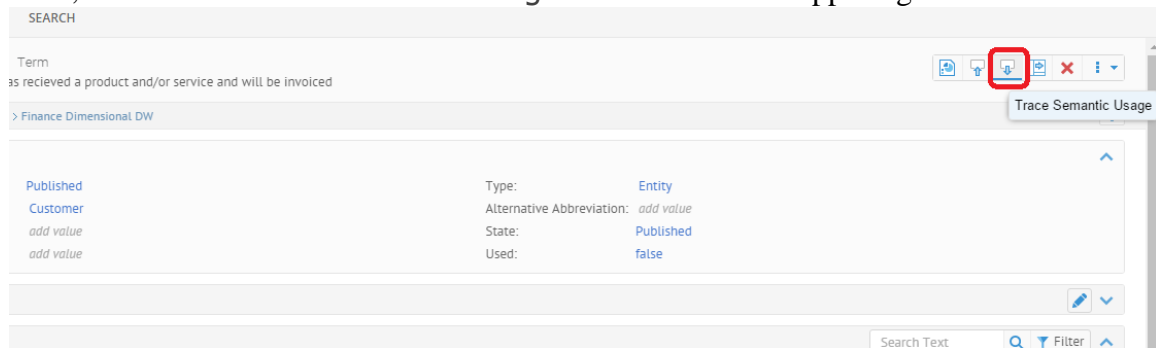


Figure 47 - Trace semantic usage

One may also select the term and then use the Trace Semantic Usage action icon in the header of the list.

The result is a tree of elements traced through the semantic lineage down to the physical architecture:

## Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

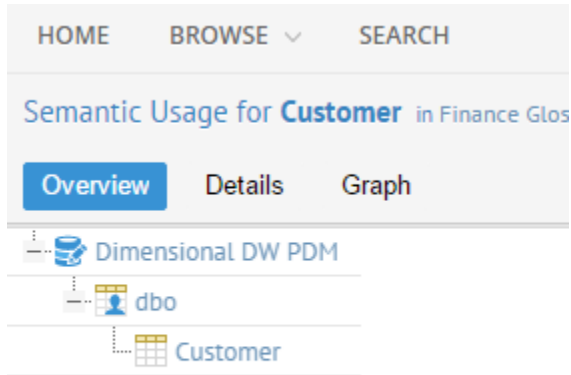


Figure 48 - Trace Semantic Usage for the Customer term

Not surprisingly, as Meta Integration® Metadata Management (MIMM) automatically populated the business glossary based upon one-to-one mappings to the [Dimensional](#) model, the trace is simply to the element this term was generated from.

We can see this usage report as a graphical trace by simply using the [Graph](#) option in the header of the Semantic Usage dialog:

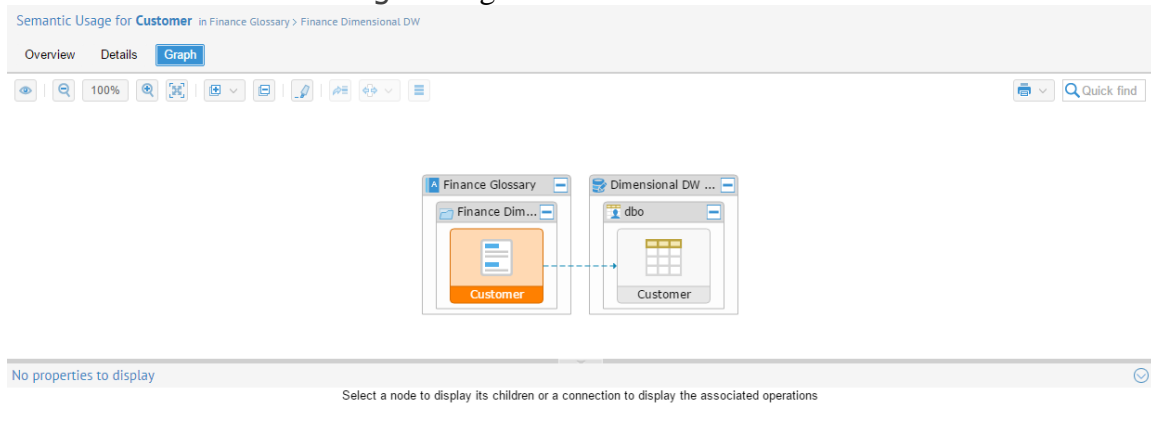


Figure 49 - Show Lineage Graph for Semantic Usage for Customer term

Please note that the above lineage only goes to [Customer](#) table in the [Dimensional](#) model. Note also that the [Customer](#) term is also of [Type Table](#).

This distinction becomes important when tracing semantic usage. A table or entity or view is generically referred to as a *classifier*. And classifier level semantic lineage is greatly restricted as compared with *feature* level semantic lineage (a feature is a column, attribute, etc.).

Let's try the feature level lineage. Return to the customer term using the browser back button and expand the Relationship panel:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Customer** | Term  
Any entity that has received a product and/or service and will be invoiced

Context: [Finance Glossary](#) > [Finance Dimensional DW](#)

**Properties**

Status:	Published	Type:	Entity
Abbreviation:	Customer	Alternative Abbreviation:	add value
Data Type:	add value	State:	Published
Steward(s):	add value	Used:	true

**Documentation**

**Relationships**

1 - 4 of 4

Contains	<a href="#">Customer Description</a> from <a href="#">Finance Glossary</a> > <a href="#">Finance Dimensional DW</a> Detailed description and notes about a customer
Contains	<a href="#">Customer ID</a> from <a href="#">Finance Glossary</a> > <a href="#">Finance Dimensional DW</a> Unique identifier of customers in 1972-Customer/Client format XXX-999999
Contains	<a href="#">Customer ID 1</a> from <a href="#">Finance Glossary</a> > <a href="#">Finance Dimensional DW</a>
Contains	<a href="#">Customer Name</a> from <a href="#">Finance Glossary</a> > <a href="#">Finance Dimensional DW</a> Name of a customer, usually organization or company name

Figure 50 - Contain relationships

Then click on the empty space in the line for **Customer ID** or just on its icon ( ):

Contains [Customer ID](#) from [Finance Glossary](#) > [Finance Dimensional DW](#)  
Unique identifier of customers in 1972-Customer/Client format XXX-999999

Contains [Customer ID 1](#) from [Finance Glossary](#) > [Finance Dimensional DW](#)

Figure 51 - Action icons for Customer ID

And then click on the Trace Semantic Usage action icon:

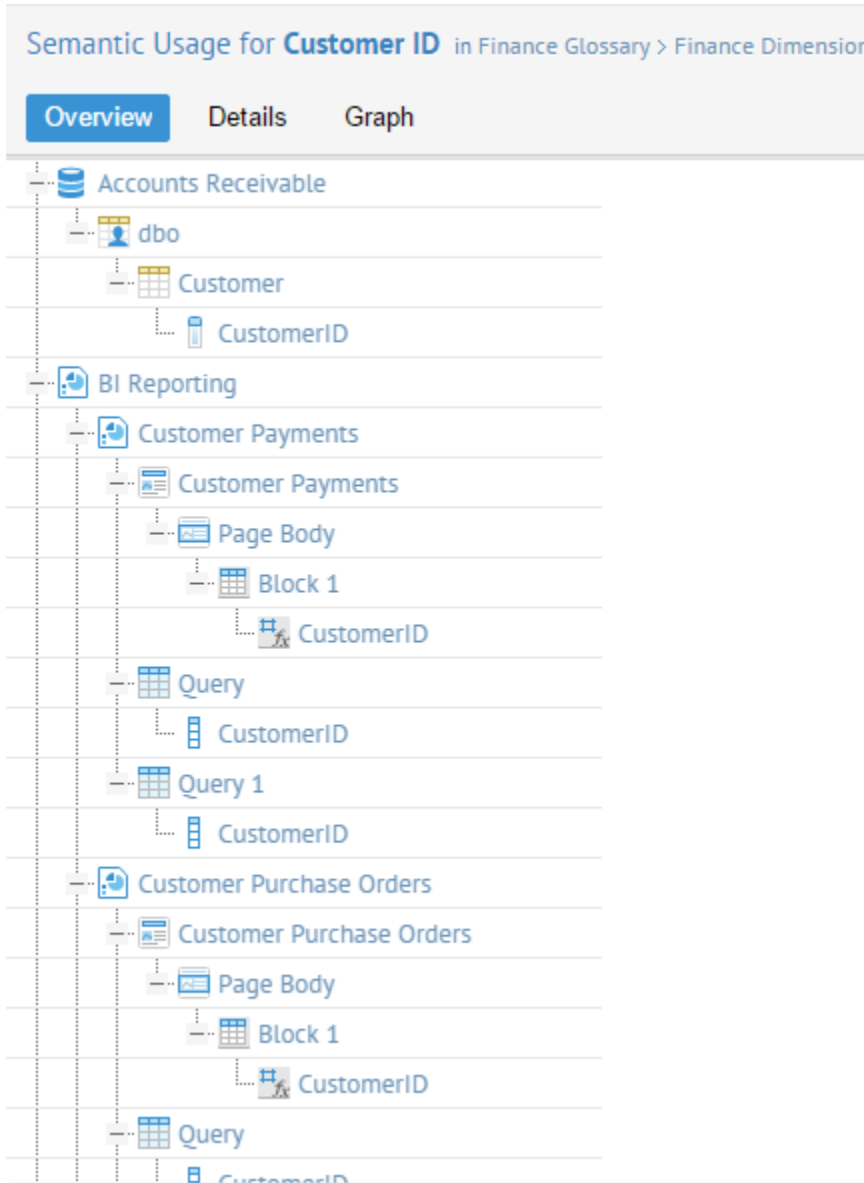


Figure 52 - Trace Semantic Usage for Customer ID term (feature type)

Note, in this case there is a much broader impact. This is because, the trace semantic usage function will also follow through the data flow architecture (like the data mappings between the Staging and Dimensional models) for a feature, as long as there is no transformation defined in the data flow (i.e., it is a “pass-through” mapping).

This is not the case with classifiers, as classifiers are not truly mapped, but are only collections of items, some of which may be mapped and some of which may have transformations.

Again, we can see this usage report as a graphical trace by simply using Graph option. Click on the Expand the selected node icon and select To Column Level and the result is:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

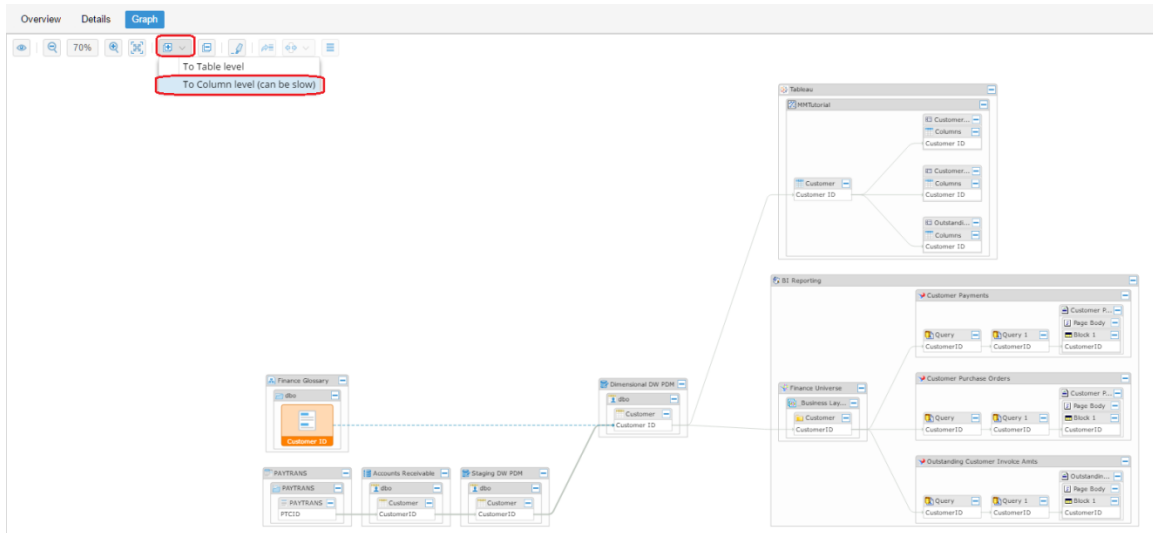


Figure 53 - Semantic Usage Lineage Graph

Again, notice how Meta Integration® Metadata Management (MIMM) automatically continues on the “usage” trace by looking at the data flow impact. Hence, we see that a change in a precise term can have large impact on the physical systems.

### 3.2 Trace Semantic Definition

We can also use Meta Integration® Metadata Management (MIMM) to look up definitions of fields in the physical architecture, now that we have a business glossary and semantic lineage.

In the Metadata Explorer UI, let's return to the [Net Vendor Customer Invoices](#) (in the Tableau model), and navigate down to the report body (which was at [MMTutorial > Net Vendor Customer Invoices](#)):



Figure 54 - Navigating to the report body

Click in the empty space (or icon) next to [AccountAmountAvailable](#) and click on the Trace Semantic Definition icon:

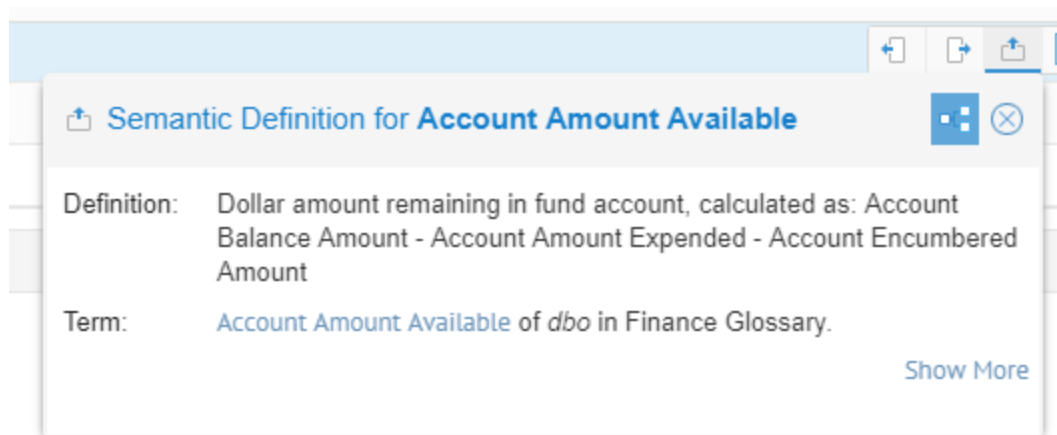
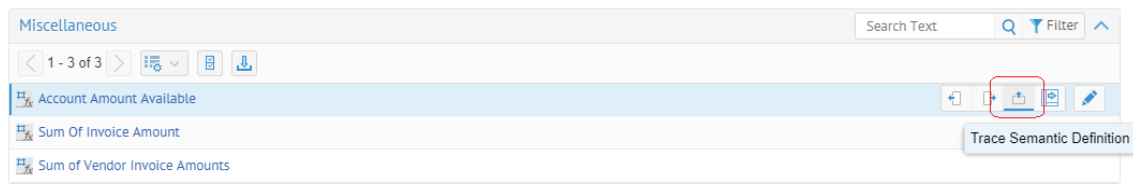




Figure 55 - Semantic Definition of AccountAmountAvailable traced back to term in business glossary

The result is the definition of the [Account Amount Available](#) term auto-populated in the [Finance business glossary](#) from when we dragged the [Dimensional DW PDM](#) model into the business glossary. As in the earlier chapters with the [Enterprise Conceptual Model](#),

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Meta Integration® Metadata Management (MIMM) determines this by tracing through the data flow lineage from the field in the report back to the [Staging DW](#) model, then up through the semantic lineage to the term in the business glossary.

Clicking on Show More will perform a search in the business glossary for additional terms and conceptual domains, as well as any other physical data elements which have definitions defined which were in the path of the data flow lineage trace or in the semantic trace:

 **Semantic Definition for Account Amount Available** 

---

**Definition:** Dollar amount remaining in fund account, calculated as: Account Balance Amount - Account Amount Expended - Account Encumbered Amount

**Term:** [Account Amount Available](#) of *dbo* in Finance Glossary. [Show More](#)

---

**Definition:**

**Term:** [Unified\\_Dollar\\_Amount](#) of *Domains* in Finance Glossary.

---

**Definition:** Dollar amount remaining in fund account, calculated as: Account Balance Amount - Account Amount Expended - Account Encumbered Amount

**Entity:** [Account Amount Available](#) of *GL Account* in MMTutorial.

---

**Definition:** Dollar amount remaining in fund account, calculated as: Account Balance Amount - Account Amount Expended - Account Encumbered Amount

**Entity:** [Account Amount Available](#) of *GL Account* in Dimensional DW PDM.dbo.

---

**Definition:** Dollar amount remaining in fund account, calculated as: Account Balance Amount - Account Amount Expended - Account Encumbered Amount

**Entity:** [Account Amount Available](#) of *General Ledger Account* in Staging DW PDM.dbo.

## 4 Data Governance with Business Glossary

#### 4.1 Glossary Semantic Mapping and Term Classification

As you can see the automatic population of a business glossary is a great boot-strapping tool. However, it is not a final product. For instance, the example in the final chapter of Part I of identifying all physical data elements impacted by a change in the payment amount and associated amount fields used the existing Enterprise Conceptual Model with generalizations (sub type/super type relationships) relating a common concept of Finance Amount.

Part of the process of utilizing and extending the business glossary involves defining these same types of generalizations within the business glossary itself.

At this point, it is time to use the Metadata Explorer UI, as you are going to be create categories and terms in the repository.

Then go to Browse → Business Glossary → Glossaries.

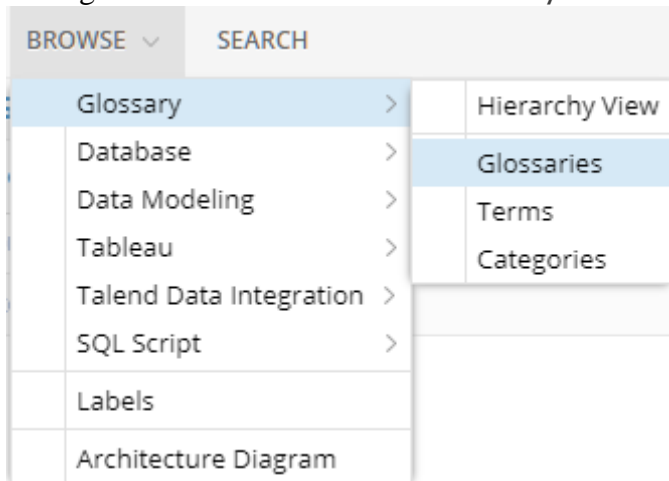


Figure 56 - Glossaries in the Explorer UI

Then click on the [Finance Glossary](#) and click on the plus sign to add a category:

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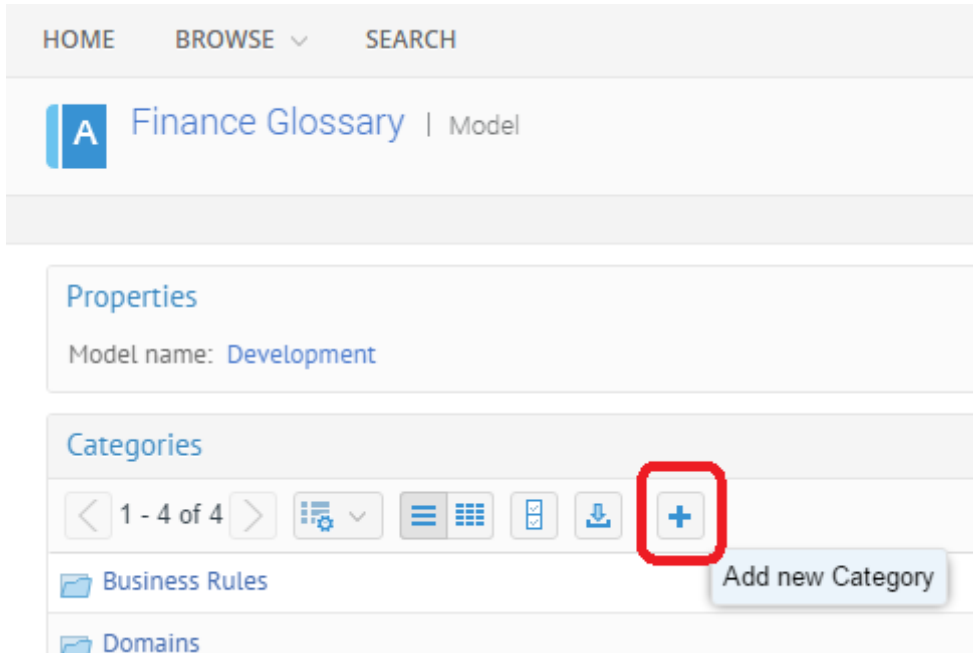


Figure 57 - Add category

Enter the name “Normalized Generalizations”:

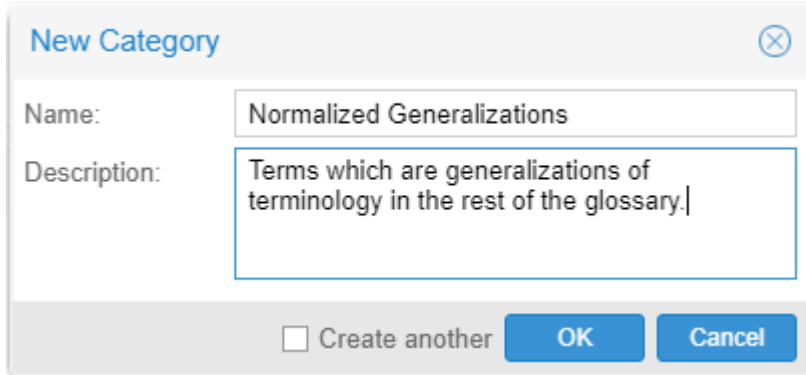


Figure 58 - Add category

Click OK.

Open that category. To add a term, click on the plus sign in the Terms panel to add terms:

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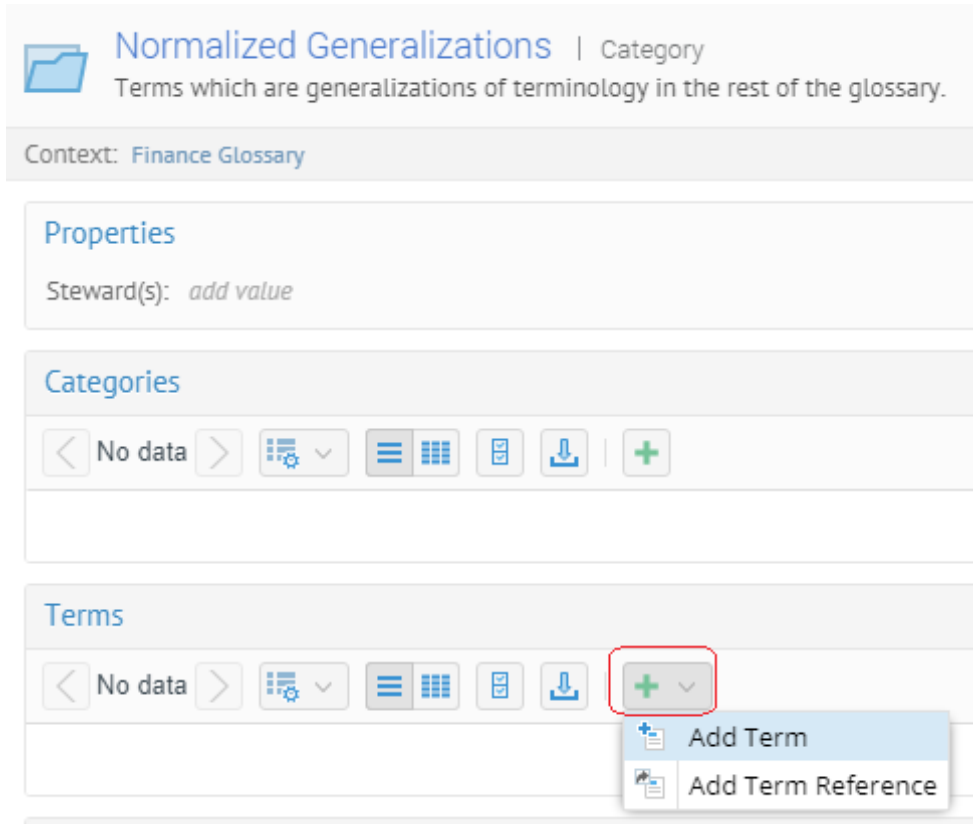


Figure 59 - Add a term

and create the term as shown below:

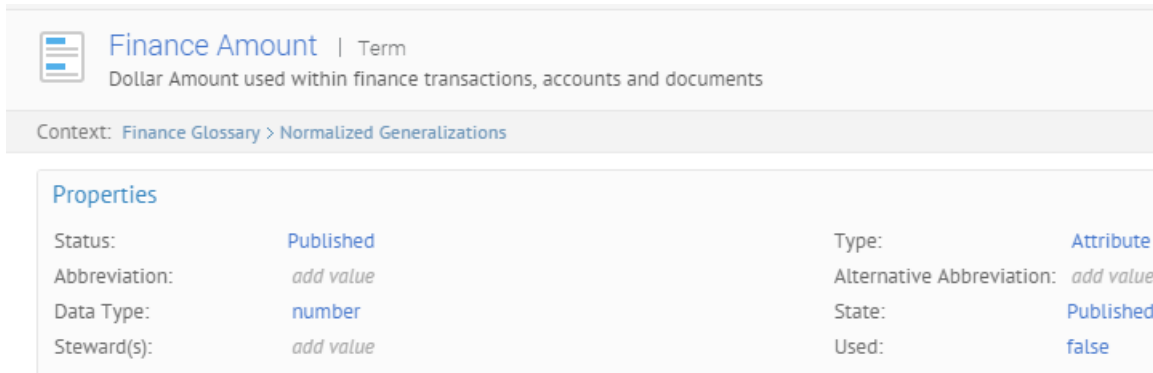


Figure 60 - New generalized Finance Amount term

Now we will create the generalization links. Click on the plus sign in the Relationships panel and select More Specific.

