EI-CORE elements

This section presents a short introduction to some of the main elements in EI-CORE.

Power Edit

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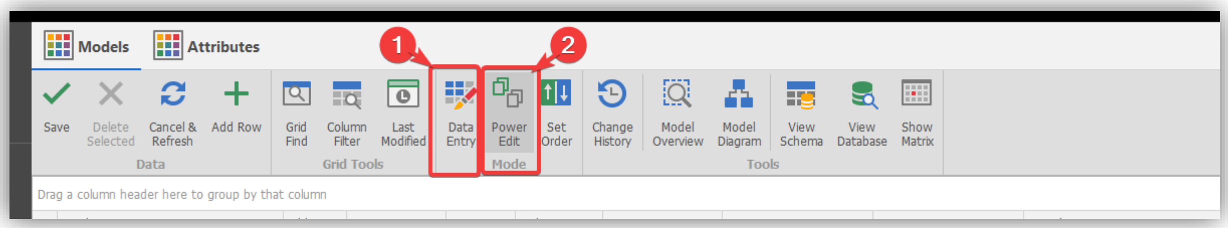
Document revision date: 2020-02-13

When entering values in EI-CORE, the usual and most secure way is in the **Data Entry** mode. But for advanced users with the need to edit multiple entries **Power Edit** mode can be toggled.

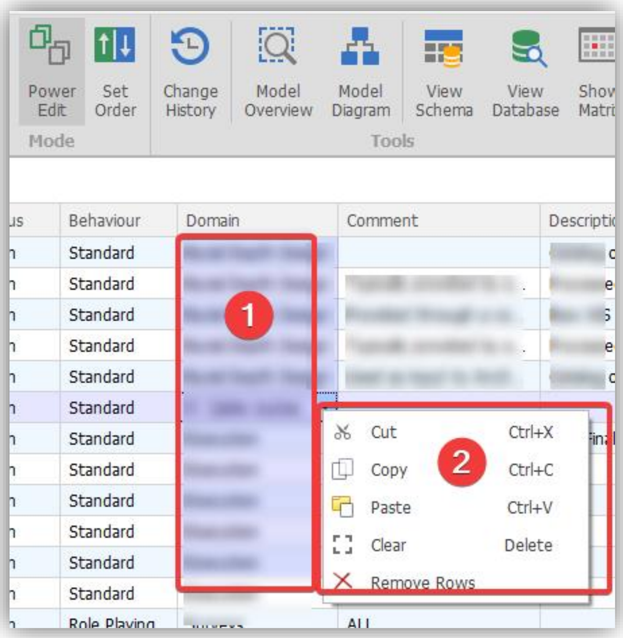
Please notice, that some checks and warnings that apply to the basic Data Entry mode, are disabled or has a different behavior during Power Edit: Whenever EI-CORE detects a malformation of values edited with Power Edit, The mal formed cell values are marked with a red circle with an X. Saving of the values will not be possible before the values are corrected in accordance with the rules and constraints that are applied to the respective model:

Attribute	Nominal rate of penetration of the cone	mm/s	Decimal	...
Attribute	Type of filter material used	unitless	Text	...
Attribute	Friction reducer used	unitless	Boolean	...
Attribute		...	...	...
Attribute		...	...	...
Attribute		...	...	...
Attribute		...	...	...
Attribute	Subcontractors name	unitless	Text	...
Attribute	Standard followed for testing	unitless	Text	...
Attribute	Accrediting body and reference num...	unitless	Text	...

To toggle power Edit mode, select the **Power Edit** Button(2) from the task bar. To return to normal mode, Select **Data Entry(1):**



To mark Cells, click and drag to highlight desired area(1). Right-click to display a list of actions(2) or use standard keyboard shortcuts.



The options are standard editing options:

Cut clears content from the selected cells and copies it to the clipborad.

Copy copies content from selected cells to the clip-board.

Clear deletes content from selected cells

Remove Rows deletes highlighted rows, that have not been saved.