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The screenshot shows the MIMM interface for the term "Finance Amount". The page includes a navigation bar with "HOME", "BROWSE", and "SEARCH". The term is identified as "Finance Amount | Term" with the definition "Dollar amount used within finance transactions, accounts and documents". The context is "Finance Glossary > Normalized Generalizations".

The "Properties" section lists:

- Status: Published
- Abbreviation: add value
- Data Type: number
- Steward(s): add value

The "Relationships" section shows a "No data" message and a toolbar with icons for settings, view, and download. A red box highlights a "+" icon with a dropdown arrow, which has opened a menu with the following options:

- Synonym
- See Also
- More General
- More Specific (highlighted)
- Contains
- Contained By
- Represents
- Represented By

In the Select Term(s) dialog, search for “\*amount\*”, select each term for which Finance Amount could be considered a generalization:

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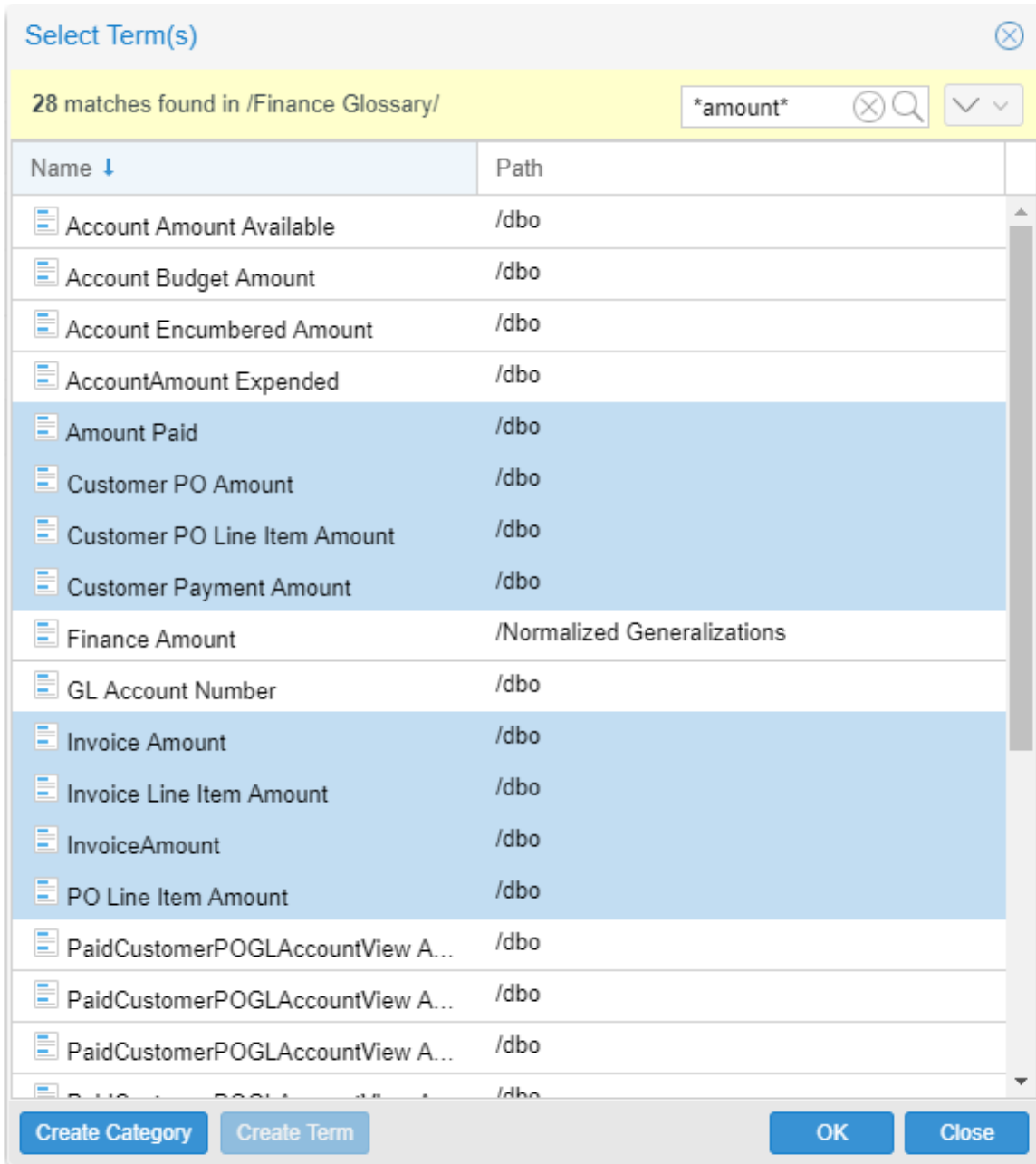


Figure 61 - Select Term(s)

and for each click the **OK** button

Here are the suggested selections:

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Relationships	
1 - 8 of 8	
More Specific	<b>Amount Paid</b> from <b>Finance Glossary &gt; dbo</b> Amount Paid to Date on the Vendor Invoice
More Specific	<b>Customer PO Amount</b> from <b>Finance Glossary &gt; dbo</b> Total amount of the Purchase Order requested by Vendor
More Specific	<b>Customer PO Line Item Amount</b> from <b>Finance Glossary &gt; dbo</b> Amount of line item on a Vendor's Purchase Order, generally $Quantity \times Unit Price$
More Specific	<b>Customer Payment Amount</b> from <b>Finance Glossary &gt; dbo</b> Dollar amount of payment
More Specific	<b>Invoice Amount</b> from <b>Finance Glossary &gt; dbo</b> Total amount of invoice, generally a sum of the line items
More Specific	<b>Invoice Line Item Amount</b> from <b>Finance Glossary &gt; dbo</b> Total dollar amount ( $Unit Price \times Quantity$ ) of this line item
More Specific	<b>InvoiceAmount</b> from <b>Finance Glossary &gt; dbo</b> Total amount of invoice, generally a sum of the line items
More Specific	<b>PO Line Item Amount</b> from <b>Finance Glossary &gt; dbo</b> Amount for a line item in a purchase order, generally equal to $units \times number\ of\ units$

Figure 62 - Terms which are more specific examples of a Finance Amount

Now, let's see the results. Trace the semantic usage for the term Finance Amount.

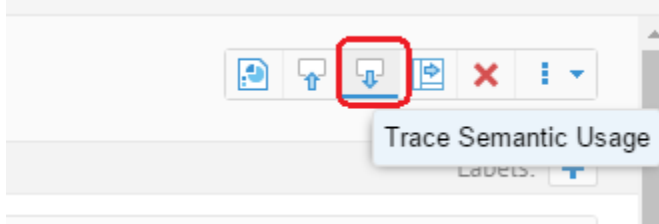


Figure 63 - Trace semantic usage

You should see the entire usage graph which is quite extensive for one term.

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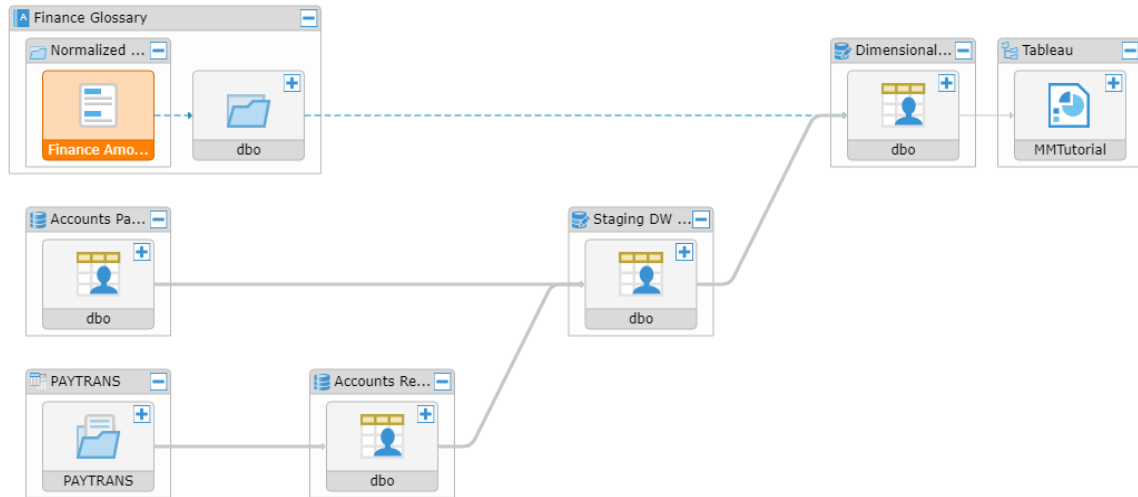


Figure 64 - Usage graph

Note, if we expand the dbo nodes in both the Finance Glossary and Dimensional DW PDM, you will see all the semantic maps you just created, showing that the term Finance Amount is used by 8 other terms, which in turn are used by several columns in several tables.

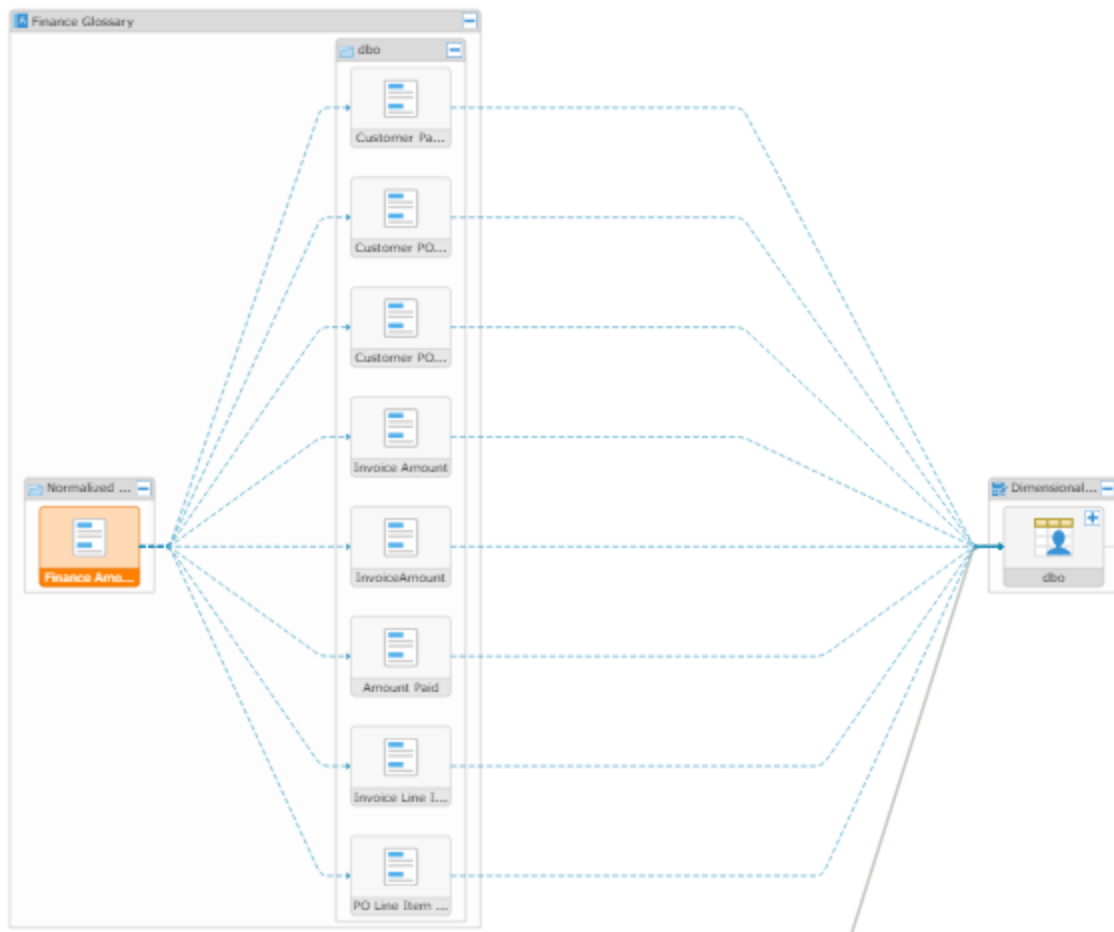


Figure 65 - Usage diagram

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Now, this is one (good) way to define such generalizations that normalize the terminology. It relies on the existence of only one glossary.

However, as you might imagine, one could separate the more conceptual or generalized terminology into a separate glossary. In fact, we already have the basis for this. Just as the [Finance Glossary](#) has been built based upon a data model that is fairly close to the physical [Dimensional DW PDM](#), we have a second glossary (the [Enterprise Glossary](#)) that we imported from a CSV file. Perhaps, it would make sense for this organization to use that glossary as the conceptual, enterprise wide glossary, for normalization of terminology and ultimately for standardization.

Let's do so now.

In order to define the same type of relationships between glossaries we will first create a semantic mapping that will contain the semantic links among the terms.

Create this new semantic mapping, named “Enterprise to Finance Glossary” in the Metadata Manager UI:

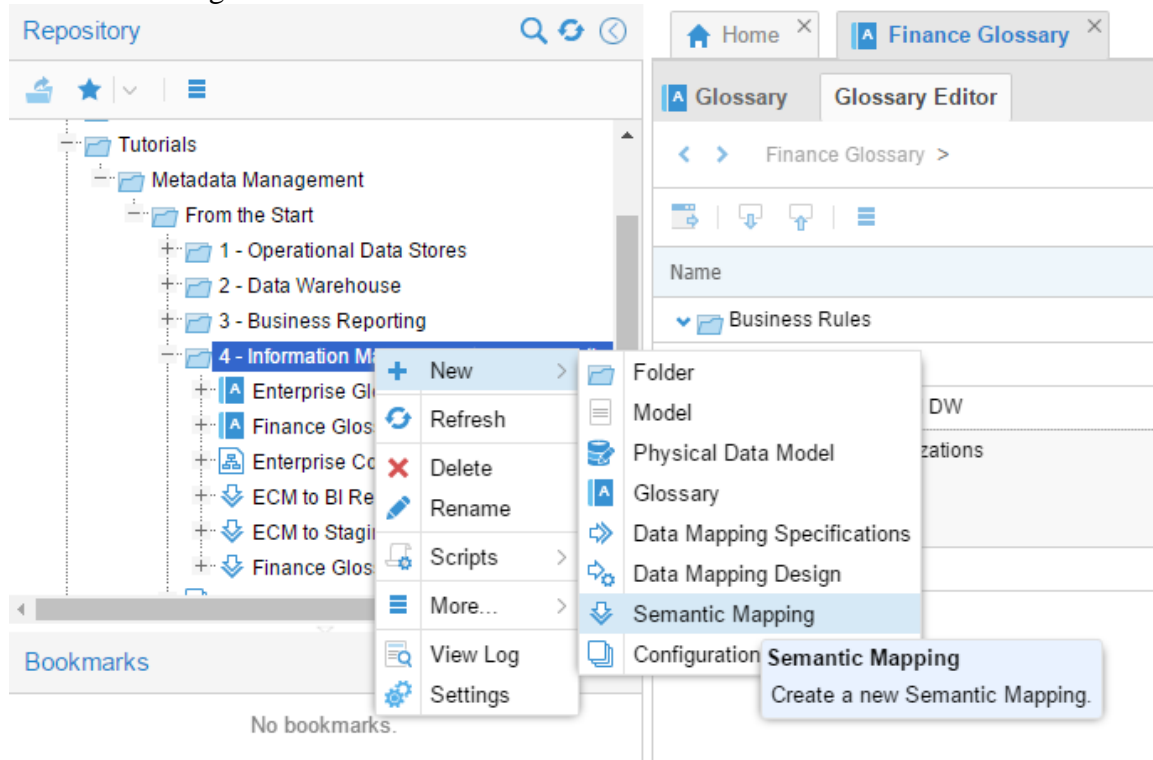


Figure 66 - Create semantic mapping

And drag the two glossaries into the semantic mapping:

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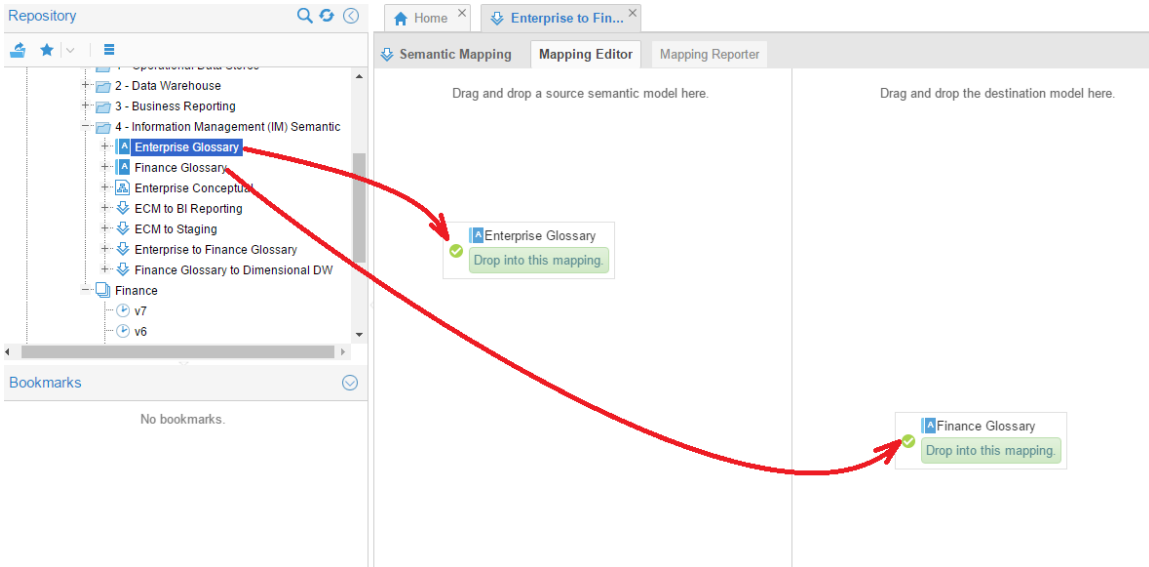


Figure 67 - Drag glossaries into mapping

Now, you may use the mapper to define links across from one glossary to the other. Let's do the line item amounts, as we did before. Search for “\*amount\*” in both the left and right hand sides of the mapping:

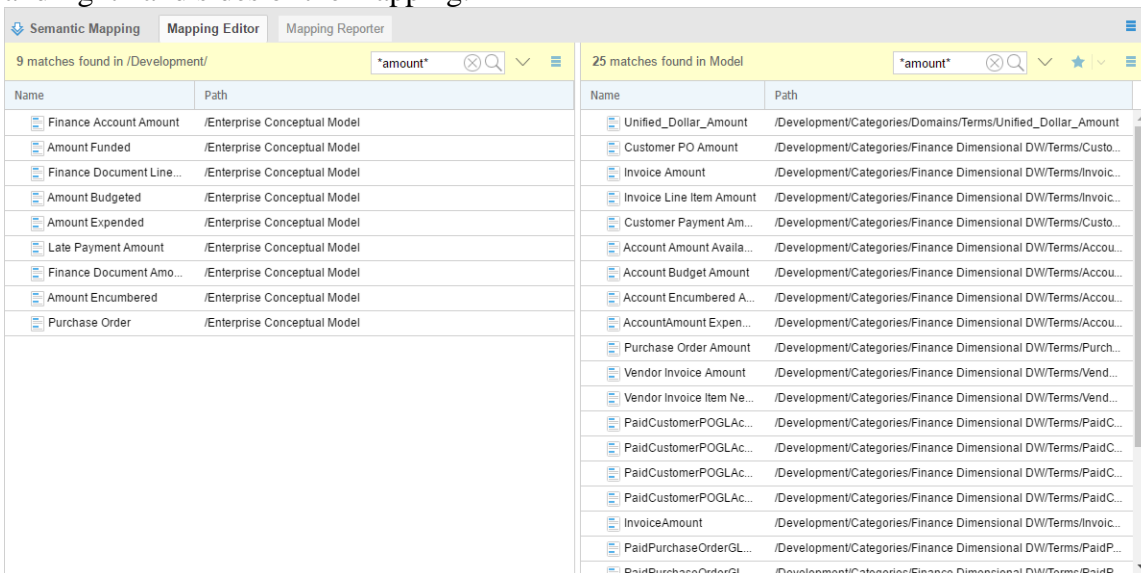
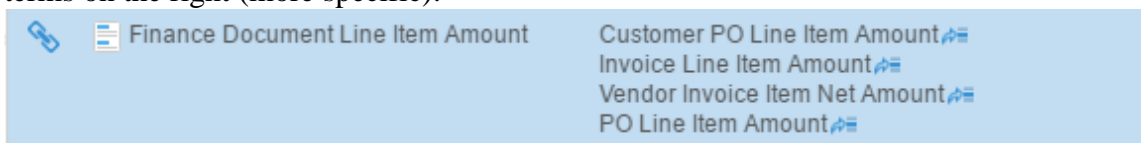


Figure 68 - Filter by \*amount\*

Then, drag the Finance Document Line Item Amount (generalization) to the following terms on the right (more specific):



Also, one can quickly create a (generalization) term based upon a (more specific) term in the right side of the mapping. E.g., if one wanted to take the three terms in the Finance

Glossary (right) related to [Line Item Descriptions](#) and generalize them into a term in the [Enterprise Glossary](#) (left), one could simply drag one of them from right to left and that will create a new term.

First specify “line item description” in the search box for the right-hand side. Then select the category to add to on the left (use the X next to the search criteria to clear it and pick a category). Then, drag and drop from the right to the left to extend the glossary one left.