Pasting

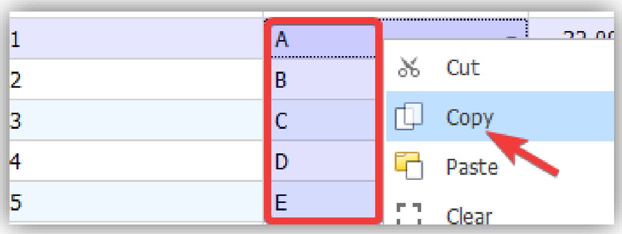
Paste pastes the clip-board content into the selected cells by the following principles.

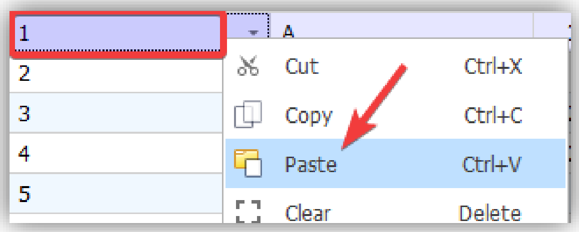
Constraints

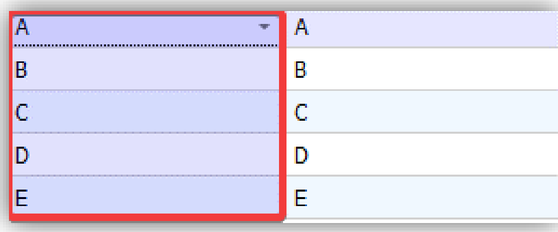
- Destination cell must not be locked
- Source- and destination Cell must be of the same type

Copy-paste behavior

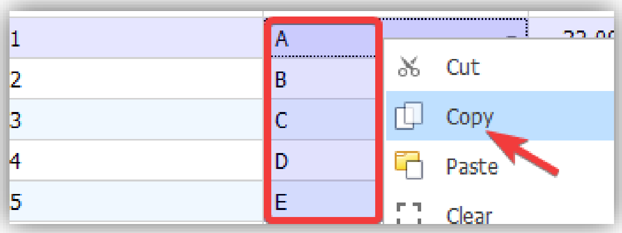
If the destination area is a single cell, the clip-board content will overwrite the existing content of the target cell **and all cells below the target cell** until all cell values from the clip-bord has been pasted:

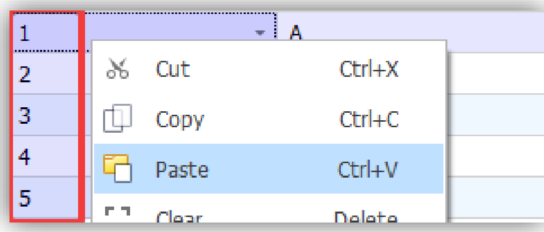


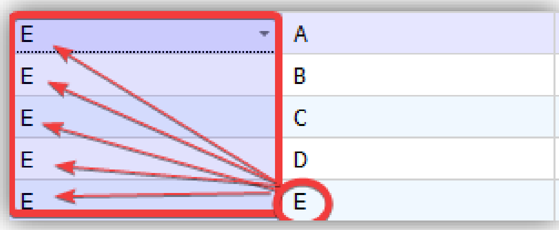




If the destination area consists of multiple cells, the value from the last cell (the one to the lower right) from the source area will be populated into all cell in the destination area:

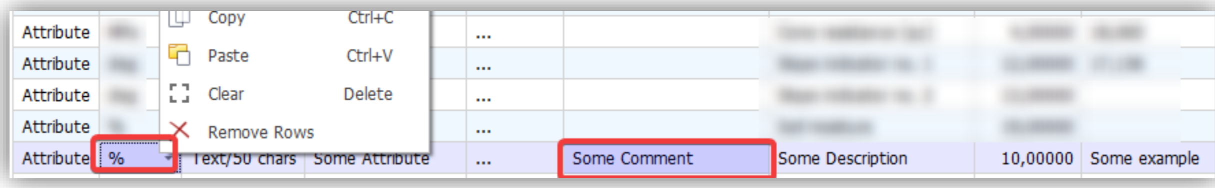




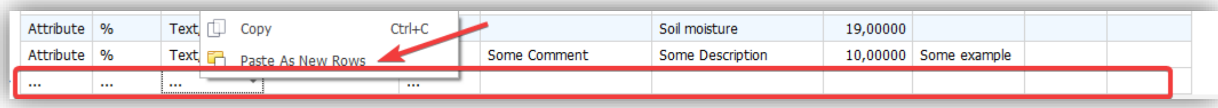


Paste as new row

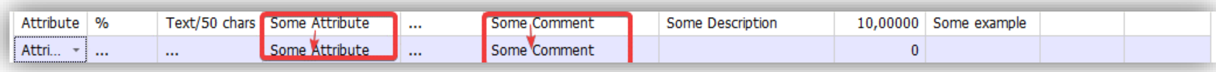
To paste content as a new row, mark the row or, as in this example, only selected values (pressing and holding ctrl-key while right-clicking desired fields will accomplish that), first mark desired values and copy to the clip-board:



Scroll down to the last, empty row at the grid, right-click and select **Paste As New Rows:**

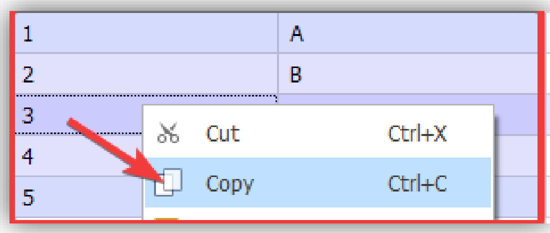


The selected values will no be pasted into a new row under their respective headlines:

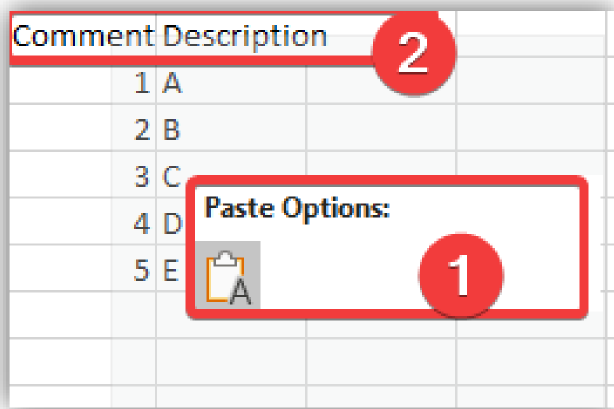


Pasting into Spread Sheet:

To paste into a spread sheet like Excel or similar, simply mark the desired fields and copy the content into the clip-board:



In the target application, select insert-point and insert/paste(1) clip-board content. The values and their respective headings(2), will automatically transfer:

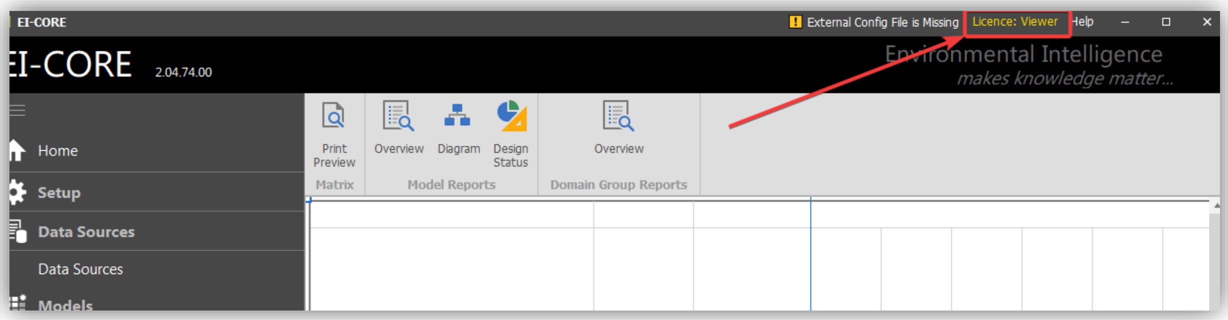

Comment Description
1 A
2 B
3 C
4 D
5 E
Paste Options:
2
1

Claiming a licence

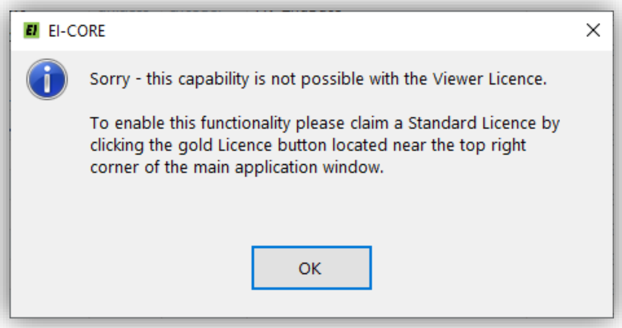
EI-CORE version number: 2.04.74.00
Document revision date: 2020-01-22

By default, the user is assigned a **Viewer-Licence** that grants some basic rights such as browsing data. Editing and Certain other operations requires a **standard licence** to perform. If a standard license has been purchased and is available, it can be claimed within EI-CORE:

- The current license level is displayed in the top right Corner of EI-CORE:

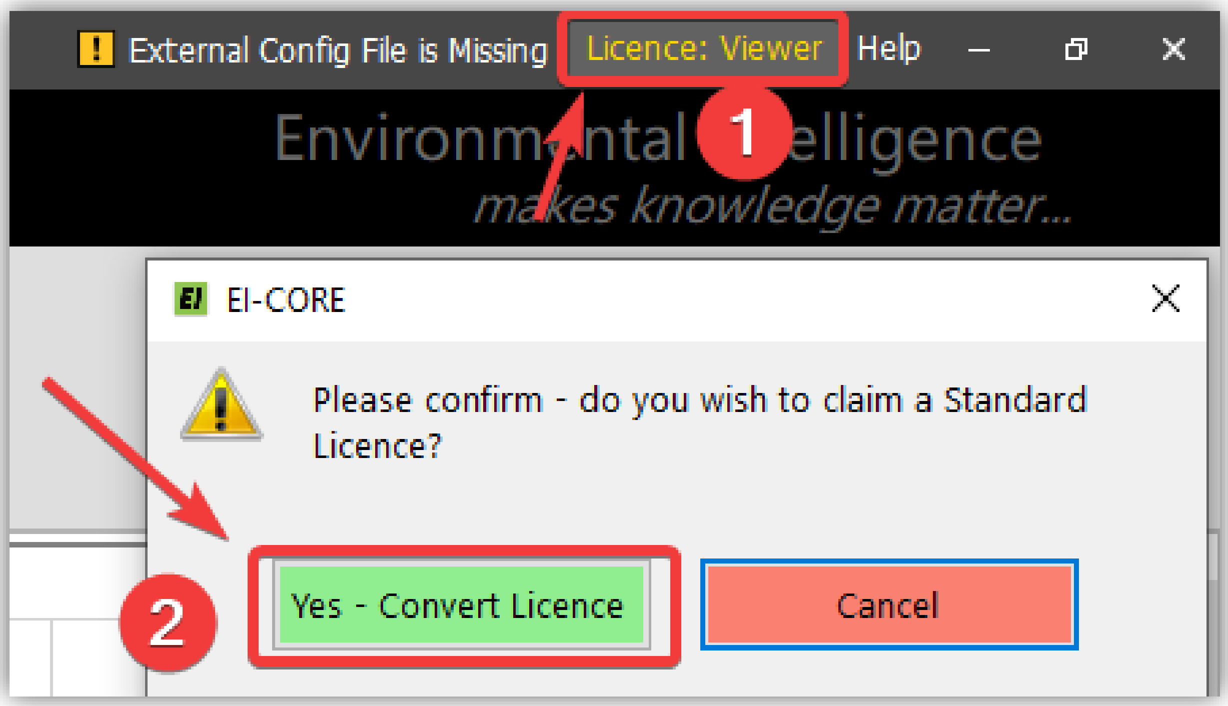


- When needed, EI-CORE will prompt the user for a licence upgrade:

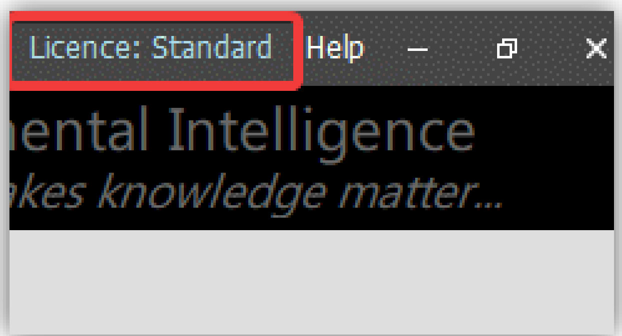


-

- To claim a licence, click the **Licence-Button** in the tom right corner, and confirm by clicking the **green button** in the dialog box (**This will Claim a license from the licence pool!**):



- A licence has now been claimed and the user is now granted elevated rights:



Model Types

An introduction to the types of models encountered in EI-CORE

Subject Model

The Subject Model contains a description of all required information for the organization within a narrow subject area such as Geotechnical Boreholes, CPT´s, etc. Each model is assigned a Domain Group, which is responsible for designing and maintaining the model. Each model will have a detailed description which can be used for those wanting a general overview before exploring the content of the Subject Model in more detail. Within the model, the required information is registered as Attributes each having a meaningful name and a thorough description of what it is and unit of preference, if required. The expected data format is also documented for each Attribute but can be changed if needed. Each Attribute is assigned an Owner, so it is possible to keep track of who decided to name the Attributes and provide the descriptions to each of them. This also ensures that this information will never become orphan as you will be able to track all input for a given employee and therefore also hand over responsibility if the employee stops working in the organization. The final information in the Subject Model is how it relates to other Models. This is a very important step as it will reveal how the information areas within the organization actually relates to other information areas and who is responsible for the different areas of information (Subject Models). An example is presented for the Moisture Content Subject Model in Figure 1.