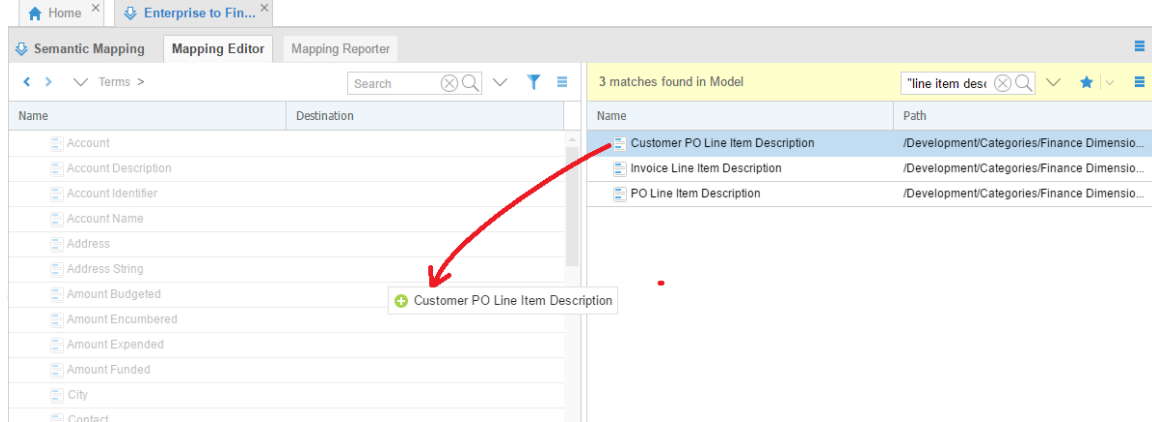


Figure 69 - Create a term by drag and drop

You will then be presented with the opportunity to change the Name and Description. Here we will specify it as below:

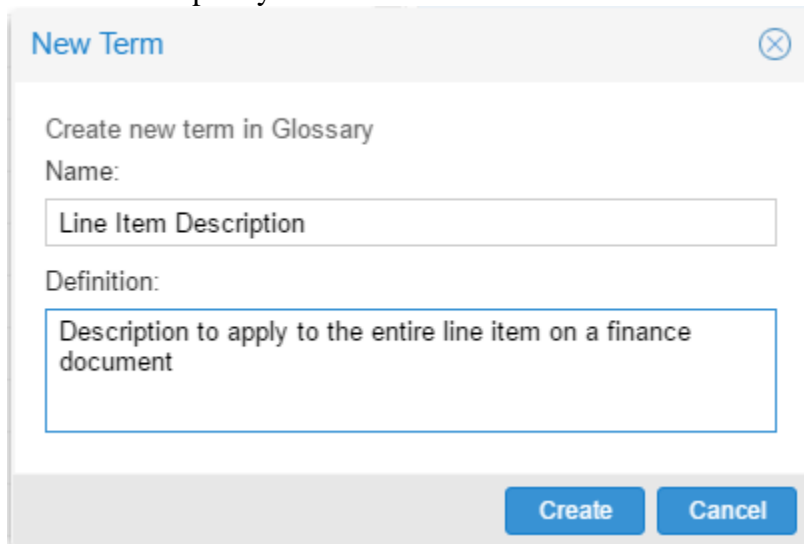


Figure 70 - New name and definition

This way we have created a more general term. We may then map it to the other two terms:

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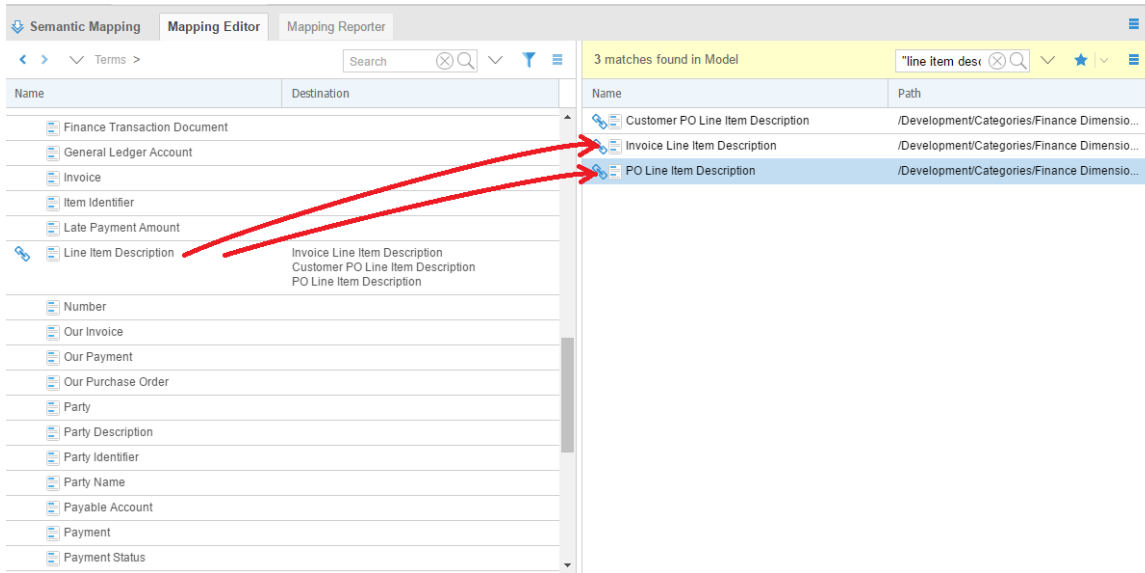


Figure 71 - Finance Line Item Description

Here is another generalization term and relationships to define:

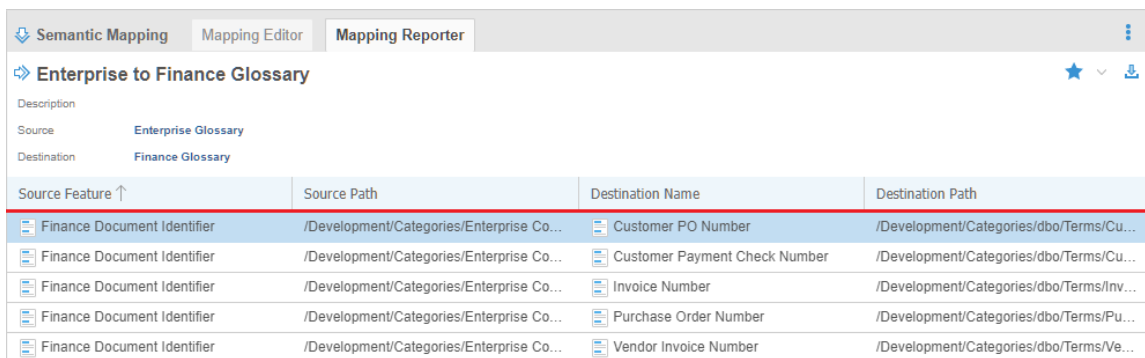
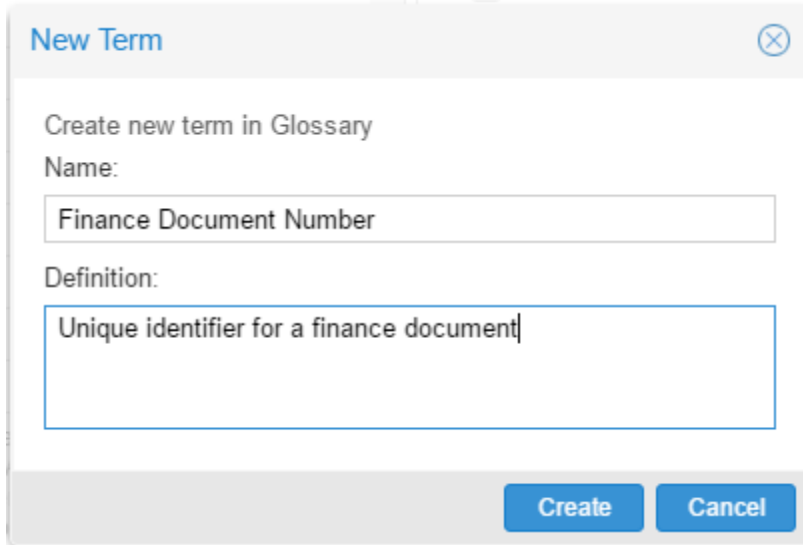


Figure 72 - Finance Document Number

Note, the use of the Mapping Reporter tab.

And finally, we can even go back to the **Finance Document Amount** (which is already a term in the **Enterprise Glossary**, no need to create a new term here) example and map to all the specific finance amount type terms, this time mapping from the **Enterprise Glossary** to the **Finance Glossary**, rather than simply within the **Finance Glossary**:

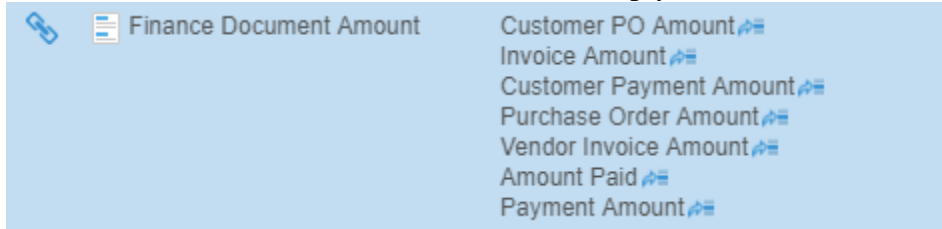


Figure 73 - Finance Amount in the Enterprise Glossary as a generalization of these specific terms in the Finance Glossary

With these generalization, we can now perform the same usage lineage trace for **Finance Amount** and see all the locations where and update from **Decimal(8,2)** to **Decimal(10,2)** is suggested, just as in Chapter 6 (Be sure to add the semantic mapping to the **Finance configuration** and build first):

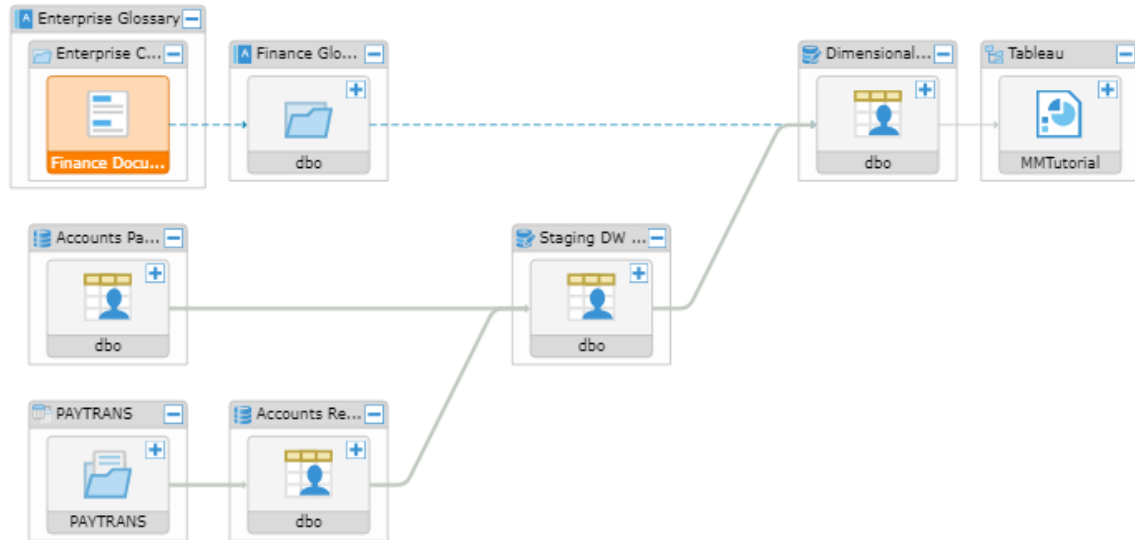


Figure 74 - Semantic usage for Finance Document Amount

## 4.2 Extending the Business Glossary with existing metadata

### 4.2.1 Analyze potential metadata

We will now extend the business glossary to include some concepts which are in the PAYTRANS system.

Let's take a look at what is in the PAYTRANS flat file message:

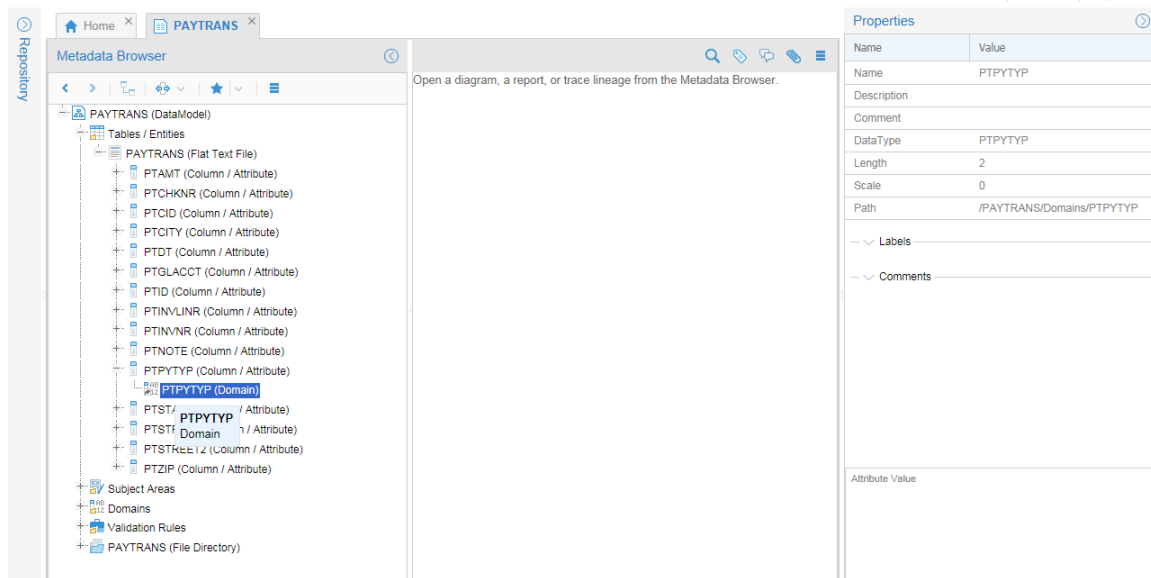


Figure 75 - PAYTRANS schema

In particular, if you scan through the features inside, the PTPYTYP has a derived type (double click on the Derived Type link):

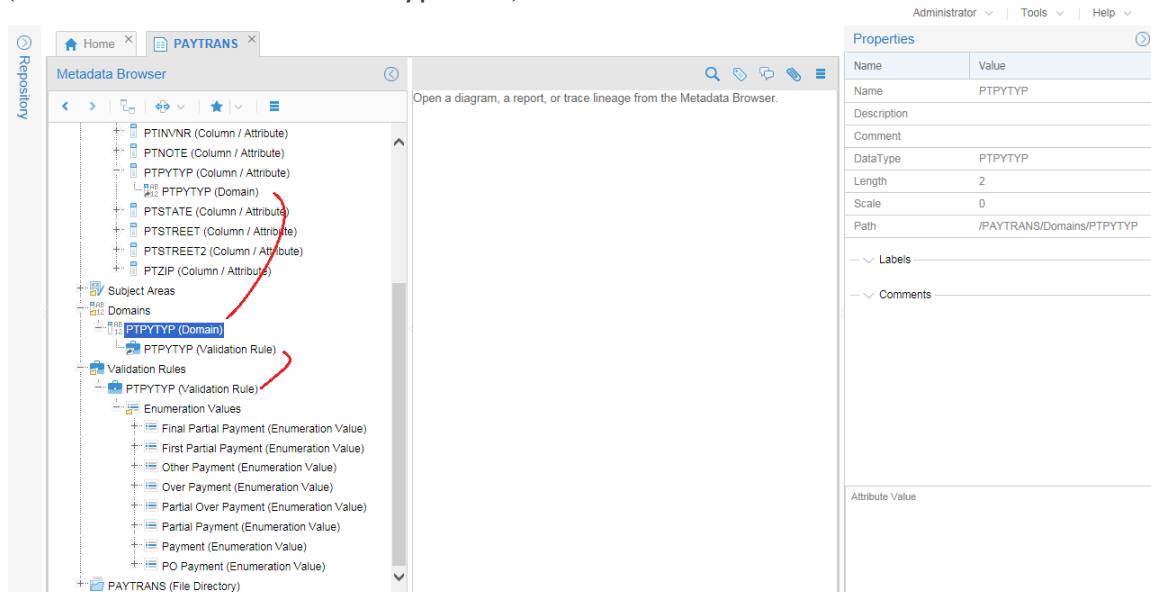



Figure 76 - PTPYTYP derived type

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Which, in turn has a business rule. This is a coded data set, specifically with codes for each type of payment coming from **PAYTRANS**.

Let's see where this information goes. Trace the impact of this field by returning to the **PTPYTYP** attribute and right-clicking and selecting Trace Data Impact. You will need to  the configuration again after all your edits to the glossary.

Here we have the graphical trace for the Finance configuration:

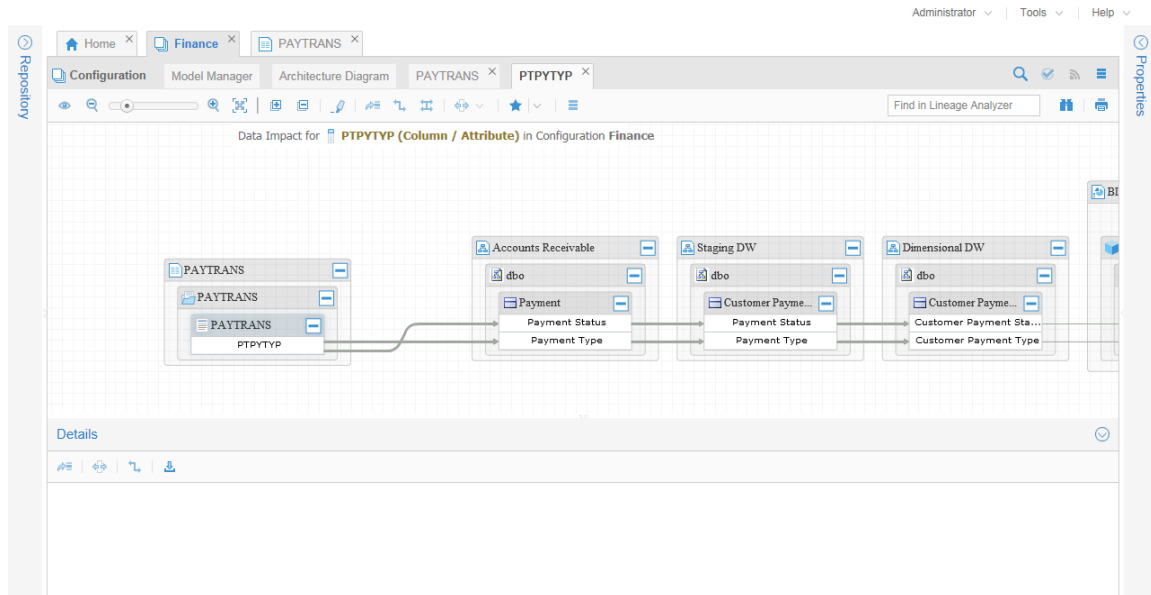


Figure 77 - Impact lineage trace for PTPYTYP

PTPYTYP is used to derive both the **Payment Type** and the **Payment Status** for a **Payment** in the **Accounts Receivable** database. However, clicking on the **Payment Type** in the **Payment** table in **Accounts Receivable**, and navigating to its validation rule, we see a valid value list that is quite different:

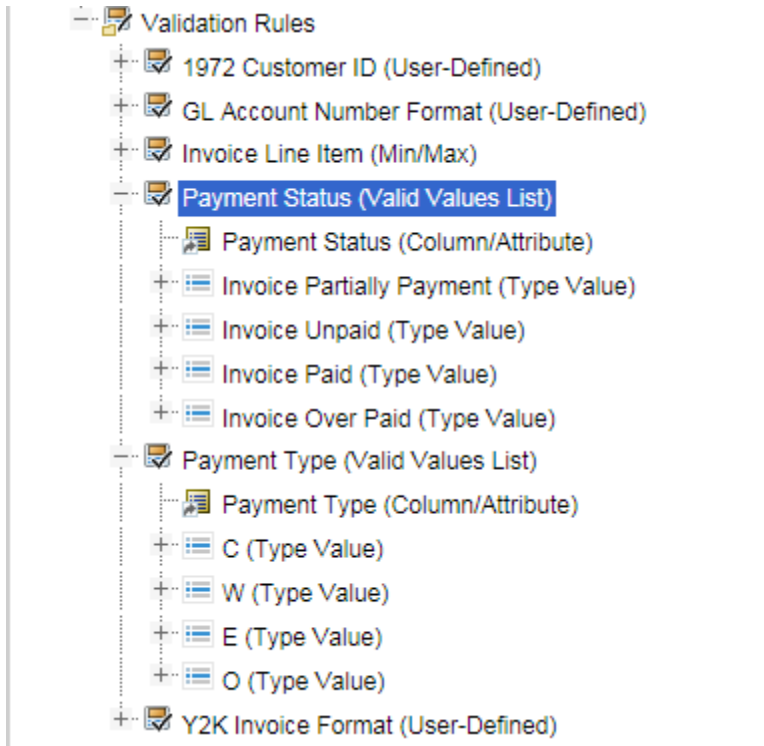


Figure 78 - Payment Type and Payment Status valid value lists

From the thin grey line in the lineage which points to the [Staging DW](#) database, we know that the exact same values are then passed to the [Staging DW](#) database. And it is the [Staging DW](#) database where we derived the [Payment Type](#) and [Payment Status](#) defined in the [Finance](#) business glossary. Thus, [PTPYTYP](#) is a new concept which is an example of both [Payment Status](#) and [Payment Type](#) information. We should include it in the business glossary.

#### 4.2.2 Populate the business glossary

To do so, we can again drag the model, this time [PAYTRANS](#), into the business glossary. However, most of these terms are not going to stay, as they are not unique. So, we will do something a little different this time.

First, we will specify that it should create a new category in the business glossary, so we can identify it later:

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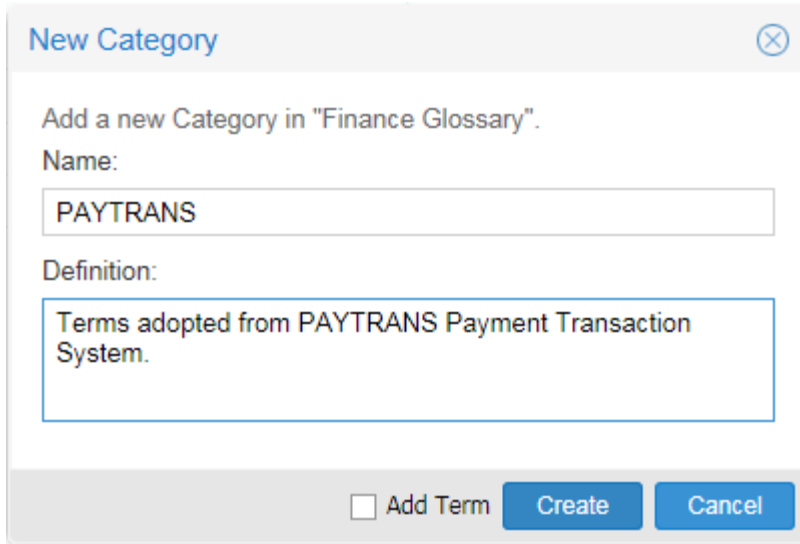
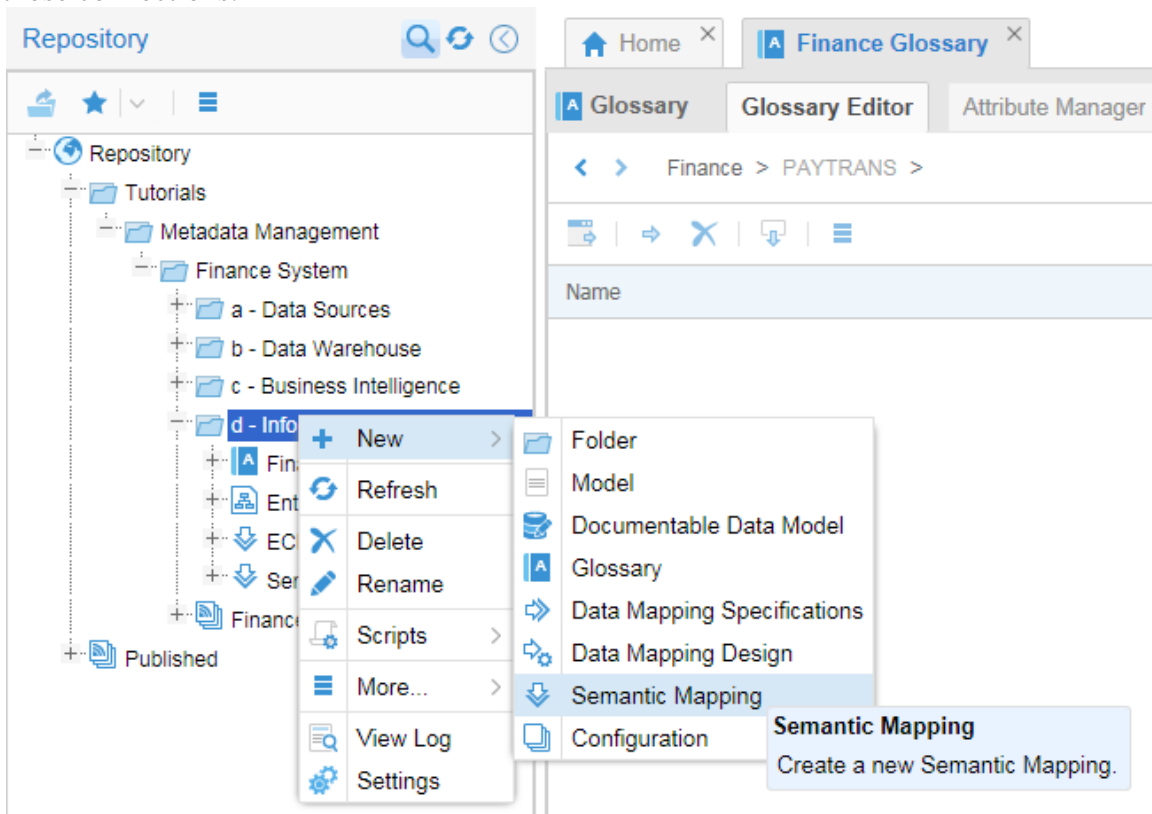


Figure 79 - Populating the Finance business glossary with PAYTRANS data elements

We should also create a semantic mapping (call it Finance Glossary to PAYTRANS) between the Finance Glossary and the PAYTRANS model, as we will want to maintain those connections:



# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

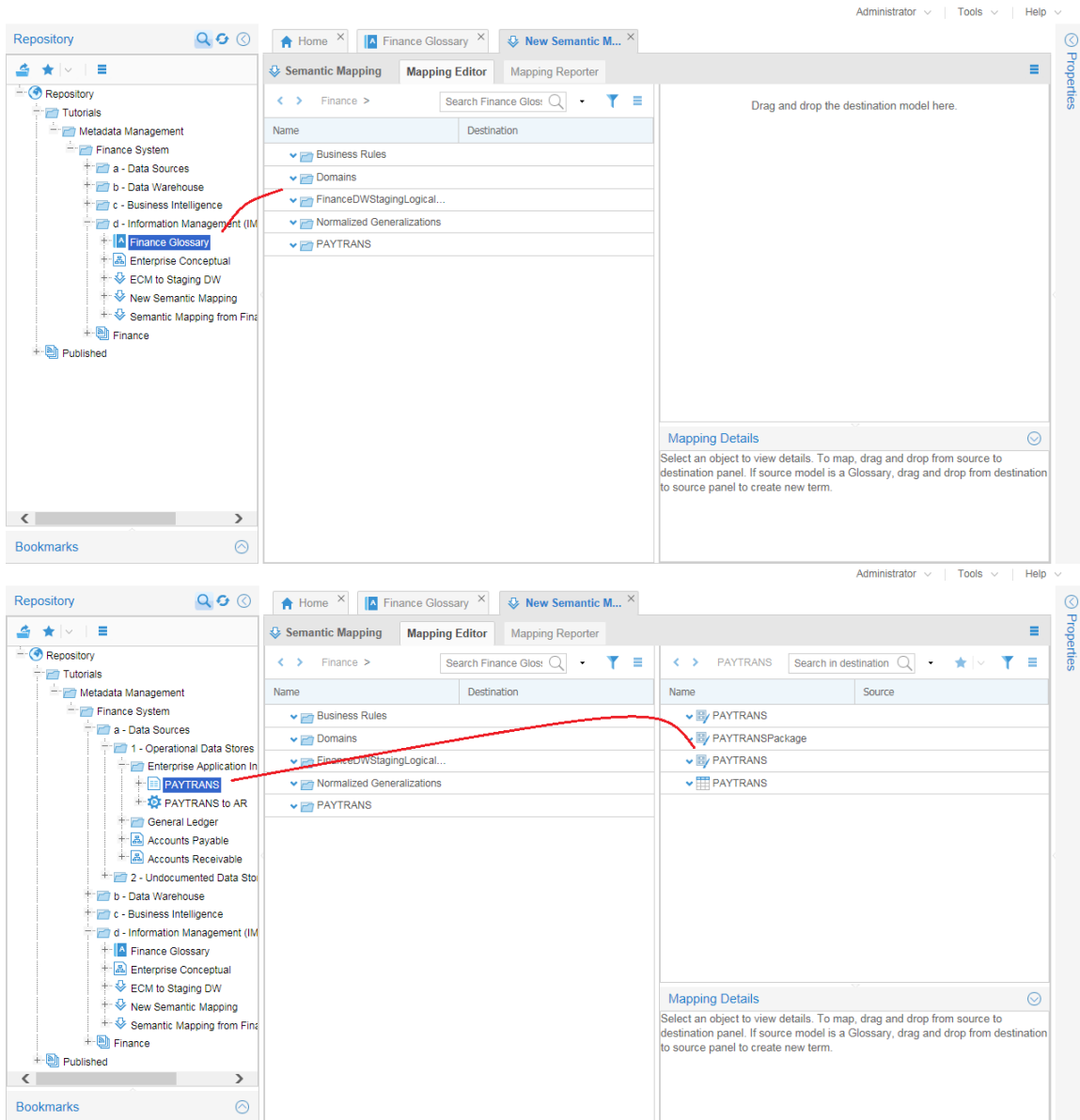


Figure 80 - New semantic mapping from the Finance Glossary to PAYTRANS

### 4.3 Normalization of Terminology

#### 4.3.1 Preventing redundancy

As one can imagine, many of the terms which could be added are really just new names for an identical term. In particular, the **PTAMT** term mapped to the **PTAMT** field in the **PAYTRANS** flat file is identical in definition to the Payment Amount term already in the business glossary and mapping to the Payment Amount attribute in the **Staging DW** model.