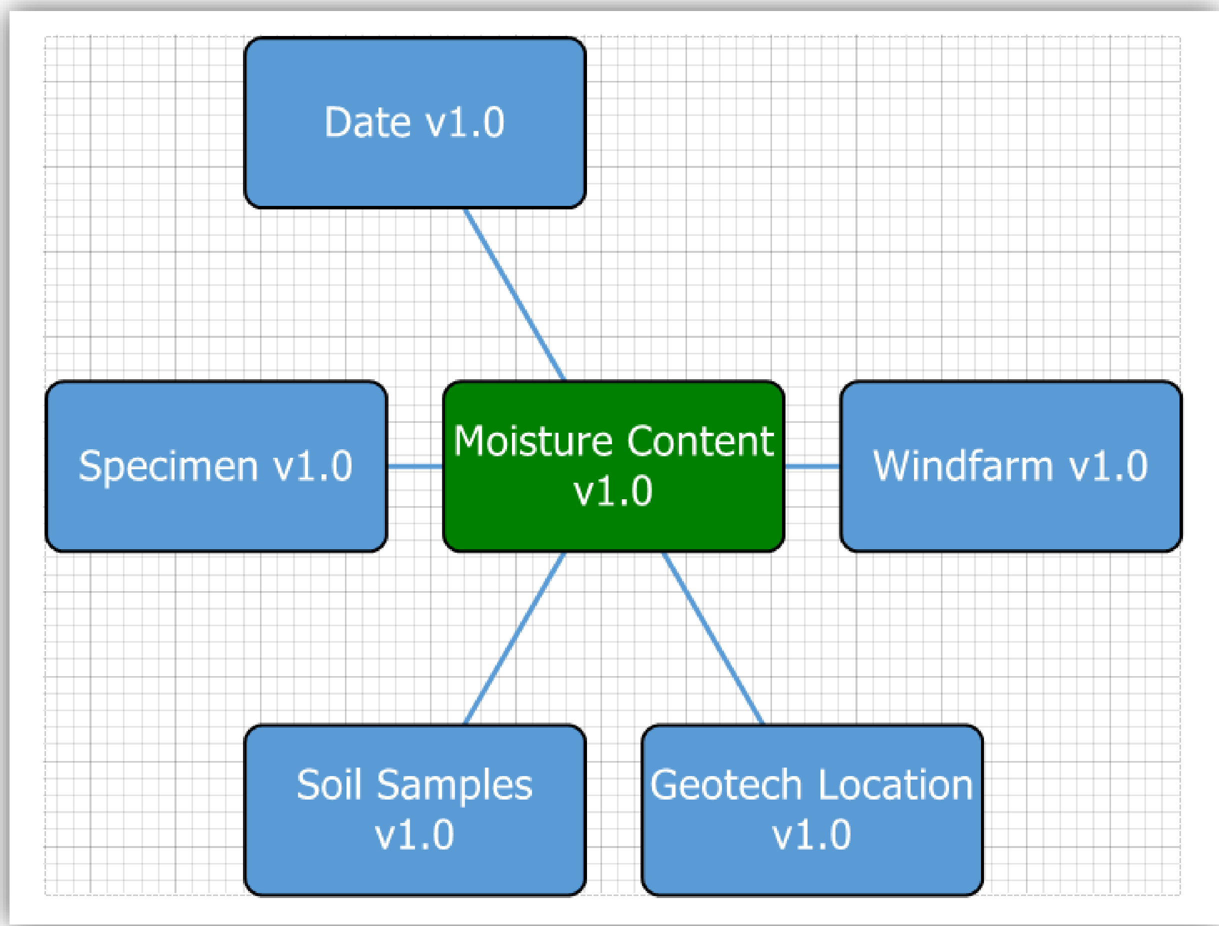


Figure 1 Subject Model for Moisture Content displaying how it relates to other Subject Models

Facts

The center of the Subject Model is called the Fact Table and is the focus for the Subject Model and the data exploration by the user. In Figure 1 “Moisture Content is the Fact table”

Dimensions

Dimensions surrounds a fact table and is usually used to further filter out data for a given Fact Table/ Subject Model.

Fact+Dimension

In the case of Environmental data, it is very often seen that a Table sometimes acts as the Fact tables and at other times as Dimensions for other Fact Tables. In these cases they can be labled Fact+Dimension.

3NF

3NF (Third Normal Form) models differ from a standard Subject Model in that a given attribute can contain different types of data. An example can be a table having an attribute named [Parameter Name], [Value] and [Unit]. In such a case it is not possible to say that the value attribute always will contain e.g. pH values as it basically can contain all sorts of parameters because the name is listed in the other attribute. A 3NF model is very compact and easy to use by an automated process but not very reading friendly for a person. A traditional Subject Model structure would have one column for each type of parameter, so it is possible to compare or summarize values across records. This is not the case for a 3NF model type.

Bridge Tables

A bridge table is used when a record in the Fact table is linked to multiple records in a Dimensional table. In case there is no link between the Fact table and Dimension, an ´N/A´record is added as a bridge record in order to en-sure data are not filtered out by bringing in attributes from Dimensions having a Bridge table. Two types of Bridge tables exist:

Bridge1

The traditional Bridge table as described by Kimball Group is labeled “B1”. This Bridge table type is used when the multiple records in the Dimension that are linked to one record in the Fact table can be grouped together and assigned fur-ther attributes. This is not used very often at the moment with the technical data. The B1 Bridge table gets the prefix “B1_”

Bridge2

The other type of Bridge table that is identified is labeled Bridge table type “B2”. It is even more simple than B1, but can only work when a PK is present in the Fact table, which often is the case for our technical data. The B2 table consists of two attributes; a FK linking to the PK in the Fact table and a FK linking to the PK in the Dimension table. This allow one record in the Fact table to be associated with mul-tiple records in the Dimension table or the other way around. When this Dimension is brought into the Dimensional model, it may produce duplicates for all other at-tributes except for the Dimension table linked using the B2 table. The B2 Bridge Table gets the prefix “B2_”. The needed Group Table get the prefix “G_”.

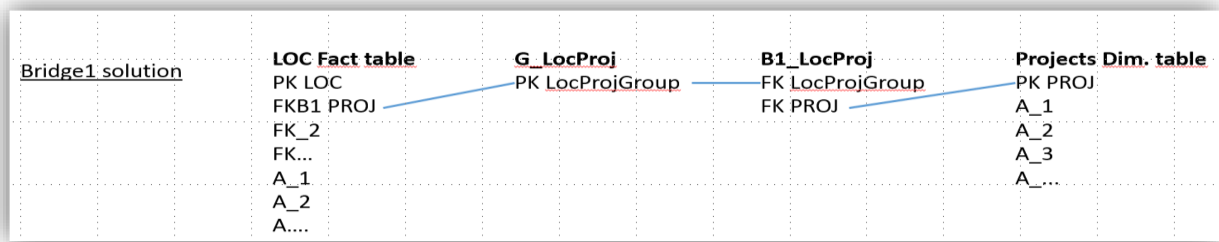
Example for Bridge2 solution:

Key points:

• In the fact table, the FK field shall be named FKB1_[table abbr.] or FKB2_[table abbr.] depending on the bridge type. e.g. FKB1_PROJ

• The Group Table shall be named G_[Fact table abbr.][Dim table abbr.] e.g. G_LocProj

• The Bridge Table shall be named B1_[Fact table abbr.][Dim table abbr.] or B2_[Fact table abbr.][Dim table abbr.] e.g. B1_LocProj



Role Playing Dimensions.

A Role Playing Dimension is a dimension that is used several times in the same Fact table under different names. The most common example is the Date Dimension that can be presented in the Fact tables as e.g. StartDate, EndDate and several other important dates you want to capture. This is solved by creating views based on the parent dimension but with the name of the Role Playing Dimension. The Abbreviation for the Role Playing Dimension must also be different so it can be used as prefix for the Attributes and thereby easily be distinguished from each other.

List

A list represents a list of allowed values that can be assigned a given attribute. It can then be used for checking or limiting the values for this attribute to be one of the values in the list.

MiniDimension

A Minidimension is an extension to an existing dimension with the same set of core attributes but with extra attributes not relevant for the Master Dimension, only for the Minidimension. The Minidimension concept is, however, being taken over by the Reference Model concept that is a bit more generic (see description of Reference Model).

Reference Model

A reference Model is a Subject Model containing a set of Attributes so generic that they are used very often as part of many other subject Models. A new Subject Model can contain elements from one or more Reference Models, which assure consistency with respect to naming of the core set of attributes used across multiple Subject Models.

Rules

EI-CORE version number: 2.04.56.00
Document revision date: 2020-05-11

The EI-CORE **Rules** functionality handles criteria for data validation and can be applied to any Model attribute by switching on the **Show-Rules button**. It offers the possibility to apply both a fixed set of general rules and the option to assign context dependent rules as defined in a **List** and the ability to select an attribute from an EI-CORE defined table.

Applied rules are associated with a **Rule Set**. Several Rule Sets can be defined for every Model Design Version providing a flexible data format. A Rule Set is defined within a Design Version and can be applied in that version only.

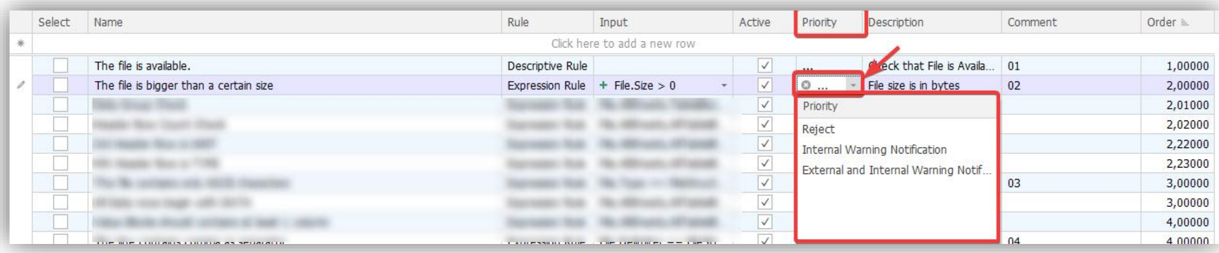
- **Choose From List**:
  The Rule type "Choose From List", makes it possible to define a list of attributes selectable as rules for another attribute.