How do we know it is identical? One good indicator is in the data flow, and the lineage impact trace will let us know (simple gray thin lines) that the data flow between the **PTAMT** field in the **PAYTRANS** and the **Payment Amount** in the **Staging DW** database has no transformation.

In fact, we can create the impact trace for the entire **PAYTRANS** schema:

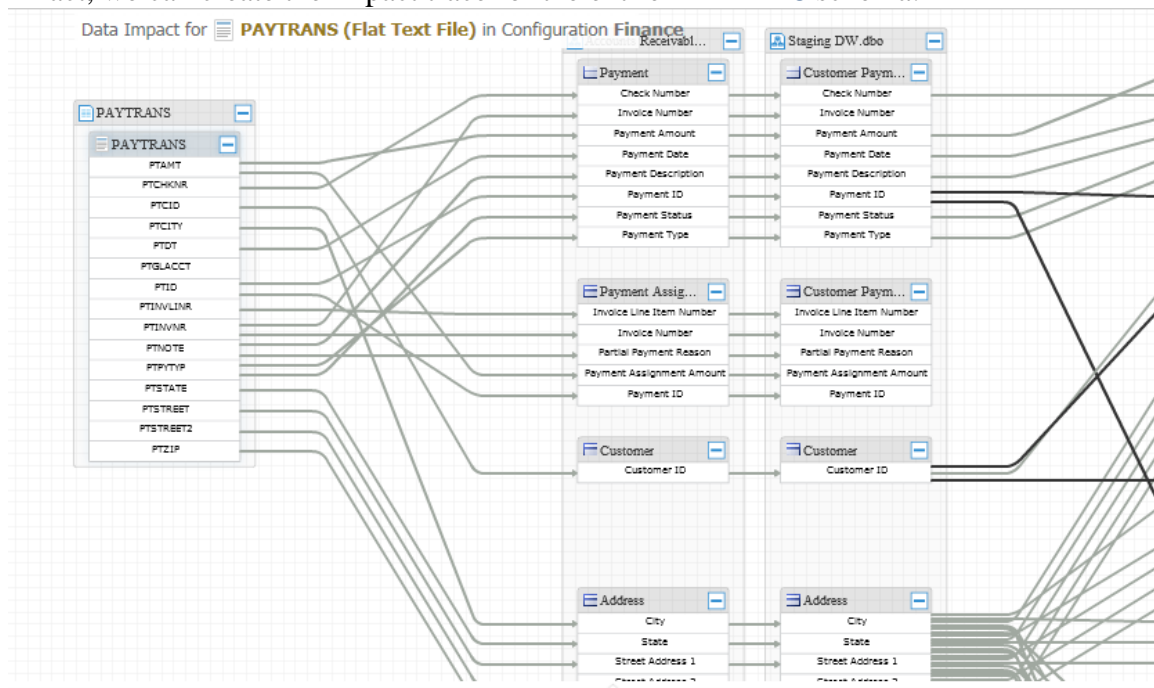


Figure 81 - PAYTRANS impact lineage trace

And note that only three fields are not simple moves of the data:

- PTDT
- PTNOTE
- PTPYTYP

The others are simple moves and most likely have exactly the same meaning as a term already in the business glossary. They are not needed for terminology.

Thus, we will concentrate on these three.

### 4.3.2 Mapping terminology

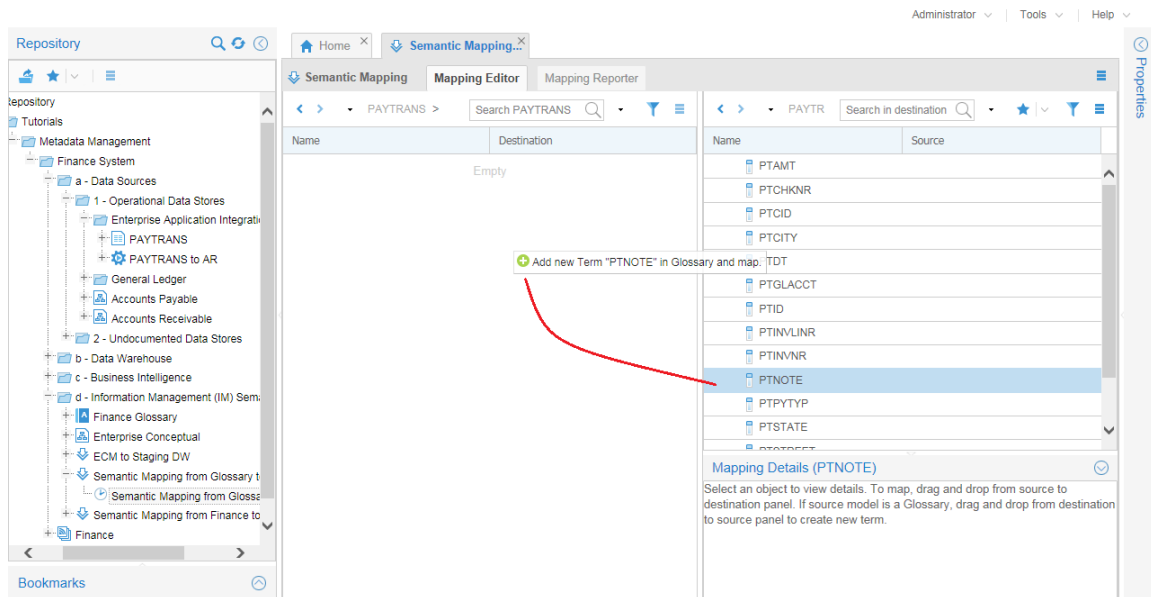
We now have a much cleaner collection of terms, without a large number of redundancies. We now have three additional potential terms which are not redundant:

- PTNOTE
- PTDT
- PTPYTYP

For **PTNOTE**, it is truly a descriptive text field. However, the information is used in two different places, including the descriptive field that the existing Payment Description term is derived from. It is really a matter of choice how to correctly handle this example. On the one hand, **PTNOTE** is a distinct element that has unique meaning. However, that unique meaning is derived from the fact that the information is also used to create a **Partial Payment Reason** in the **Payment Assignment** table in **Accounts Receivable**. Looking at the actual ETL, or looking at the lineage report in the configuration, each show that there is no transformation to **PTNOTE** as it is moved to **Partial Payment Reason**. Thus, it contains information about the reason but merely as descriptive text.

Let's err on the side of completeness, and add a term for the **PTNOTE** but give it a name specify was it represents.

So, to create the term using the mapper, expand the source (Finance Glossary) side to the PAYTRANS category, and drag the PTNOTE field from right-to-left (reverse) into the source side:



Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**New Term** [Close]

Create new term in Glossary

Name:

Definition:

**Create** **Cancel**

Figure 82 - Creating a term with a mapping

Now, let's edit it like so:

**New Term** [Close]

Create new term in Glossary

Name:

Definition:

**Create** **Cancel**

And the term is created in the glossary with a mapping to PAYTRANS.

Semantic Mapping | **Mapping Editor** | Mapping Reporter

< > Development > Categories > PAYTRANS > Terms >

Name	Destination
Payment Description with Reason	Columns - Attri

**Show in Glossary**

**Show in Glossary**  
Show Object in Glossary Editor.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Payment Description with Reason	
Name	Payment Description with Reason
Definition	Descriptive text for a payment containing addition information describing any partial payment reason
Steward	
Type	Business
Abbreviation	
Alternative Abbreviation	
Data Type	

Figure 83 - Term in glossary

Let's edit, but this cannot be done here (not in the Metadata Manager UI). Also, to work with the mapping in the Metadata Explorer UI, we should add it to the configuration. So, close the mapping to ensure the changes are saved. Drag it into the Finance configuration and build the configuration.

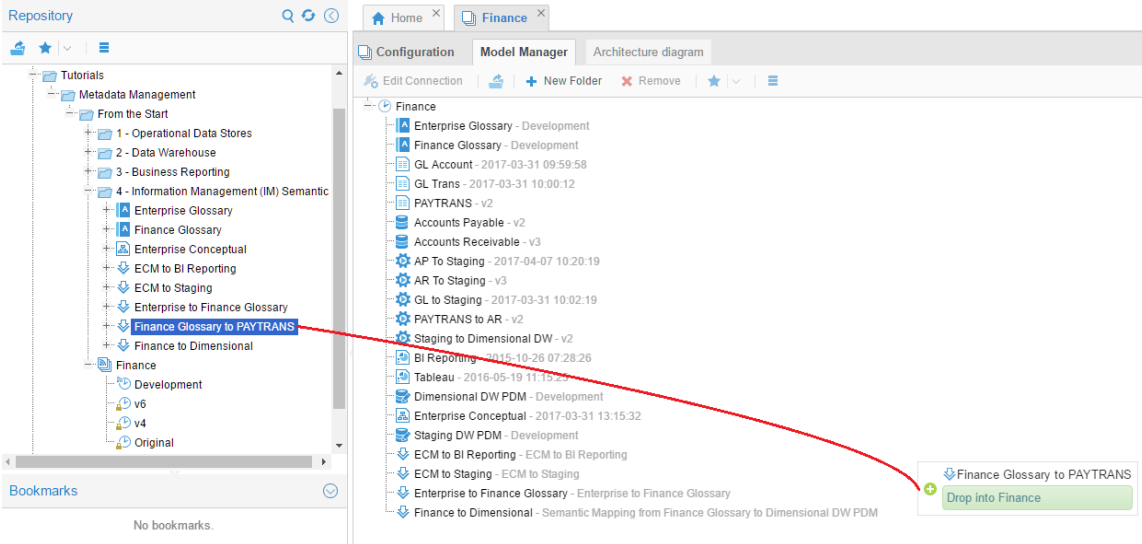


Figure 84 - Drag the mapping into the configuration and build

Then, returning to the Glossary, use the option Open in Metadata Explorer.

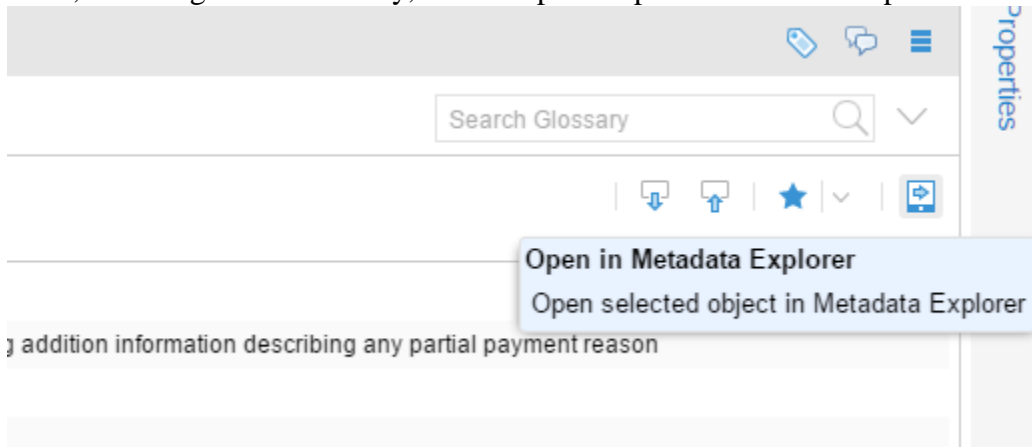


Figure 85 - Open in Metadata Explorer

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

And we can edit the term like so:

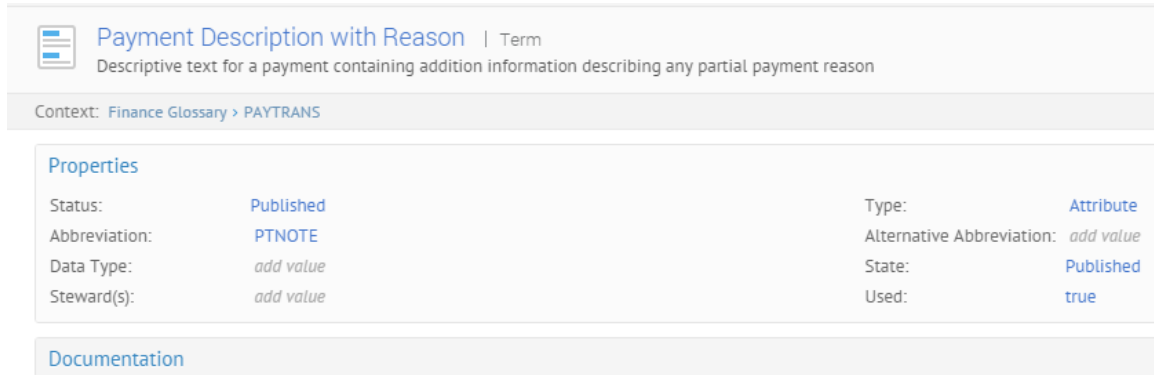


Figure 86 - New name and description for PTNOTE term

In addition, we must associate this term with the others that are similar, specifically **Customer Payment Description**. As this new term can refer to this term, it should be a More Specific example of this other term.

To define those relationships, expand the **Relationship** sub panel for the term, click on the plus sign and select More General

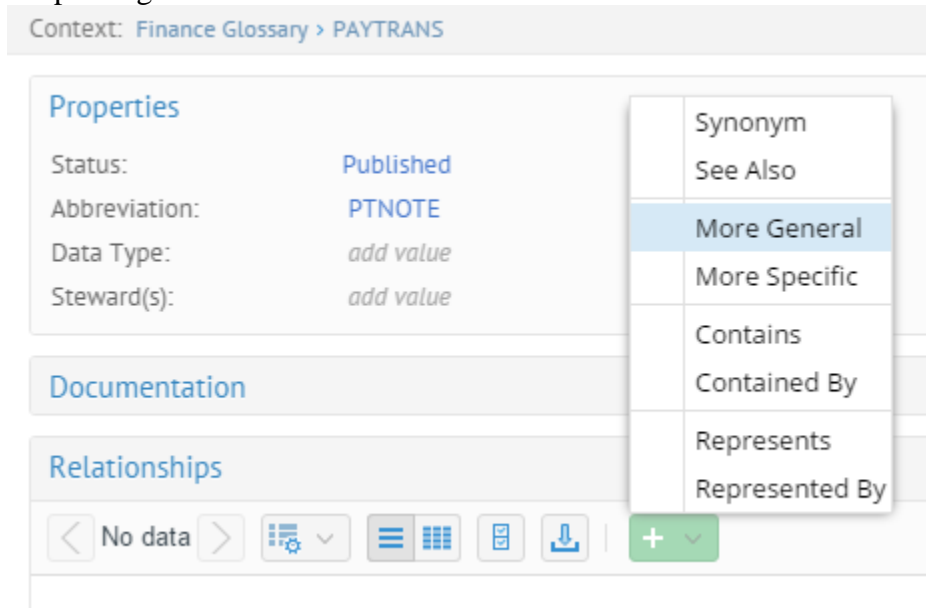


Figure 87 - Specify more general link

and select the term:

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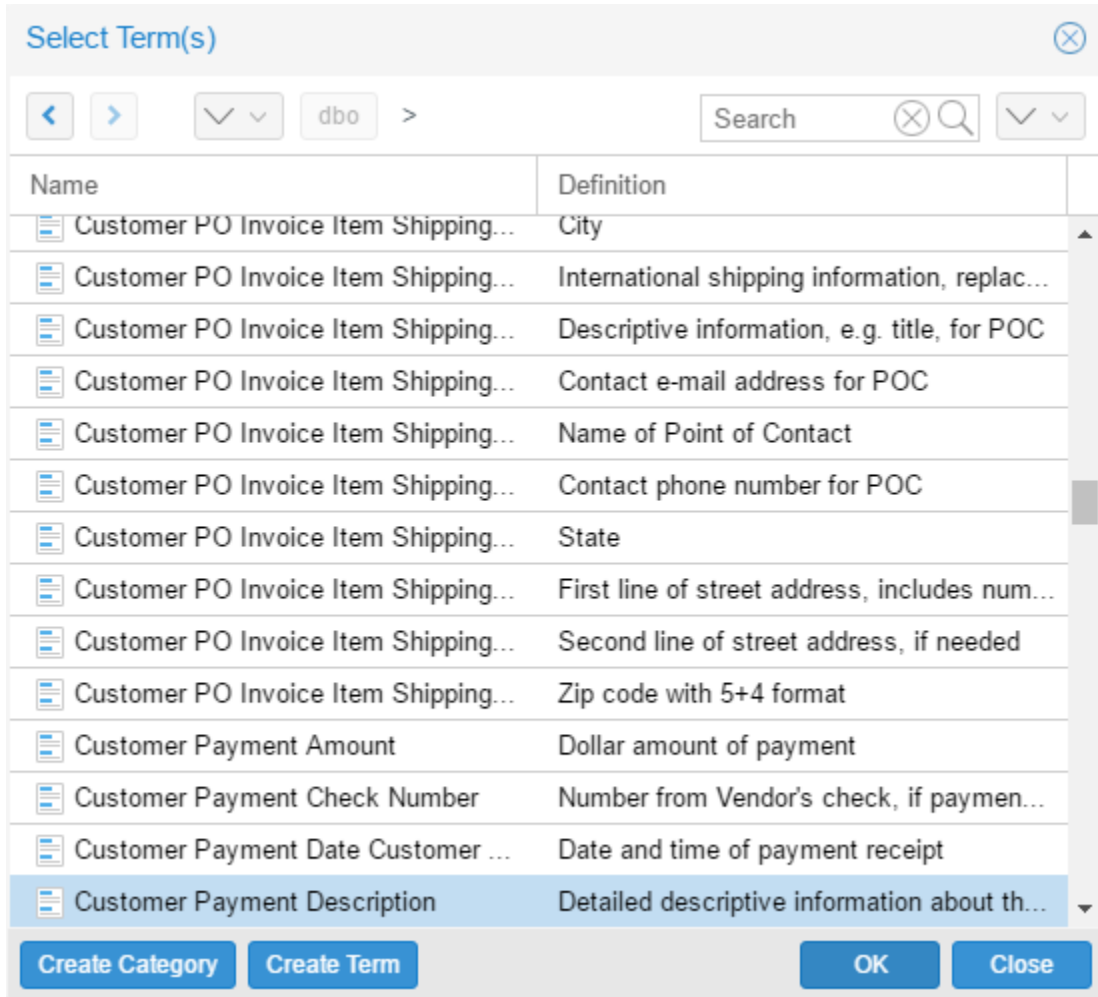


Figure 88 - Associating more general terms with new term

Select **Customer Payment Description**, select and click the **OK** button.

Note the new relationship:

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**Payment Description with Reason** | Term  
Descriptive text for a payment containing addition information describing any

Context: [Finance Glossary](#) > [PAYTRANS](#)

**Properties**

Status:	<b>Published</b>
Abbreviation:	<b>PTNOTE</b>
Data Type:	<i>add value</i>
Steward(s):	<i>add value</i>

**Documentation**

**Relationships**

1 - 1 of 1

More General **Customer Payment Description** from [Finance Glossary](#) > [dbo](#)  
Detailed descriptive information about the payment

Figure 89 - New relationships for the term

There is one more generalization to consider, i.e. the **Partial Payment Reason**. However, no such term exists at this point so, we should add it.

Navigate to [Finance Glossary](#) → [dbo](#). Then click on the plus sign to add a term.

**New Term**

Name:

Description:

Create another **OK** **Cancel**

Figure 90 - Partial Payment Reason

Now, click on the plus sign to add Relationships and specify More Specific:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

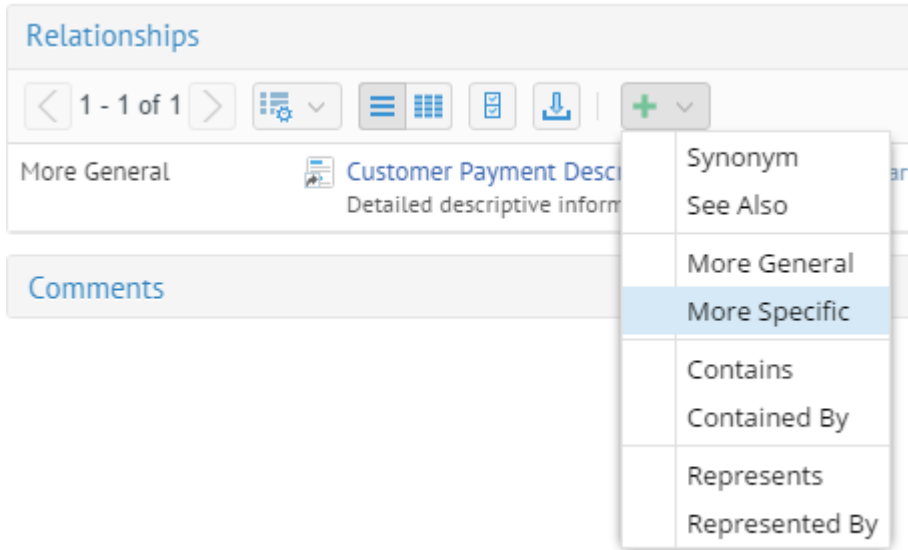


Figure 91 - More specific relationship

Then select Payment Description with Reason and click the **OK** button.

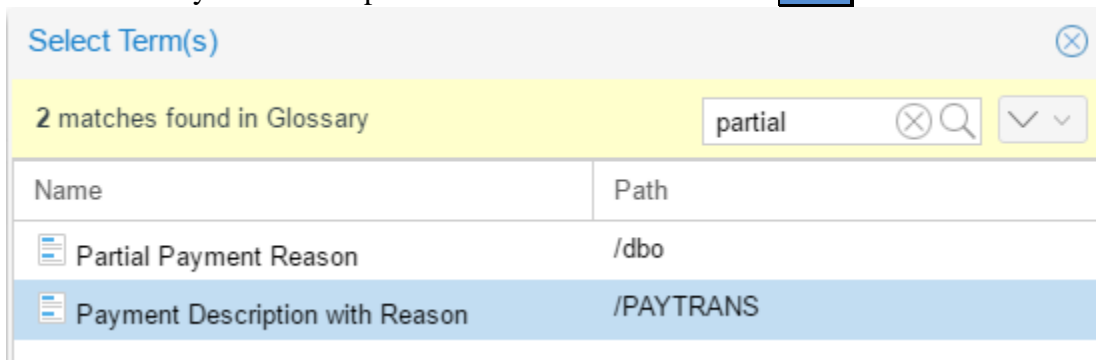


Figure 92 - Defining relationship

Click on the original term (now linked as Payment Description with Reason).

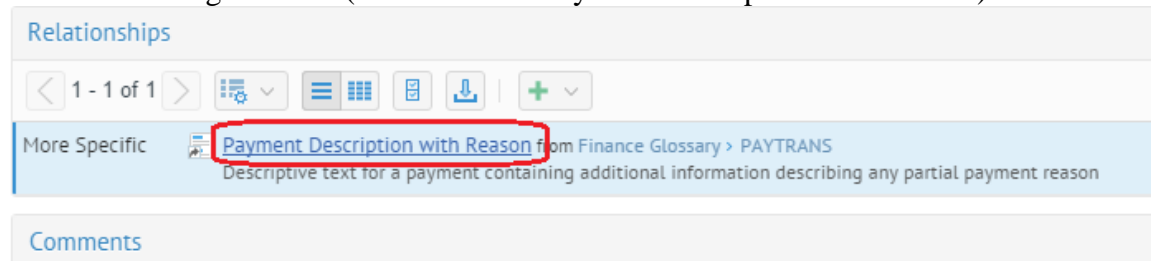


Figure 93 - Click on link

Note the two relationships:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Payment Description with Reason** | Term  
Descriptive text for a payment containing additional information describing any partial payment reason

Context: [Finance Glossary > PAYTRANS](#)

**Properties**

Status:	Published
Abbreviation:	PTNOTE
Data Type:	add value
Steward(s):	add value

**Documentation**

**Relationships**

1 - 2 of 2

More General [Customer Payment Description from Finance Glossary > dbo](#)  
Detailed descriptive information about the payment

More General [Partial Payment Reason from Finance Glossary > dbo](#)  
Reason provided for why a partial payment was made.

**Comments**

Figure 94 - Both generalizations

This way, when one is requesting a usage lineage trace from either of those other terms, this term and its related field in **PAYTRANS** will also be reported.

Now, a similar association might be made with **PTDT**. In this case, the date format of **PTDT** is simply different. In other words, the meaning of **PTDT** term is the same as **Payment Date** term. Thus, instead of creating a relationship, we will simply treat the **PTDT** term as redundant with **Payment Date** and not create it in the business glossary.

In addition, there is no need to semantically map this field to the any **Payment Date** term as the data flow means that the semantic definition lookup is already available:

HOME BROWSE SEARCH

**PTDT** | Column - Attribute

Context: [PAYTRANS > PAYTRANS > PAYTRANS](#)

**Properties**

Data Type:	SQL_VARCHAR	Length:	0
Scale:	0	Nullable:	
Position:	3		

**Glossary**

**Comments**

**Semantic Definition for PTDT**

Definition: Date and time of payment receipt

Term: Customer Payment Date Customer Payment Date of dbo in Finance Glossary

Show More

Figure 95 - Semantic definition lookup for PTDT

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Finally, we have **PTPYTYP**. In this case, it contains a code set which decodes to **Payment Type** and **Payment Status**. Thus, just like **PTNOTE**, **PTPYTYP** should be represented as a more specific example of both **Payment Type** and **Payment Status**. Please update the business glossary accordingly:

The screenshot shows the Mapping Editor interface. On the left, a semantic mapping is defined with the name "Payment Description with Reason" and destination "Columns - Attributes.PTNOTE". On the right, a list of source terms is displayed under the heading "PAYTRANS > Columns - Attributes >". The terms listed are PTAMT, PTCHKNR, PTCID, PTCITY, PTDT, PTGLACCT, PTID, PTINVLINR, PTINVNR, PTNOTE (mapped to "Payment Description with Reason"), PTPYTYP (highlighted), PTSTATE, PTSTREET, PTSTREET2, and PTZIP. A red arrow points from a tooltip that says "Add new Term 'PTPYTYP' in Glossary and map." to the PTPYTYP entry in the list.

The "New Term" dialog box is shown. It has a title bar with a close button. The main content area contains the text "Create new term in Glossary". Below this, there are two input fields: "Name:" with the value "PTPYTYP" and "Definition:" with the text "Combination of Payment Status and Type information provided as a feed from the PAYTRANS Payment Transaction System". At the bottom of the dialog are two buttons: "Create" and "Cancel".

This screenshot shows the Mapping Editor interface with the PTPYTYP term highlighted in the list. A context menu is open over the highlighted row, containing three options: "Show in Glossary", "Show in Glossary", and "Show Object in Glossary Editor." The first two options are identical and appear to be the same menu item.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

The screenshot displays the Metadata Explorer interface for the term 'PTPYTYP'. The top navigation bar shows the breadcrumb 'Finance Glossary > PAYTRANS > PTPYTYP' and a search box. The main content area shows the term details:

Name	PTPYTYP
Definition	Combination of Payment Status and Type information provided as a feed from the PAYTRANS Payment Transaction System
Steward	
Type	Business
Abbreviation	

A tooltip 'Open in Metadata Explorer' is visible over the 'PTPYTYP' name, with the text 'Open selected object in Metadata Explorer' below it.

The bottom part of the screenshot shows the 'META INTEGRATION Metadata Explorer' browser window. The URL is 'localhost:19980/MM/Explorer#view=details&configId=-1\_1560&objectId=1475\_217'. The interface includes a navigation menu (HOME, BROWSE, SEARCH), a search bar, and a list of tabs for 'Properties', 'Documentation', 'Relationships', 'Glossary', and 'Comments'. The 'Properties' tab is active, showing a table of metadata:













Status:	Published	Type:	Business
Abbreviation:	add value	Alternative Abbreviation:	add value
Data Type:	add value	State:	Published
Steward(s):	add value	Used:	false

A context menu is open over the 'Properties' section, listing options: Synonym, See Also, More General (highlighted), More Specific, Contains, Contained By, Represents, and Represented By. Below the table, there are sections for 'Documentation', 'Relationships' (showing 'No data'), 'Glossary', and 'Comments' (all showing 'Empty').

Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Select Term(s) ⓧ

36 matches found in /Finance Glossary/dbo/  ⓧ 🔍 ⌵ ⌵

Name ↓	Path
 Customer Payment POC Description	/dbo
 Customer Payment POC EMail	/dbo
 Customer Payment POC Phone	/dbo
 Customer Payment State	/dbo
 Customer Payment Status	/dbo
 Customer Payment Street Address 1	/dbo
 Customer Payment Street Address2	/dbo
 Customer Payment Type	/dbo
 Customer Payment Zip	/dbo
 Date Paid	/dbo
 Description	/dbo
 Partial Payment Reason	/dbo

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**PTPYTYP** | Term  
Combination of Payment Status and Type information provided as a feed fr

Context: [Finance Glossary](#) > [PAYTRANS](#)

### Properties

Status:	<b>Published</b>
Abbreviation:	<i>add value</i>
Data Type:	<i>add value</i>
Steward(s):	<i>add value</i>

### Documentation

### Relationships

1 - 2 of 2

More General **Customer Payment Status** from [Finance Glossary > dbo](#)  
Status of payment

More General **Customer Payment Type** from [Finance Glossary > dbo](#)  
Type of payment

Figure 96 - PTPYTYP as a more specific term to Payment Status and Payment Type

Turns out, the erwin model we used to harvest the [Dimensional DW](#) and ultimately was used to populate the glossary does not have a business rule for [Customer Payment Status](#), and thus there are no code set definitions for it in the [Finance](#) business glossary. Thus, we must look elsewhere for this information.

In particular, one could look at the ETL specification [PAYTRANS to AR](#), as that is where the transformation would be defined. Opening the model and then the target connection (stitched to [Accounts Receivable](#) which has [Payment Status](#) and [Payment Type](#)) we see:

## Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

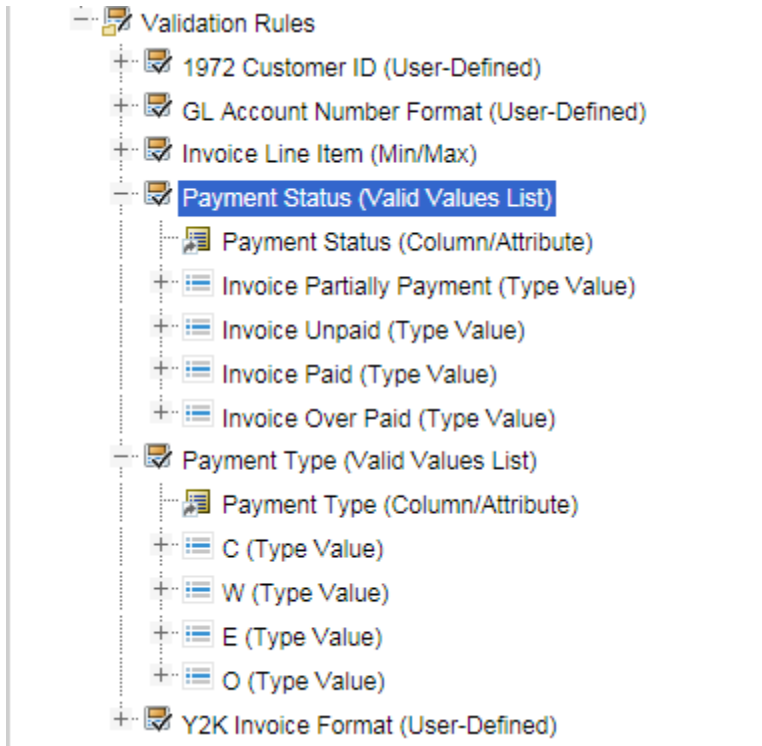


Figure 97 - PaymentStatus and PaymentType code sets defined in the PAYTRANS to AR ETL

Here is a table of the values for copy and paste and reference:

PTPYTYP	10	Payment	Payment of an invoice in full
	20	Partial Payment	Partial payment of an invoice
	21	First Partial Payment	First partial payment of an invoice
	22	Final Partial Payment	Final partial payment which should complete payment on an invoice
	23	Partial Over Payment	Partial over payment which should complete payment on an invoice and includes more than the amount currently defined
	30	Over Payment	Payment of more than the amount currently defined for an invoice
	40	Other Payment	Payment not associated with an invoice
	41	PO Payment	Payment for a purchase order that does not have an invoice associated with it
	PaymentType	C	Payment by Check
E		Payment by EFT	EFT

Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

	O	Other Payment	Other
	W	Payment by Wire Transfer	Wire Transfer
PaymentStatus	Over Paid	Invoice Over Paid	Excessive payments made on invoice
	Paid	Invoice Paid	Payment made in full to the invoice
	Partial Payment	Invoice Partially Paid	Partial payment of an invoice
	Unpaid	Invoice Unpaid	No payments made to the invoice

Figure 98 - Table of code sets

Let's add these to the Finance business glossary. Create a Business Rules category in the business glossary, select Add Term and complete as follows:

**Payment Status** | Term  
Status of a payment

Context: Finance Glossary > Business Rules

**Properties**

Status:	Published	Type:	Domain
Abbreviation:	add value	Alternative Abbreviation:	add value
Data Type:	char	State:	Published
Steward(s):	add value	Used:	false

Figure 99 - Payment Status Conceptual Domain

Then, create a category named Payment Status Values and enter the four payment statuses as terms in that category:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Payment Status Values | Category

Context: Finance Glossary > Business Rules

**Properties**  
Steward(s): *add value*

**Categories**

**Terms**

< 1 - 4 of 4 > [Filter] [List View] [Mobile View] [Download] [Add]

- Over Paid**  
Invoice Over Paid
- Paid**  
Invoice Paid
- Partial Payment**  
Invoice Partially Paid
- Unpaid**  
Invoice Unpaid

Figure 100 - Terms for Possible Values

Then, select all the codes and define them with a Type of Possible Value.




# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)







Payment Status Values | Category

Context: Finance Glossary > Business Rules

Properties  
Steward(s): add value


Categories

Terms 4 selected   

1 - 4 of 4      

- Over Paid**  
Invoice Over Paid
- Paid**  
Invoice Paid
- Partial Payment**  
Invoice Partially Paid
- Unpaid**  
Invoice Unpaid

**Edit**

**Edit Object(s) properties** 

	Name	Action	Value
<input type="checkbox"/>	Abbreviation		
<input type="checkbox"/>	Alternative Abbreviation		
<input checked="" type="checkbox"/>	<b>Data Type</b>	Update	char
<input type="checkbox"/>	Definition		
<input checked="" type="checkbox"/>	<b>Type</b>	Update	Possible Value
<input type="checkbox"/>	Labels		

Optional comment describing the change:

**OK** **Cancel**

Figure 101 - Multi-select and edit

Edit the Documentation section of each term entering the descriptive text in the table.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Over Paid | Term  
Invoice Over Paid

Context: Finance Glossary > Business Rules > Payment Status Values

Labels: +

**Properties**

Status:	Published	Type:	Possible Value
Abbreviation:	add value	Alternative Abbreviation:	add value
Data Type:	add value	State:	Published
Steward(s):	add value	Used:	false

**Documentation**

Excessive payments made on invoice

Associate the new code set terms with the business rule term: open **Payment Status** and click on the plus sign next to **Contains** and select the four terms:

Select Term(s)

Payment Status Values

Search

Name	Definition
Over Paid	Invoice Over Paid
Paid	Invoice Paid
Partial Payment	Invoice Partially Paid
Unpaid	Invoice Unpaid

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Payment Status** | Term  
Status of a payment

Context: [Finance Glossary](#) > [Business Rules](#)

**Properties**

Status:	Published	Type:	Domain
Abbreviation:	add value	Alternative Abbreviation:	add value
Data Type:	char	State:	Published
Steward(s):	add value	Used:	false

**Documentation**

**Relationships**

1 - 4 of 4

- Contains [Over Paid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Over Paid
- Contains [Paid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Paid
- Contains [Partial Payment](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Partially Paid
- Contains [Unpaid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Unpaid

Figure 102 - Edit Payment Status

Finally, link this back to the Customer Payment Type term as Represents:

**Payment Status** | Term  
Status of a payment

Context: [Finance Glossary](#) > [Business Rules](#)

**Properties**

Status:	Published
Abbreviation:	add value
Data Type:	char
Steward(s):	add value

**Documentation**

**Relationships**

1 - 4 of 4

- Synonym
- See Also
- More General
- More Specific
- Contains
- Contained By
- Represents**
- Represented By

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

## Payment Status

| Term  
Status of a payment

---

Context: [Finance Glossary](#) > [Business Rules](#)

---

### Properties

Status:	Published	Type:
Abbreviation:	add value	Alternative Abbrev:
Data Type:	char	State:
Steward(s):	add value	Used:

---

### Documentation

---

### Relationships

< 1 - 5 of 5 >

Represents [Customer Payment Type](#) from [Finance Glossary](#) > [dbo](#)  
 Type of payment

Contains [Over Paid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
 Invoice Over Paid

Figure 103 - Represents link

Now do the same for Payment Type:

PaymentType	C	Check	Payment by Check
	E	EFT	Payment by EFT
	O	Other	Other Payment
	W	Wire Transfer	Payment by Wire Transfer

### New Term

✕

Name:

Description:

Create another

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

### New Category ✕

Name:

Description:

Create another OK Cancel

## Payment Type Values | Category

Context: Finance Glossary > Business Rules

**Properties**  
Steward(s): *add value*

**Categories**

**Terms** 4 selected → ✎ ✕

< 1 - 4 of 4 > ⚙️ ☰ 📄 📥 +

<input checked="" type="checkbox"/>	C	Payment by Check
<input checked="" type="checkbox"/>	E	Payment by EFT
<input checked="" type="checkbox"/>	O	Other Payment
<input checked="" type="checkbox"/>	W	Payment by Wire Transfer

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

### Edit Object(s) properties

	Name	Action	Value
<input type="checkbox"/>	Abbreviation		
<input type="checkbox"/>	Alternative Abbreviation		
<input checked="" type="checkbox"/>	Data Type	Update	char
<input type="checkbox"/>	Definition		
<input checked="" type="checkbox"/>	Type	Update	Possible Value
<input type="checkbox"/>	Labels		

Optional comment describing the change:

C | Term  
Payment by Check

Context: Finance Glossary > Business Rules > Payment Type Values Labels: +

#### Properties

Status:	Published	Type:	Possible Value
Abbreviation:	<i>add value</i>	Alternative Abbreviation:	<i>add value</i>
Data Type:	char	State:	Published
Steward(s):	<i>add value</i>	Used:	false

#### Documentation

Payment by Check

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Payment Type** | Term  
Type of payment made against an invoice

Context: [Finance Glossary](#) > [Business Rules](#)

**Properties**

Status: **Published**

Abbreviation: *add value*

Data Type: *add value*

Steward(s): *add value*

**Documentation**

**Relationships**

No data

- Synonym
- See Also
- More General
- More Specific
- Contains**
- Contained By
- Represents
- Represented By


**Select Term(s)**

Payment Status Values

Search

Name	Definition
Over Paid	Invoice Over Paid
Paid	Invoice Paid
Partial Payment	Invoice Partially Paid
Unpaid	Invoice Unpaid

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

 **Payment Type** | Term  
Type of payment made against an invoice






Context: [Finance Glossary](#) > [Business Rules](#)

### Properties

Status:	<b>Published</b>
Abbreviation:	<i>add value</i>
Data Type:	<i>add value</i>
Steward(s):	<i>add value</i>

### Documentation

### Relationships

< 1 - 4 of 4 >     

- Synonym
- See Also
- More General
- More Specific
- Contains
- Contained By
- Represents**
- Represented By

Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Select Term(s)

89 matches found in Glossary

Customer Pay

Name ↓	Path
Customer Payment Status	/dbo
Customer Payment Street Address 1	/dbo
Customer Payment Street Address2	/dbo
Customer Payment Type	/dbo
Customer Payment Zip	/dbo
Date Paid	/dbo
Description	/dbo
E	/Business Rules/Payment Typ...
O	/Business Rules/Payment Typ...
PAYTRANS	/PAYTRANS
PTPYTYP	/PAYTRANS
Paid	/Business Rules/Payment Sta...

Create Category Create Term OK Close

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**Payment Type** | Term  
Type of payment made against an invoice

Context: [Finance Glossary](#) > [Business Rules](#)

**Properties**

Status:	Published	Type:	Business
Abbreviation:	<i>add value</i>	Alternative Abbreviation:	<i>add value</i>
Data Type:	<i>add value</i>	State:	Published
Steward(s):	<i>add value</i>	Used:	false

**Documentation**

**Relationships**

1 - 5 of 5

- Represents [Customer Payment Type](#) from [Finance Glossary](#) > [dbo](#)  
Type of payment
- Contains [Over Paid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Over Paid
- Contains [Paid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Paid
- Contains [Partial Payment](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)  
Invoice Partially Paid
- Contains [Unpaid](#) from [Finance Glossary](#) > [Business Rules](#) > [Payment Status Values](#)

Figure 104 - *Payment Type, possible values, generalizations and links*

and PTPYTYP:

PTPYTYP	10	Payment	Payment of an invoice in full
	20	Partial Payment	Partial payment of an invoice
	21	First Partial Payment	First partial payment of an invoice
	22	Final Partial Payment	Final partial payment which should complete payment on an invoice
	23	Partial Over Payment	Partial over payment which should complete payment on an invoice and includes more than the amount currently defined
	30	Over Payment	Payment of more than the amount currently defined for an invoice
	40	Other Payment	Payment not associated with an invoice

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)


	41	PO Payment	Payment for a purchase order that does not have an invoice associated with it
--	----	------------	---

**New Term** ✕

Name:

Description:

Create another
 OK
Cancel

 **PTPYTYP** | Term  
Business rule associated with PTPYTYP

Context: Finance Glossary > Business Rules

---

**Properties**

Status: <span style="color: blue;">Published</span>	Type: <span style="color: blue;">Domain</span>
Abbreviation: <span style="color: blue;">add value</span>	Alternative Abbreviation: <span style="color: blue;">add value</span>
Data Type: <span style="color: blue;">char</span>	State: <span style="color: blue;">Published</span>
Steward(s): <span style="color: blue;">add value</span>	Used: <span style="color: blue;">false</span>

**New Category** ✕

Name:

Description:

Create another
 OK
Cancel

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

**New Term** ✕

Name:

Description:

Create another OK Cancel

Terms 8 selected ✎ ✕  🔍 Filter

1 - 8 of 8

10	Payment
20	Partial Payment
21	First Partial Payment
22	Final Partial Payment
23	Partial Over Payment
30	Over Payment
40	Other Payment
41	PO Payment

**Edit Object(s) properties** ✕

	Name	Action	Value
<input type="checkbox"/>	Abbreviation		
<input type="checkbox"/>	Alternative Abbreviation		
<input checked="" type="checkbox"/>	Data Type	Update	char
<input type="checkbox"/>	Definition		
<input checked="" type="checkbox"/>	Type	Update	Possible Value <span>▼</span>
<input type="checkbox"/>	Labels		

Optional comment describing the change:

OK Cancel

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

10 | Term  
Payment

Context: Finance Glossary > PAYTRANS > PTPYTYP Possible Values

Labels: +

**Properties**

Status:	Published	Type:	Possible Value
Abbreviation:	<i>add value</i>	Alternative Abbreviation:	<i>add value</i>
Data Type:	char	State:	Published
Steward(s):	<i>add value</i>	Used:	false

**Documentation**

Payment of an invoice in full

PTPYTYP | Term  
Business rule associated with PTPYTYP

Context: Finance Glossary > Business Rules

**Properties**

Status:	Published
Abbreviation:	<i>add value</i>
Data Type:	char
Steward(s):	<i>add value</i>

**Documentation**

**Relationships**

- Synonym
- See Also
- More General
- More Specific
- Contains**
- Contained By
- Represents
- Represented By

No data

Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Select Term(s) ✕

Search  Q ▼ ▼

Name ↓	Definition
10	Payment
20	Partial Payment
21	First Partial Payment
22	Final Partial Payment
23	Partial Over Payment
30	Over Payment
40	Other Payment
41	PO Payment
50	PO Payment

**PTPYTYP** | Term  
Business rule associated with PTPYTYP

Context: [Finance Glossary](#) > [Business Rules](#)

**Properties**

Status:	Published
Abbreviation:	<i>add value</i>
Data Type:	char
Steward(s):	<i>add value</i>

**Documentation**

**Relationships**

- Synonym
- See Also
- More General
- More Specific
- Contains
- Contained By
- Represents
- Represented By

1 - 9 of 9 ⚙️ ☰ ☱ 📄 📥 +

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

Select Term(s)
✕

< >

▼ ▼
PAYTRANS
>

🔍
▼ ▼

Name ↓	Definition
PTPYTYP	Combination of Payment Status and Type...
Payment Description with Reason	Descriptive text for a payment containing...

PTPYTYP | Term

Business rule associated with PTPYTYP

Context: Finance Glossary > Business Rules
Labels: +

**Properties** ↑

Status:	Published	Type:	Domain
Abbreviation:	<i>add value</i>	Alternative Abbreviation:	<i>add value</i>
Data Type:	char	State:	Published
Steward(s):	<i>add value</i>	Used:	false

**Documentation** 📝 ▼

**Relationships** Search Text 🔍 Filter ↑

< 1 - 10 of 10 >
🔍
📄
📄
📄
+

Contains	10 from Finance Glossary > Business Rules > PTPYTYP Possible Values Payment
Contains	20 from Finance Glossary > Business Rules > PTPYTYP Possible Values Partial Payment
Contains	21 from Finance Glossary > Business Rules > PTPYTYP Possible Values First Partial Payment
Contains	22 from Finance Glossary > Business Rules > PTPYTYP Possible Values Final Partial Payment
Contains	23 from Finance Glossary > Business Rules > PTPYTYP Possible Values Partial Over Payment
Contains	30 from Finance Glossary > Business Rules > PTPYTYP Possible Values Over Payment
Contains	40 from Finance Glossary > Business Rules > PTPYTYP Possible Values Other Payment
Contains	41 from Finance Glossary > Business Rules > PTPYTYP Possible Values PO Payment
Contains	50 from Finance Glossary > Business Rules > PTPYTYP Possible Values PO Payment
Represents	PTPYTYP from Finance Glossary > PAYTRANS Combination of Payment Status and Type information provided as a feed from the PAYTRANS Payment Transaction System

#### 4.4 More Editing Terminology in the Metadata Explorer UI

As business users, including subject matter experts and stewards, are often the source, if not the authority, concerning defining information for terminology in a business glossary. However, most of these users will use the Metadata Explorer UI exclusively. This is why Meta Integration® Metadata Management (MIMM) placing these editing functions of the business glossary terminology and categorization within the Metadata Explorer UI.

##### 4.4.1.1 Users, Permission and Configuration

We have been working as **Administrator**, which has permissions to everything. Instead, as a non-admin user (again **Bob**), one, of course, must have edit permissions on the glossary. The **Bob** does not have these permissions at this time, so let's assign them.

After all the changes from before, please go to the configuration and build.

We do not want all business analysts to have this permission, so we will create a new group **Glossary Editors** which will.

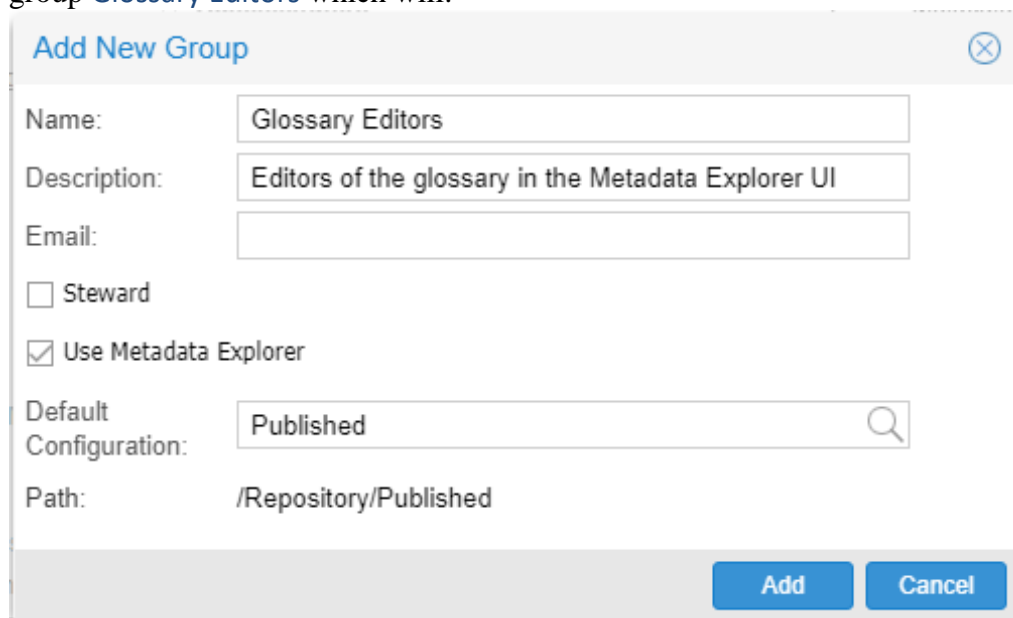


Figure 105 - Creating the Glossary Editors group

Now, assign the **Bob** user to the group **Glossary Editors**:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

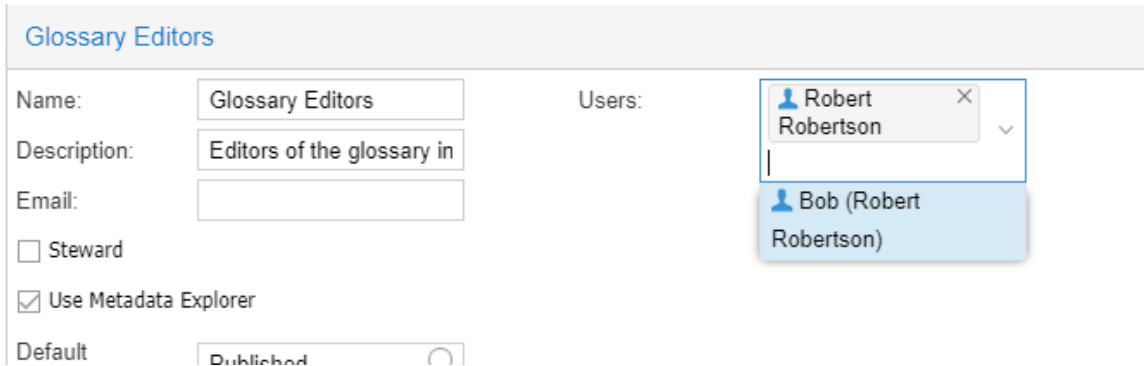


Figure 106 - Assign Bob to the Glossary Editors group

Then, right-click on the **Finance Glossary** and select **Settings**:

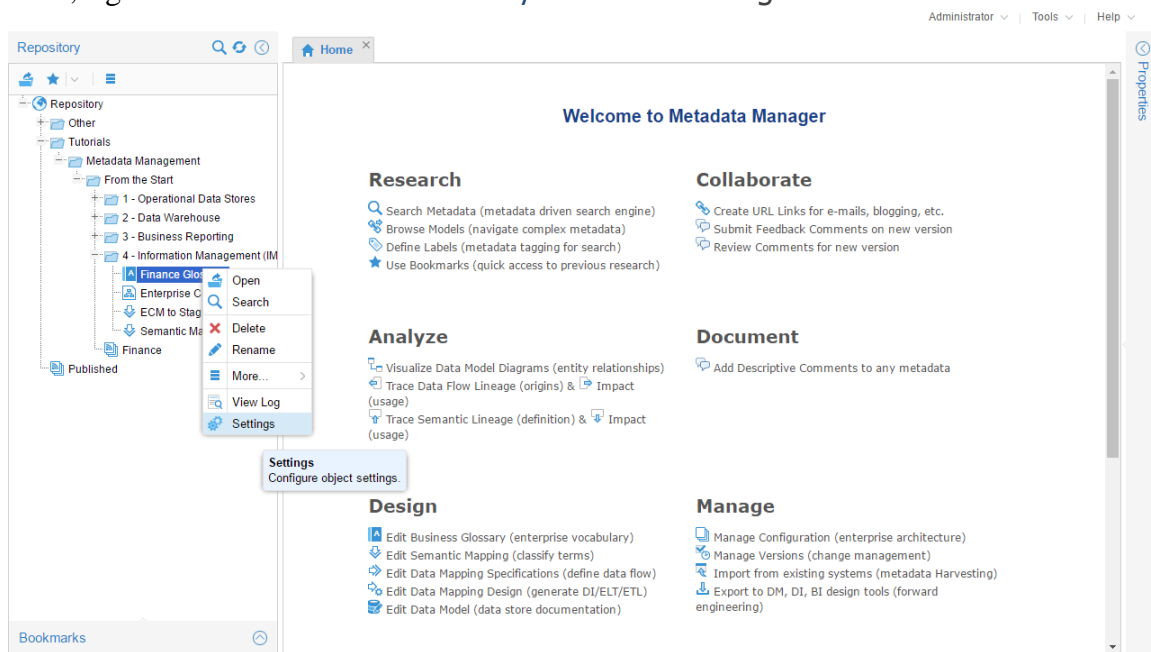


Figure 107 - Setting for Glossary

Select the **Security** tab and select **Glossary Editors** as an Editor for the glossary and click **Save**:

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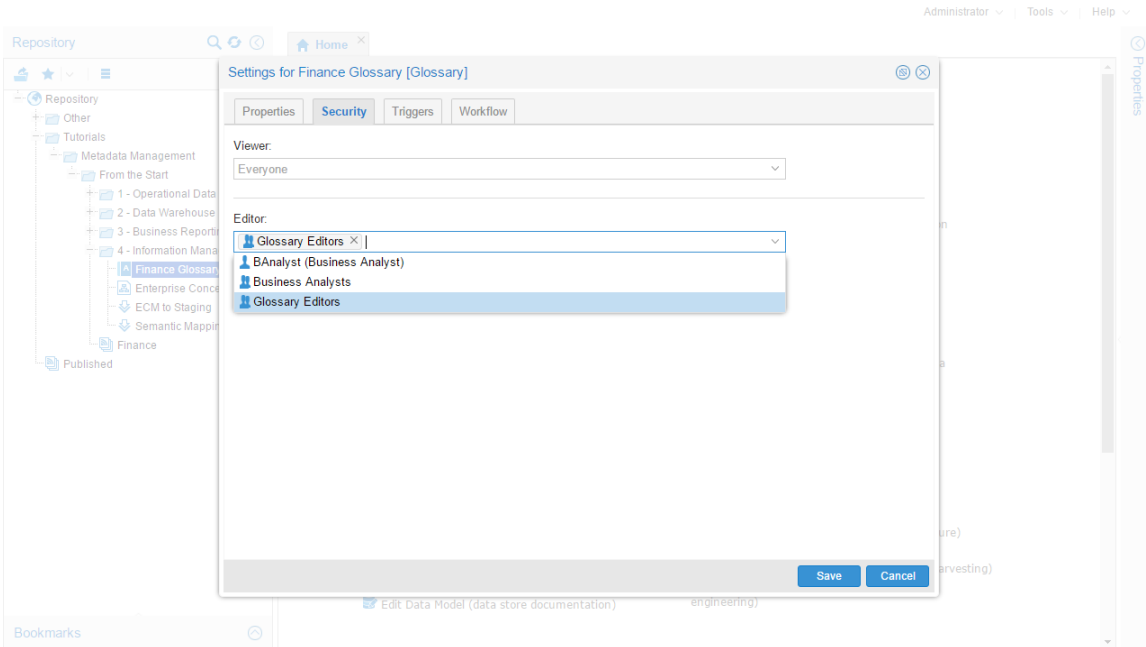


Figure 108 - Setting permissions on the glossary

Now, open the Metadata Explorer UI for the configuration and browse to the terms in the glossary:

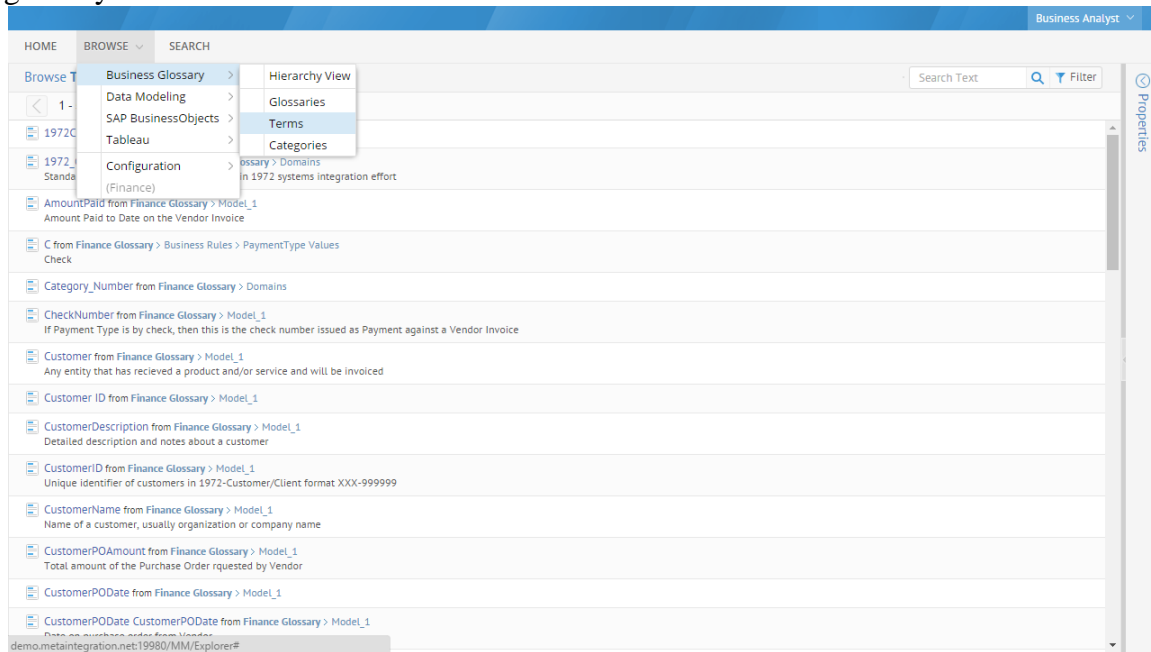


Figure 109 - Browse terms

So, a subject matter expert could quickly see what needs to be documented by specifying a filter such that it shows only those terms for which no Definition exists, like so:

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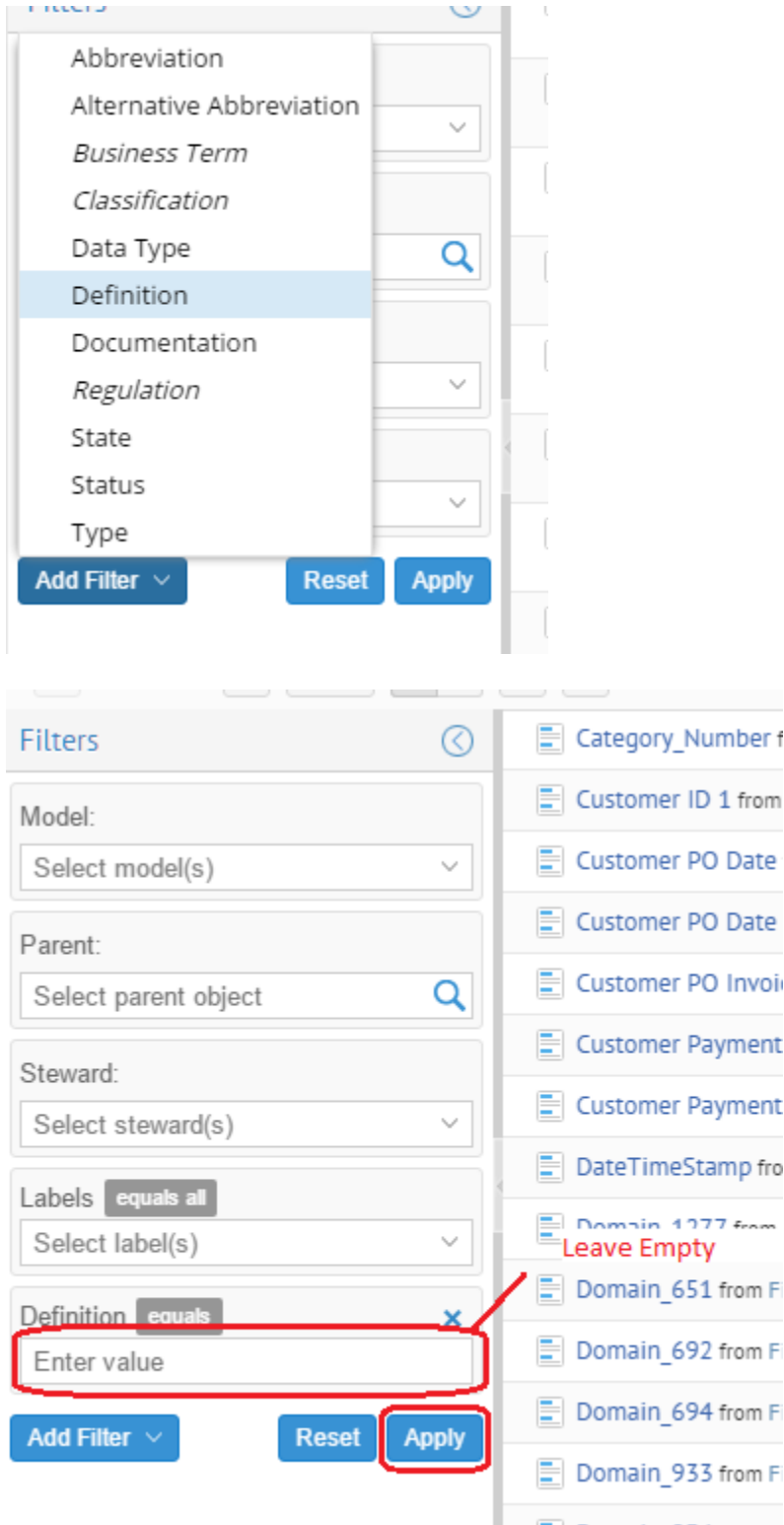


Figure 110 - Filter terms to those without Definition

Then, to edit a term, e.g., the first in the list is the `Category_Number`, simply click on it to open it and click on the space below the Name of the term where the Definition should be displayed:

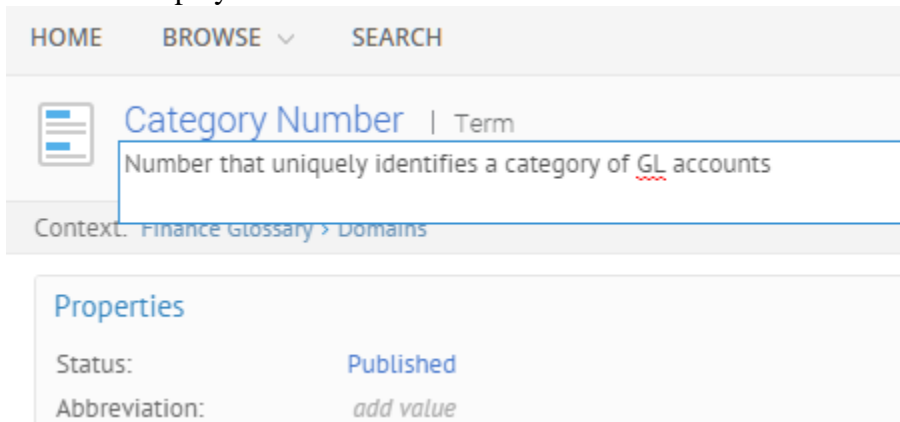


Figure 111 - Updating the definition of a term

Any other property works the same way, e.g., Data Type:

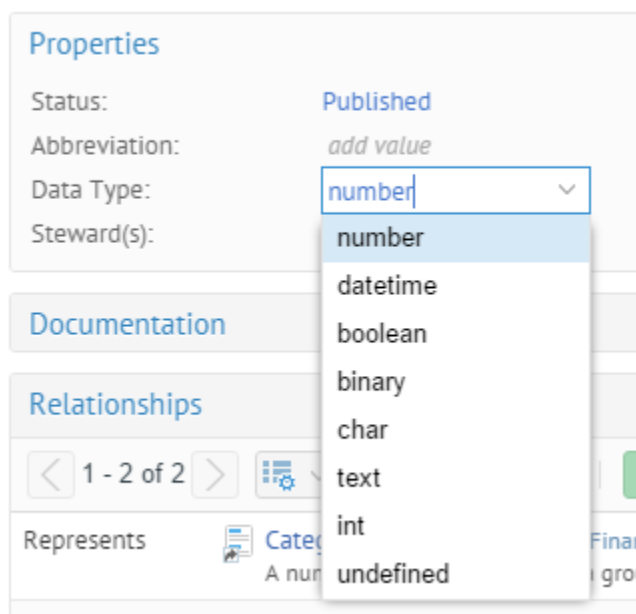


Figure 112 - Updating the Data Type for a term

Also, one may assign labels and comments as always:

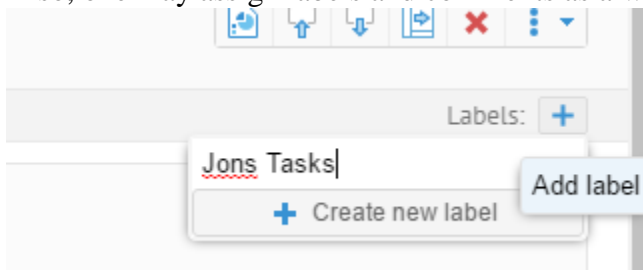


Figure 113 - Assigning labels to a term

#### 4.4.1.2 Bulk Editing

In fact, this idea of labeling a number of terms to be Jons Tasks sounds like a good idea. However, one would not want to do so by opening up each term. So, let's work in bulk.

Use the browser back button to return to the list of terms and note that your previous filter is still applied. Use the **Reset** button in the **Filters** panel then close the panel.

Now, in order to label a large number of terms, first make sure that they are all shown on the page by specifying the Items per page option to be large enough:

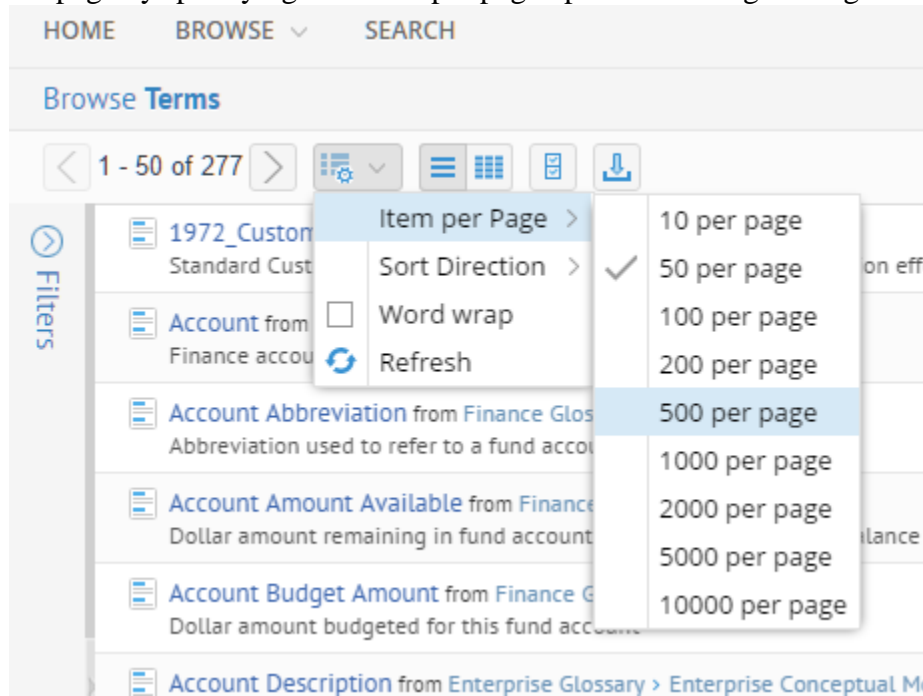



Figure 114 - Setting Items per page


Now, click on the **Account** row, then Shift-Click the **Account Status** row. Note, the number of rows selected appears in the upper right:



Figure 115 - Number of rows selected

An the  (Edit) and (Delete) icons appear next to it. This allows one to bulk edit the properties of the selected terms or delete them in bulk.

Let's add a few more terms to assign to Jon. Use the CTRL-Click or just the check-box on the far left of each row you want to also include. Always try to click outside of an area that is active (like the term name which will open the term).

Click on the  (Edit) icon, and check the box next to Labels, specify the bulk action Add, and pick **JonsTasks** as the label:

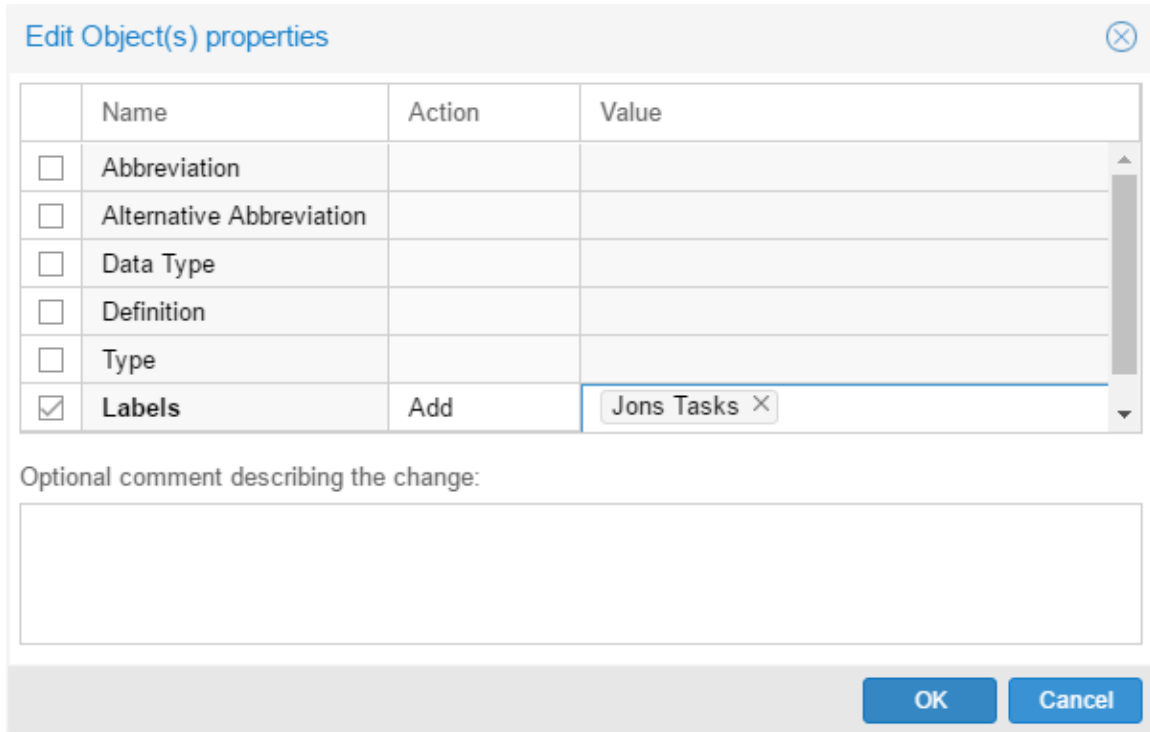



Figure 116 - Bulk assignment of a label

And click **OK**.

Now, if you filter by **JohnsTasks**, you will have his to do list.

#### 4.4.1.3 Grid View

Just as we did with browsing columns across models, one can use the grid view to view and even edit in a spreadsheet like manner.

Switch to the grid view (Click on the  icon) and note the current filter remains in effect. We may now edit all the properties of these terms quickly and efficiently. Some notes:

- To edit a cell, double-click on the cell.
- Not all cells will be editable. Those that are have a small gray tip at the lower right of the cell.
- If you use the tab key, it will move to the next cell to the right, unless that cell is not editable. Then you must press the tab key several times to “pass over” the fixed cells.
- If you use the up or down arrow key, you move a cell up or down that is the next editable cell. You do not need to pass over those in the arrow key case.

Of course, all the quick filtering and bulk editing defined earlier works for the business glossary grid view as well.

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Let's revisit the subject matter expert. Again, let's quickly see what needs to be documented by specify a filter such that it shows only those terms for which no Definition exists, like so:

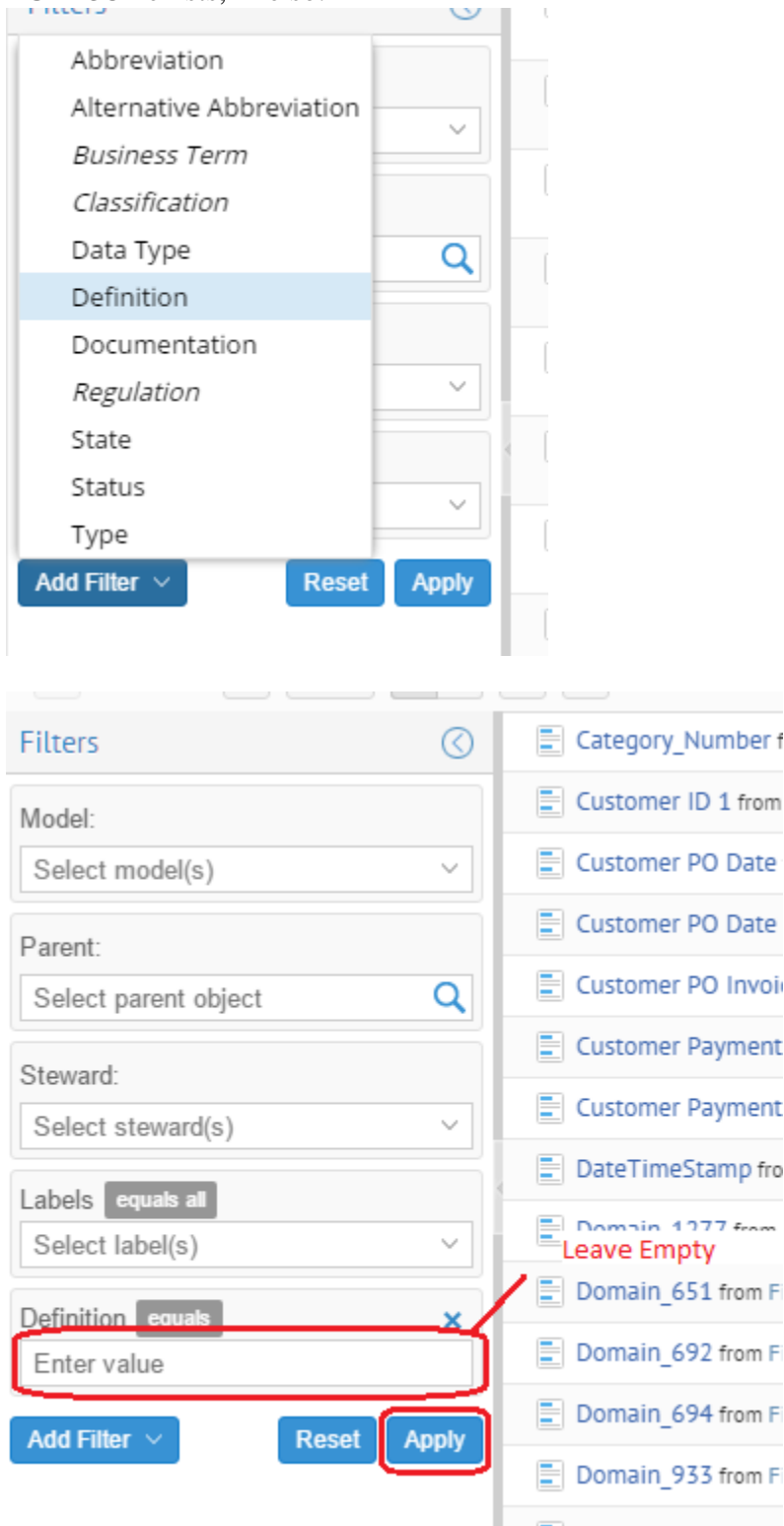


Figure 117 - Filter terms to those without Definition

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Then, to edit the definitions, let's move the column to the left (drag the column to where you want), then double click on the first description and edit. You may do as many as you want.

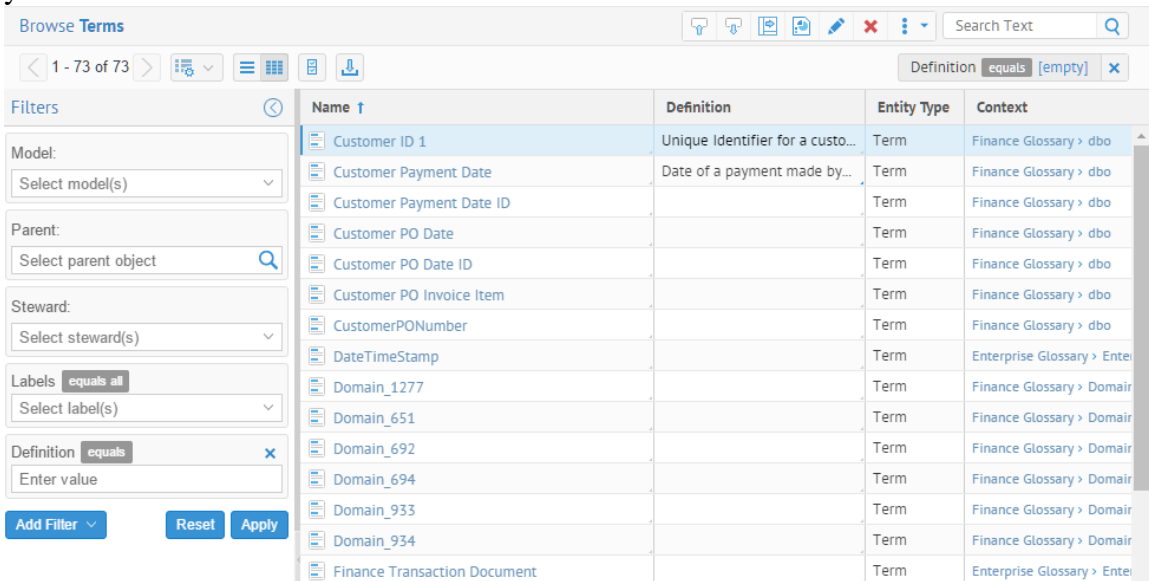


Figure 118 - Grid view editing

E.g., right-click on the cell in the with type Domain in the Type column:

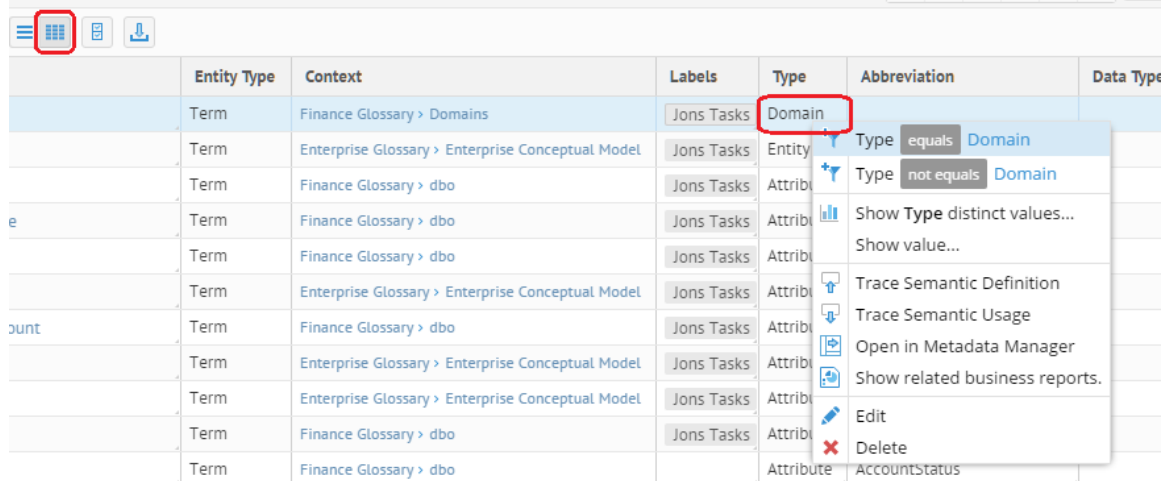


Figure 119 - Quick filter

And select the first menu item and you have only terms of type Domain:

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**Filters** ⏪

**Model:**  
Select model(s) ⌵

**Parent:**  
Select parent object 🔍

**Steward:**  
Select steward(s) ⌵

**Labels** equals all  
Select label(s) ⌵

**Definition** equals ✕  
Enter value

**Type** equals ✕  
Domain ⌵

Add Filter Reset Apply

Name ↑	Definition	Entity Type	Context	Labels	Type	Abbreviation
Domain_1277		Term	Finance Glossary > Domains		Domain	
Domain_651		Term	Finance Glossary > Domains		Domain	
Domain_692		Term	Finance Glossary > Domains		Domain	
Domain_694		Term	Finance Glossary > Domains		Domain	
Domain_933		Term	Finance Glossary > Domains		Domain	
Domain_934		Term	Finance Glossary > Domains		Domain	
GL_Account_Number		Term	Finance Glossary > Domains		Domain	
PaymentType		Term	Finance Glossary > Domains		Domain	
Program_Number		Term	Finance Glossary > Domains		Domain	
Unified_Dollar_Amount		Term	Finance Glossary > Domains		Domain	

Figure 120 - Quick filter result

## 4.5 Report Glossary and Report Documenter

Finally, as we saw earlier with the Enterprise Conceptual Model, it is possible to semantically map directly to report elements. We wish to do that again with the business glossary, this time to produce a report glossary of terms to be associated with elements in reports and the reports themselves. We will also take advantage of the report documenter capability in this exercise.

Create a new semantic mapping named **Finance Glossary to Tableau**

**Create Semantic Mapping**

Properties Security

Enter the name and a description for this Semantic Mapping:

Name: Finance Glossary to Tableau

Description:

Stewards: Select steward(s)

Figure 121 - New semantic mapping

that maps between the **Finance Glossary** and **Tableau** model:

Repository

- 1 - Operational Data Stores
- 2 - Data Warehouse
- 3 - Business Reporting
  - BI Reporting
  - Tableau
- 4 - Information Management (IM) Semantic
  - Enterprise Glossary
  - Finance Glossary
  - Enterprise Conceptual
  - ECM to BI Reporting
  - ECM to Staging
  - Enterprise to Finance Glossary
  - Finance Glossary Tableau

Mapping Editor

Drag and drop a source semantic model here. Finance Glossary Drop into this mapping.

Drag and drop the destination model here. Tableau Drop into this mapping.

Name	Destination
Categories	

Name	Source
Metadata Management...	

Figure 122 - Semantic Mapping from glossary to reporting

Now, again, we could populate this mapping in the mapper as we did before. However, this time we will populate it from the Metadata Explorer UI using the Report Documenter capability.

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So, close the semantic mapping, open the Finance configuration, add this new semantic mapping

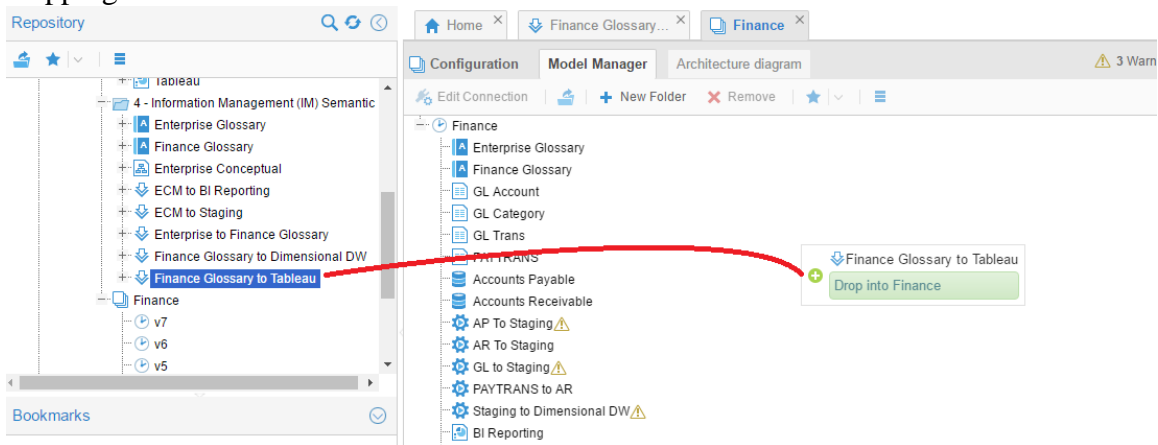


Figure 123 - Add semantic mapping to configuration

 **Build** and layout the Architecture Diagram nicely:

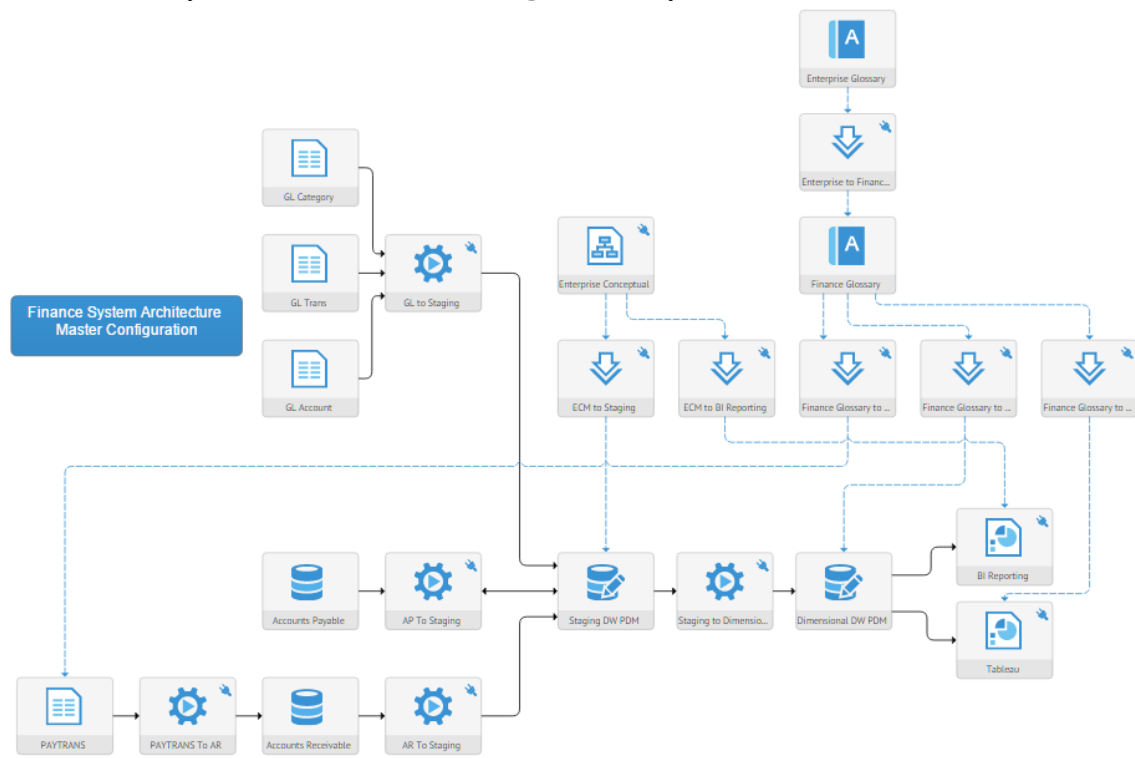


Figure 124 - Architecture Diagram

Now, sign in as **Bob in a new browser session** and navigate to the MM Tutorial report in BI Reporting (Browse → Tableau → Workbooks):

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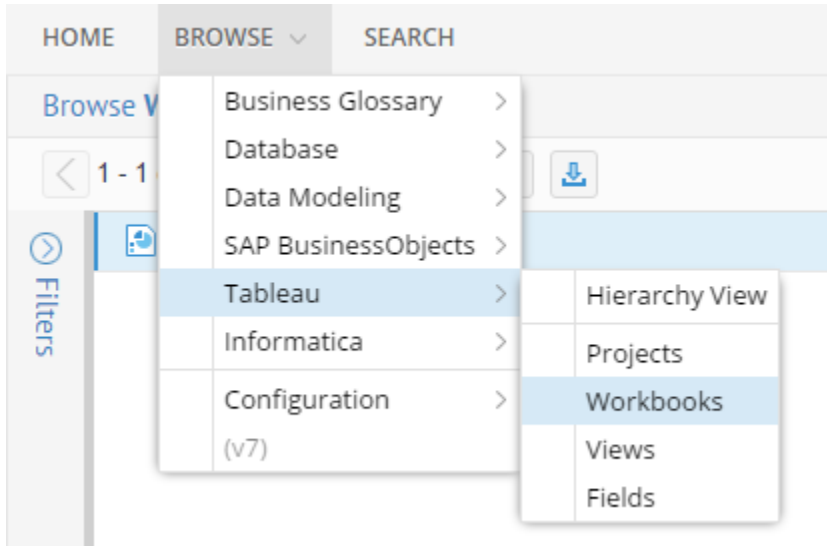


Figure 125 - Select Workbooks

## Click on MM Tutorial

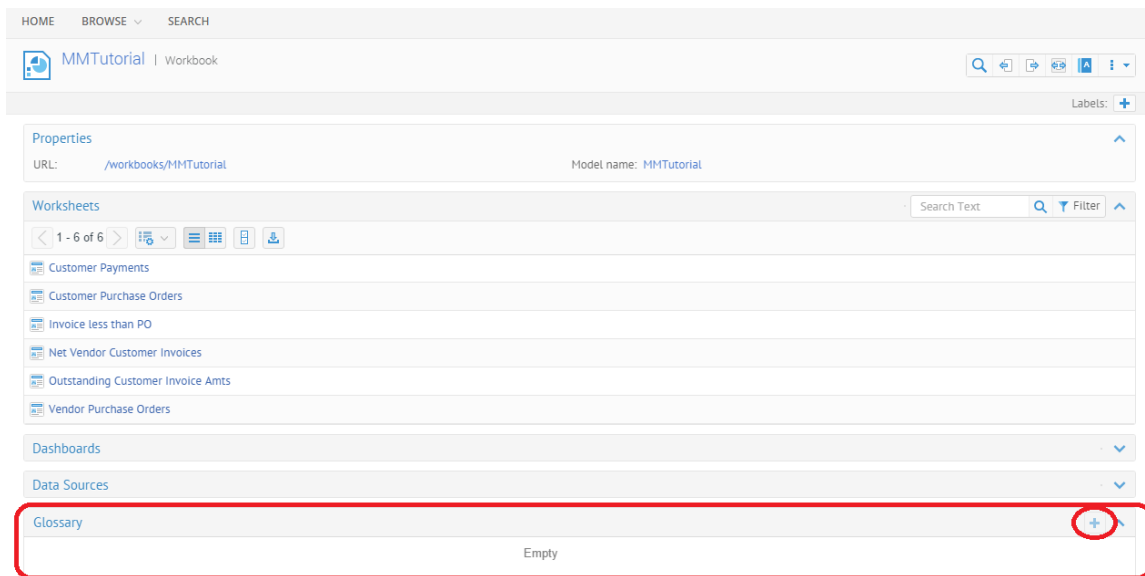


Figure 126 - Report with Glossary panel

Note, the Glossary panel and plus sign icon. This appears because of the existence of the semantic mapping we just defined in the configuration. This panel allows one to create a report glossary, which is a set of links to glossary terms for this report and any of the elements contained within the report.

Note, this icon (Link to term or plus sign) is disabled. This is because we do not have sufficient privileges to edit the semantic mapping. So, return to the browser session signed in as Administrator and set these permissions to the semantic mapping:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

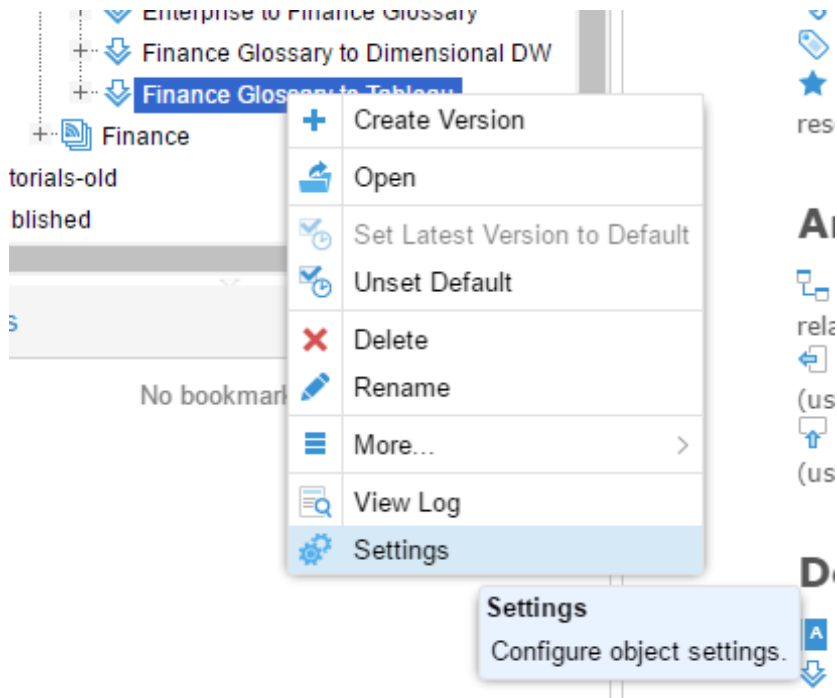


Figure 127 - Settings for the semantic mapping

Define permissions:

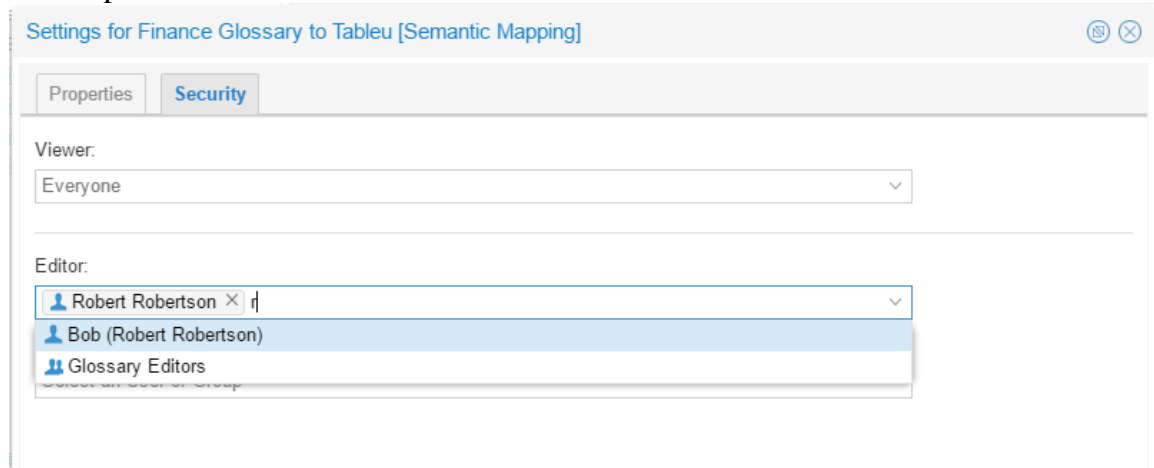


Figure 128 - Setting security roles for semantic mapping

We already have permissions for the **Finance Glossary** as **Bob** is a member of **Glossary Editors**.

Now we may begin.

Return to the **Bob** session and navigate back to **MMTutorial**. Then, click on **Outstanding Customer Invoice Amts**.

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The screenshot displays the 'Outstanding Customer Invoice Amt's page. At the top, there is a navigation bar with 'HOME', 'BROWSE', and 'SEARCH'. Below this, the page title 'Outstanding Customer Invoice Amt's | Worksheet' is shown. The 'Context' is 'MMTutorial'. The 'Properties' section shows the URL: '/views/MMTutorial/OutstandingCustomerInvoiceAmts'. The 'Miscellaneous' section contains a list of metadata terms, each with a plus sign icon and a description. The terms are: Customer Description (Detailed description and notes about a customer), Customer ID (Unique identifier of customers in 1972-Customer/Client format XXX-999999), Customer Name (Name of a customer, usually organization or company name), Customer PO Amount (Total amount of the Purchase Order requested by Vendor), Invoice Amount (Total amount of invoice, generally a sum of the line items), and Invoice Status (Current status of an Invoice, generally related to the last Invoice Log entry). The 'Glossary' panel at the bottom is empty and contains a plus sign icon in the bottom right corner, which is highlighted with a red box.

Figure 129 - Outstanding Customer Invoice Amt's page

and click on the plus sign (Link to term) in the bottom right of the page in the Glossary panel:

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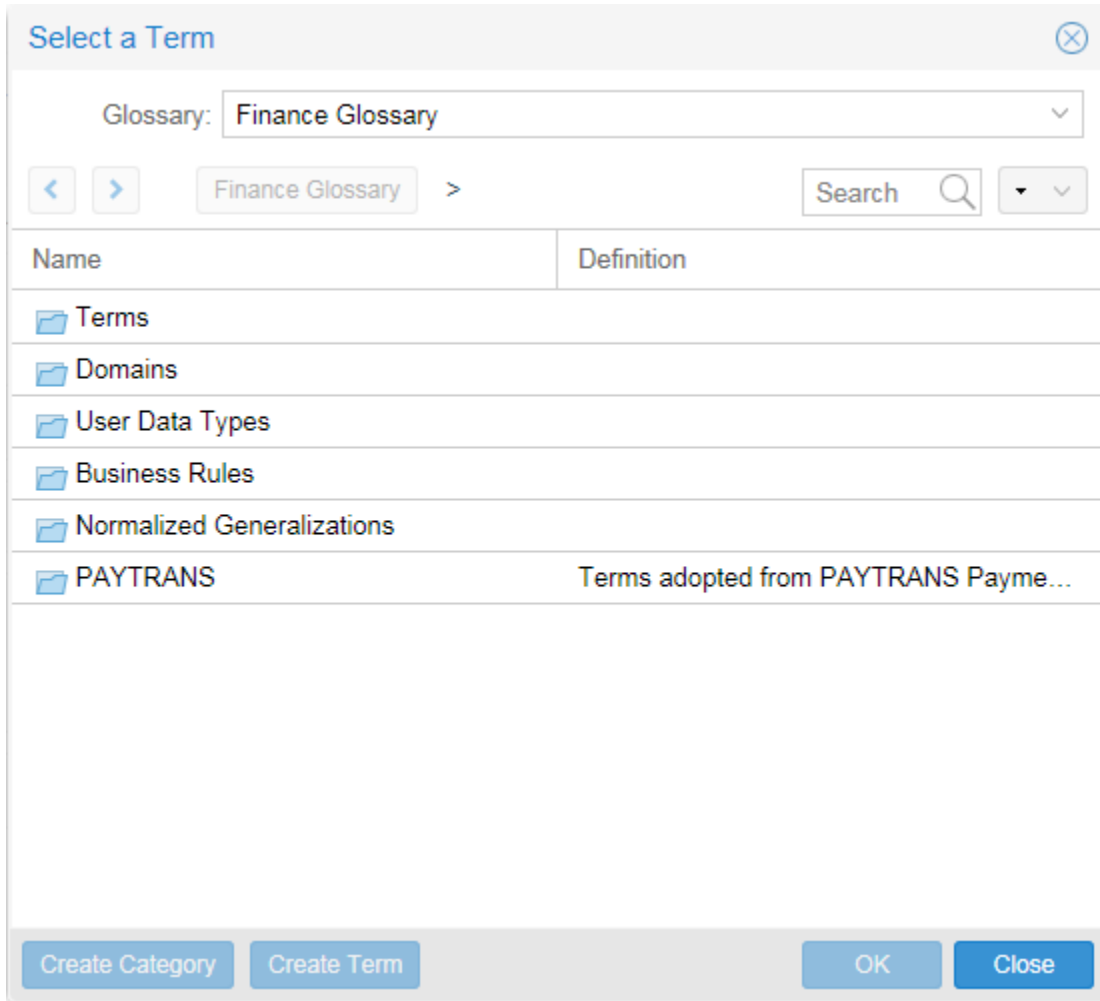


Figure 130 - Link to term dialog

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Click on Create Category, and name it Reports.

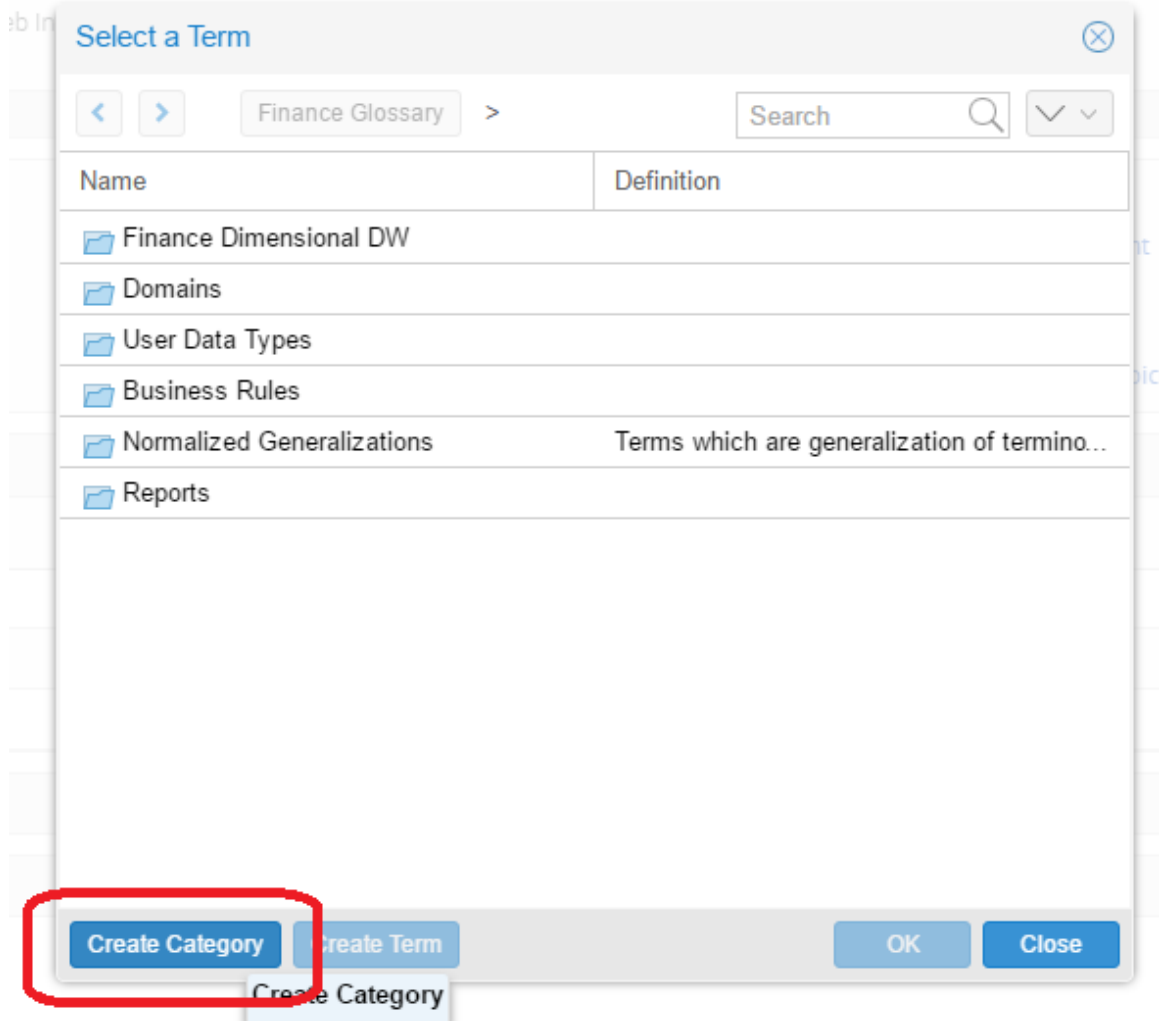


Figure 131 - Create category

Open that [Reports](#) category and then click on Create Term. Give it the Description “Invoices that are not in fully paid status”. Click OK.

Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

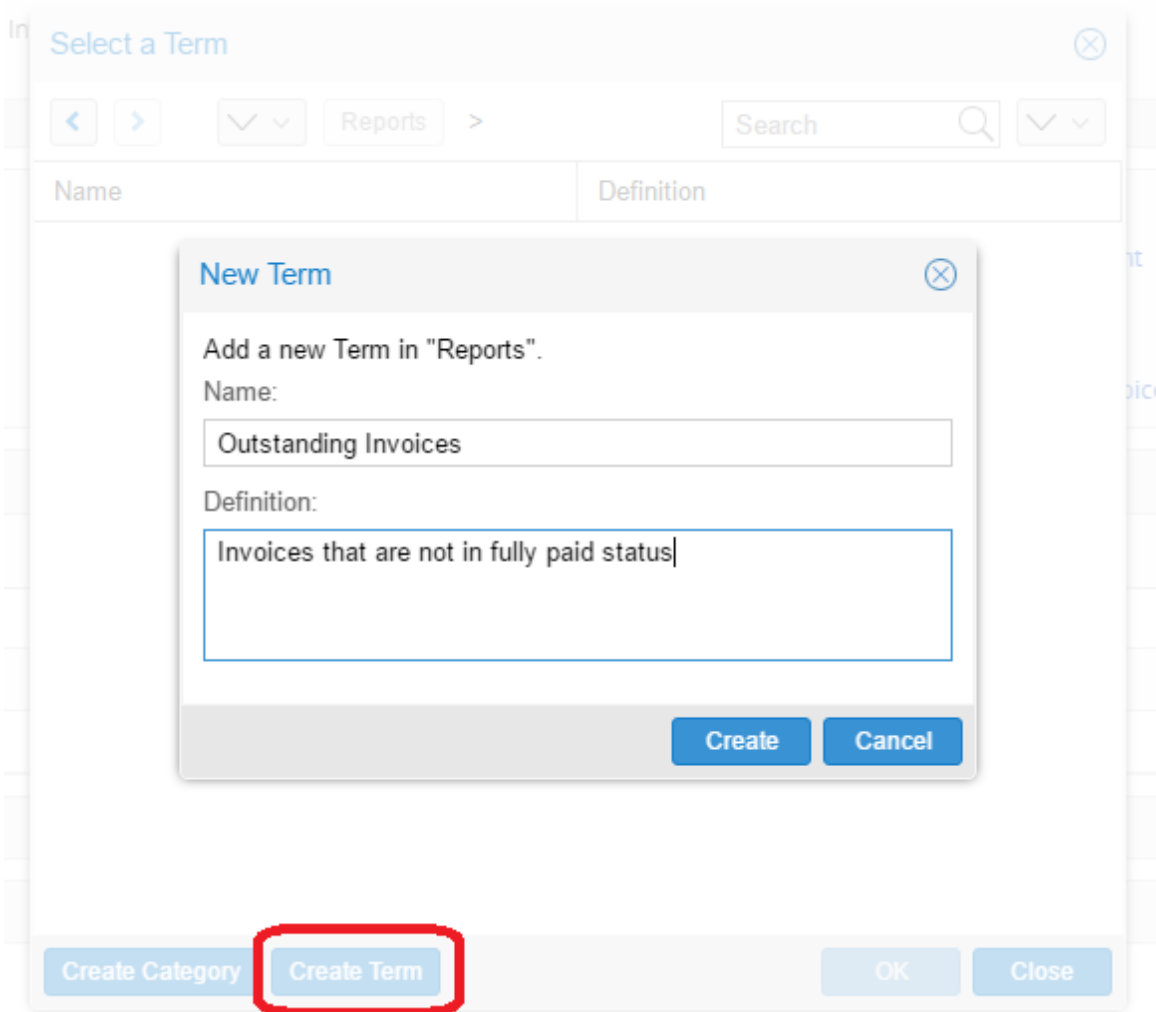


Figure 132 - Create term

And the link is shown:

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

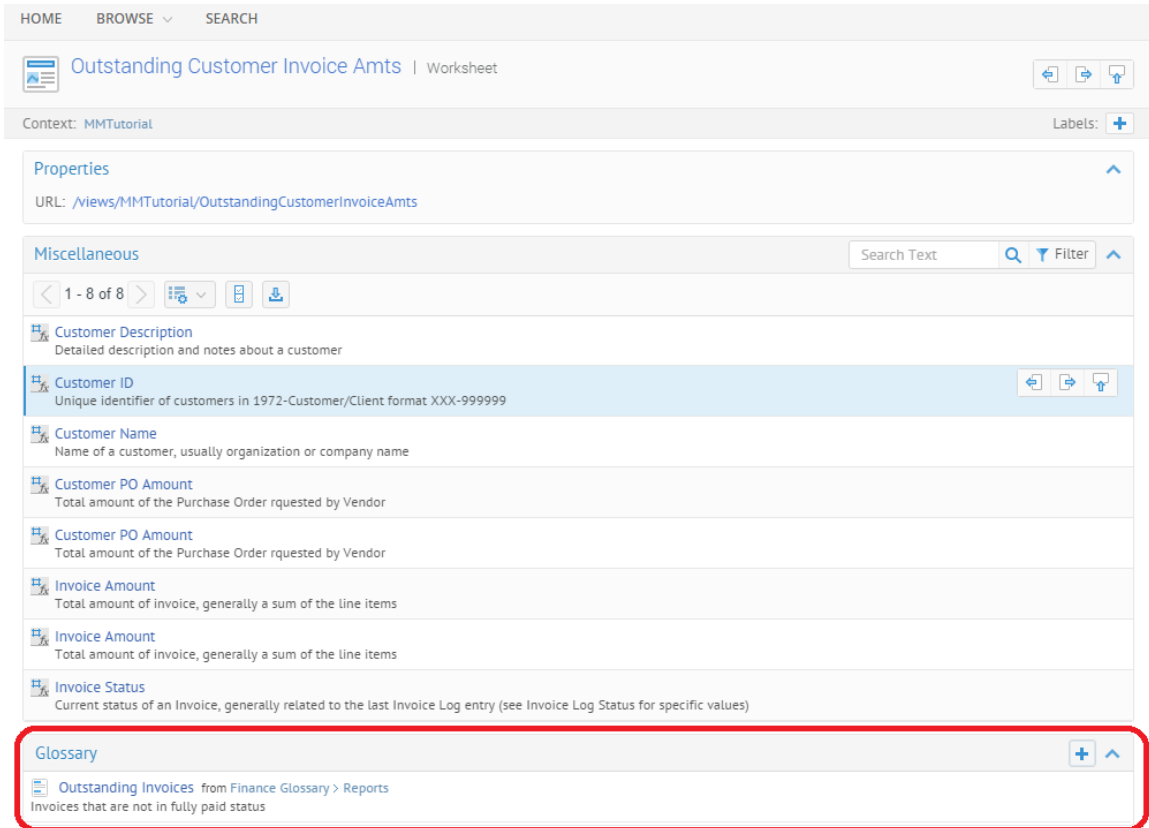


Figure 133 - Linked to glossary

So, we have associated a report with a glossary term and thus a definition. This should be made available in an easy manner, and it is.

Use the browser back button to go back one screen to the MMTutorial page. Note the Open Business Glossary icon in the upper right of the page.

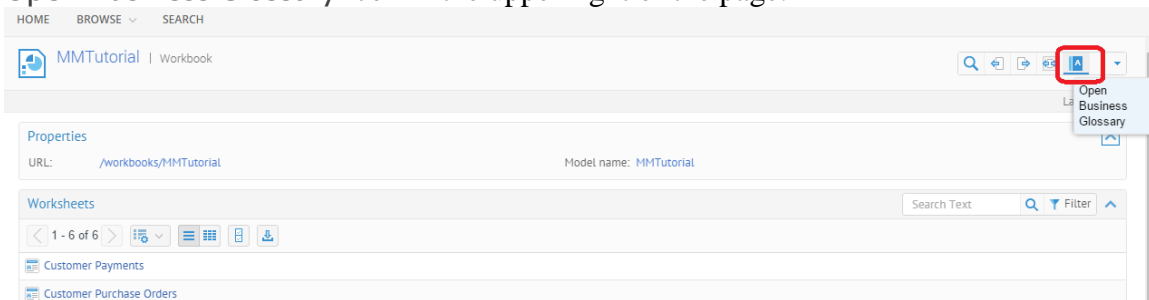


Figure 134 - Glossary icon

Click on this and note the glossary lists all terms linked to this report and its contents.

# Metadata Management Tutorial – Data Governance Using Meta Integration® Metadata Management (MIMM)

HOME BROWSE SEARCH

MMTutorial | Workbook's Business Glossary report Options Edit

Name	Definitions
Account Amount Available from Category (Finance Dimensional DW) > ...	Dollar amount remaining in fund account, calculated as: Account Balance Amount - Account Amount Expended - Account Encumbered Amount from Account Amount Available
Billing POC Name from PO Vendor Invoice Item FACT (Finance Dimensi...	Name of Point of Contact from PO Vendor Invoice Item Billing POC Name
Category Group Number from Category (Finance Dimensional DW) > Ca...	<Empty definition> from Category Number
Category Group Number from Category (Finance Dimensional DW) > GL...	<Empty definition> from Category Number
Category Group Number from Category (Finance Dimensional DW) > Ca...	A number uniquely identifying a group of categories of accounts from Category Group Number
Category Number from Category (Finance Dimensional DW) > Category	A number uniquely identifying a category of accounts from Category Number
Category Number from Category (Finance Dimensional DW) > GL Account	<Empty definition> from Category Number
Customer Description from Customer PO Invoice Item FACT (Finance DL...	Detailed description and notes about a customer from Customer Description
Customer ID from Customer PO Invoice Item FACT (Finance Dimensiona...	Unique identifier of customers in 1972-Customer/Client format XXX-999999 from Customer ID
Customer Name from Customer PO Invoice Item FACT (Finance Dimensi...	Name of a customer, usually organization or company name from Customer Name
Customer PO Amount from Customer PO Invoice Item FACT (Finance DL...	Total amount of the Purchase Order requested by Vendor from Customer PO Amount
Customer PO Date from Customer PO Invoice Item FACT (Finance Dime...	Date on purchase order from Vendor from Customer PO Date Customer PO Date
Customer PO Date_ID from Category (Finance Dimensional DW) > Cust...	<Empty definition> from Customer PO Date ID
Customer PO Date_ID from Customer PO Invoice Item FACT (Finance D...	<Empty definition> from Customer PO Date ID
Customer PO Number from Customer PO Invoice Item FACT (Finance DL...	Number on purchase order from Vendor from Customer PO Number

Figure 135 - Glossary report

And note that the worksheet (report) named **Outstanding Customer Invoice Amt**s has the definition we gave it:

HOME BROWSE SEARCH

MMTutorial | Workbook's Business Glossary report Options Edit

Name	Definitions
GL Account_ID from PO Vendor Invoice Item FACT (Finance Dimension...	Dimensional ID for General Ledger Account Dimension from GL Account ID
GL Account_ID from Customer PO Invoice Item FACT (Finance Dimensi...	Dimensional ID for General Ledger Account Dimension from GL Account ID
Invoice Amount from Customer PO Invoice Item FACT (Finance Dimensi...	Total amount of invoice, generally a sum of the Line Items from Invoice Amount
Invoice Date_ID from Category (Finance Dimensional DW) > Invoice Da...	<Empty definition> from Invoice Date ID
Invoice Date_ID from Customer PO Invoice Item FACT (Finance Dimensi...	<Empty definition> from Invoice Date ID
Invoice Number from Customer PO Invoice Item FACT (Finance Dimensi...	<Empty definition> from Invoice Number
Invoice Status from Customer PO Invoice Item FACT (Finance Dimension...	Current status of an Invoice, generally related to the last Invoice Log entry (see Invoice Log Status for specific values) from Invoice Status
<b>Outstanding Customer Invoice Amt</b> s	Invoices that are not in fully paid status from Outstanding Invoices
PO Line Item Amount from PO Vendor Invoice Item FACT (Finance Dim...	<Empty definition> from PO Line Item Amount
PO Line Item Description from PO Vendor Invoice Item FACT (Finance ...	Description for a given line item on a purchase order from PO Line Item Description
PO Line Item Quantity from PO Vendor Invoice Item FACT (Finance Dim...	Number of units for a line item in a purchase order from PO Line Item Quantity

Figure 136 - Definition of worksheet

However, where did all the other definitions come from? As we described before, these definitions are based upon tracing the lineage (semantic and data flow) to hunt for definitions. So, e.g., with the report **Outstanding Customer Invoice Amt**s, we trace directly back to the term in the Finance Glossary:

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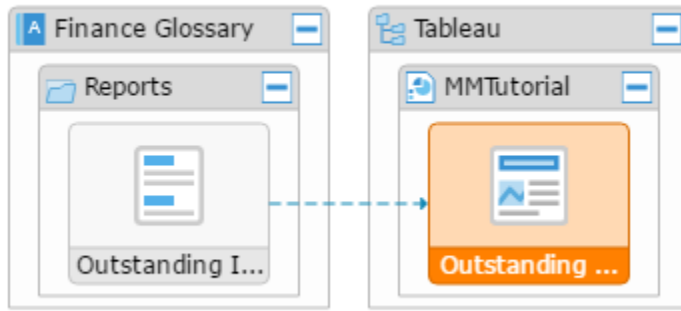


Figure 137 - Direct semantic link

On the other hand, for Account Amount Available, it is a combination of a data flow lineage trace back to the Dimensional DW PDM and then a semantic trace back to the term Account Amount Available in the Finance Glossary.

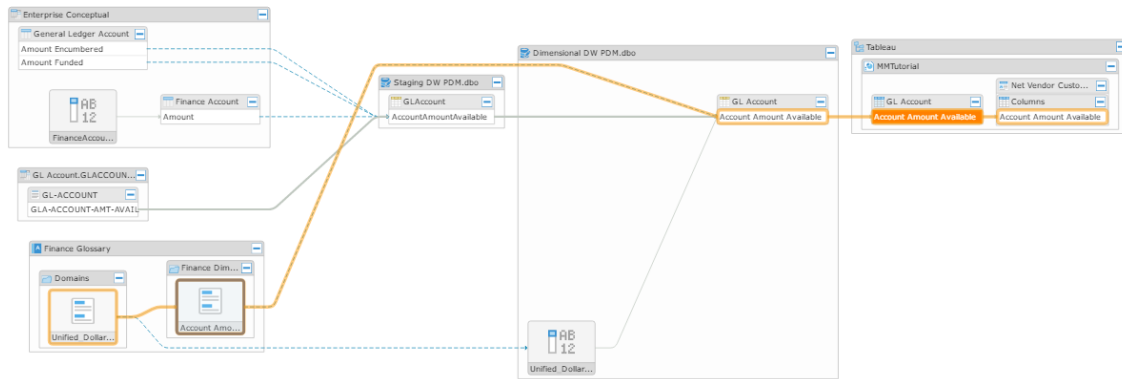


Figure 138 - Definition lookup trace for Account Amount Available

Actually, as we saw before, there are many definitions possible for Account Amount Available. This report only shows the highest priority one. In addition, in the report, one may control which types of lineage traces are used to determine the possible definitions:

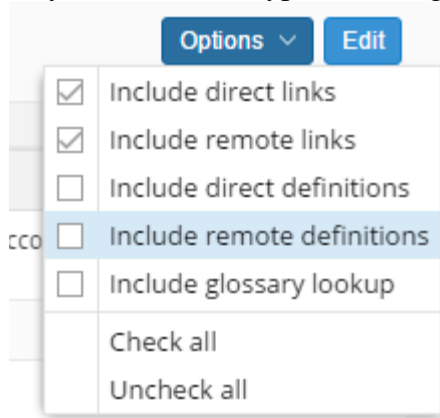


Figure 139 - Glossary report options

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Note, there are some fields in the report, e.g., **Purchase Order Amount**, where we see **<Empty definition>**. This is the result of locating a term or other object that is the highest priority, but it does not have a definition. This is simple to fix, of course. Simply click on the object that there is not definition for:

Project ID from Category (Finance Dimensional DW) > Project	<Empty definition> from Project ID
Purchase Order Amount from PO Vendor Invoice Item FACT (Finance Di...	<Empty definition> from Purchase Order Amount
Purchase Order Date__ID from Category (Finance Dimensional DW) > Pu...	Dimensional ID for Purchase Order Time Dimension from

Figure 140 - Object without definition

Which takes you to the page for that term and you may edit the definition:

**Purchase Order Amount** | Term

Total dollar amount of the purchase order which is the sum of all line item amounts

Context: Finance Glossary > ddo

Figure 141 - Editing the definition

Now, the report is updated (use the refresh browser button):

Project ID from Category (Finance Dimensional DW) > Project	<Empty definition> from Project ID
Purchase Order Amount from PO Vendor Invoice Item FACT (Finance DL...	Total dollar amount of the purchase order which is the sum of all line item amounts from Purchase Order Amount
Purchase Order Date__ID from Category (Finance Dimensional DW) > Pu...	Dimensional ID for Purchase Order Time Dimension from Purchase Order Date ID

Figure 142 - Updated definition on report

In addition, there are some fields on reports that have no associated object at all. This can be the situation when a field is unique to a report, often times because it a computed field (computed in the report) so it cannot take advantage of the warehouse definitions, and it does not have a direct semantic link to a term in the glossary.

To see these missing fields and any other object one can edit, click on the **Edit** button:

HOME BROWSE SEARCH

MMTutorial | Workbook's Business Glossary report

Options Stop editing

62 / 91 objects are documented

Name	Definitions
MMTutorial	+ Add definition
Account Amount Available from Category (Finance Dimensional DW) > ...	Dollar amount remaining in fund account, calculated as: Account Balance Amount - Account Amount Expended - Account Encumbered Amount from Account Amount Available
Billing POC Name from PO Vendor Invoice Item FACT (Finance Dimensi...	Name of Point of Contact from PO Vendor Invoice Item Billing POC Name
Category Group Number from Category (Finance Dimensional DW) > Ca...	<Empty definition> from Category_Number
Category Group Number from Category (Finance Dimensional DW) > GL...	<Empty definition> from Category_Number
Category Group Number from Category (Finance Dimensional DW) > Ca...	A number uniquely identifying a group of categories of accounts from Category Group Number
Category Number from Category (Finance Dimensional DW) > Category	A number uniquely identifying a category of accounts from Category Number
Category Number from Category (Finance Dimensional DW) > GL Account	<Empty definition> from Category_Number
Customer Description from Customer PO Invoice Item FACT (Finance DL...	Detailed description and notes about a customer from Customer Description
Customer Dimension ID from Category (Finance Dimensional DW) > Cus...	+ Add definition
Customer Dimension ID from Customer PO Invoice Item FACT (Finance ...	+ Add definition
Customer ID from Customer PO Invoice Item FACT (Finance Dimensiona...	Unique identifier of customers in 1972-Customer/Client format XXX-999999 from Customer ID
Customer Name from Customer PO Invoice Item FACT (Finance Dimensi...	Name of a customer, usually organization or company name from Customer Name
Customer PO Amount from Customer PO Invoice Item FACT (Finance DL...	Total amount of the Purchase Order requested by Vendor from Customer PO Amount

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*Figure 143 - Editing the glossary report*

Note the number of items documented is presented (62 out of 91 possible). Also, note the [Add definition](#) option. Now, for some “fields” in the report, they are not really seen by the business user, e.g., Customer Dimension ID, and thus no definition is really required and the glossary report will not show it. However, for others, the Customer Payments report itself, we could click on the [Add definition](#) option, and then add a link to a glossary element right here in the glossary report.