- **Choose From Schema** (Parent Rules):
  Defines a set of attributes from another model to be used as rules for the local attribute.

Rules Priority indicator

EI-CORE version number: 2.04.88.00
Document revision date: 2020-01-29

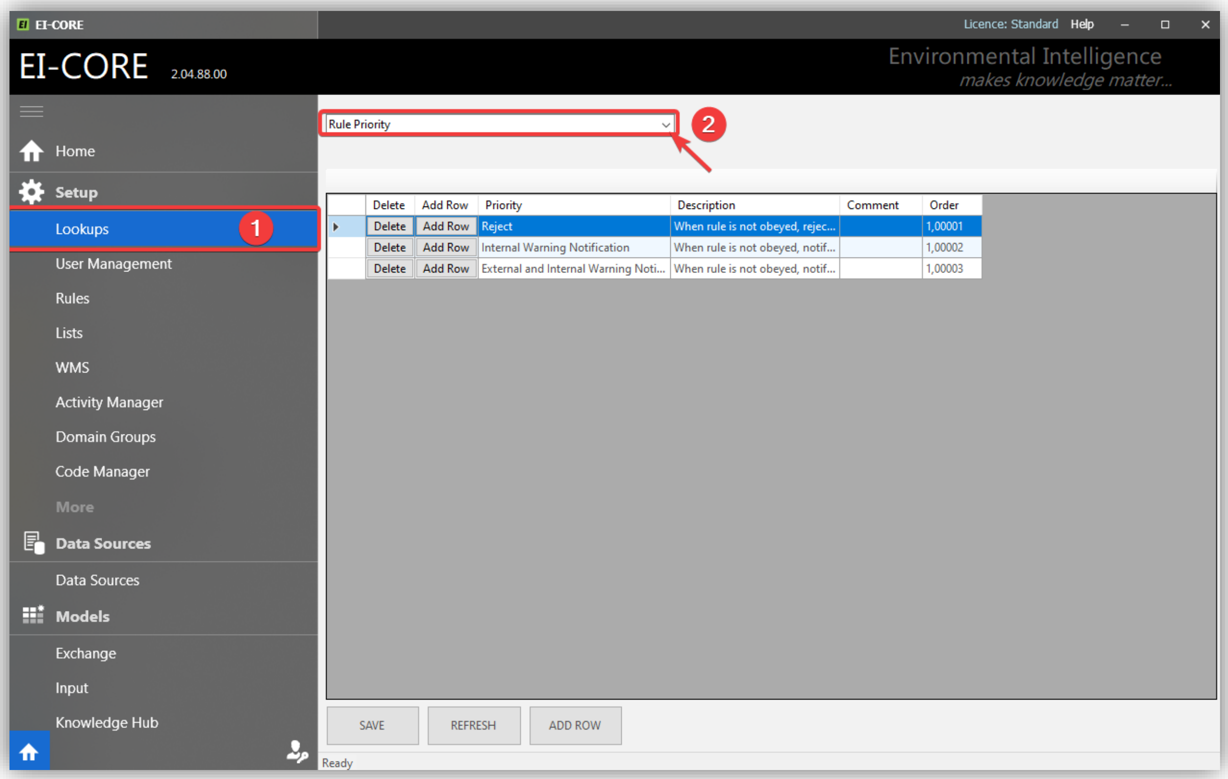
When applying file format rules to an exchange schema, EI-CORE offers the opportunity to set a **priority** for that rule by selecting a value from the **Priority drop-down menu**:



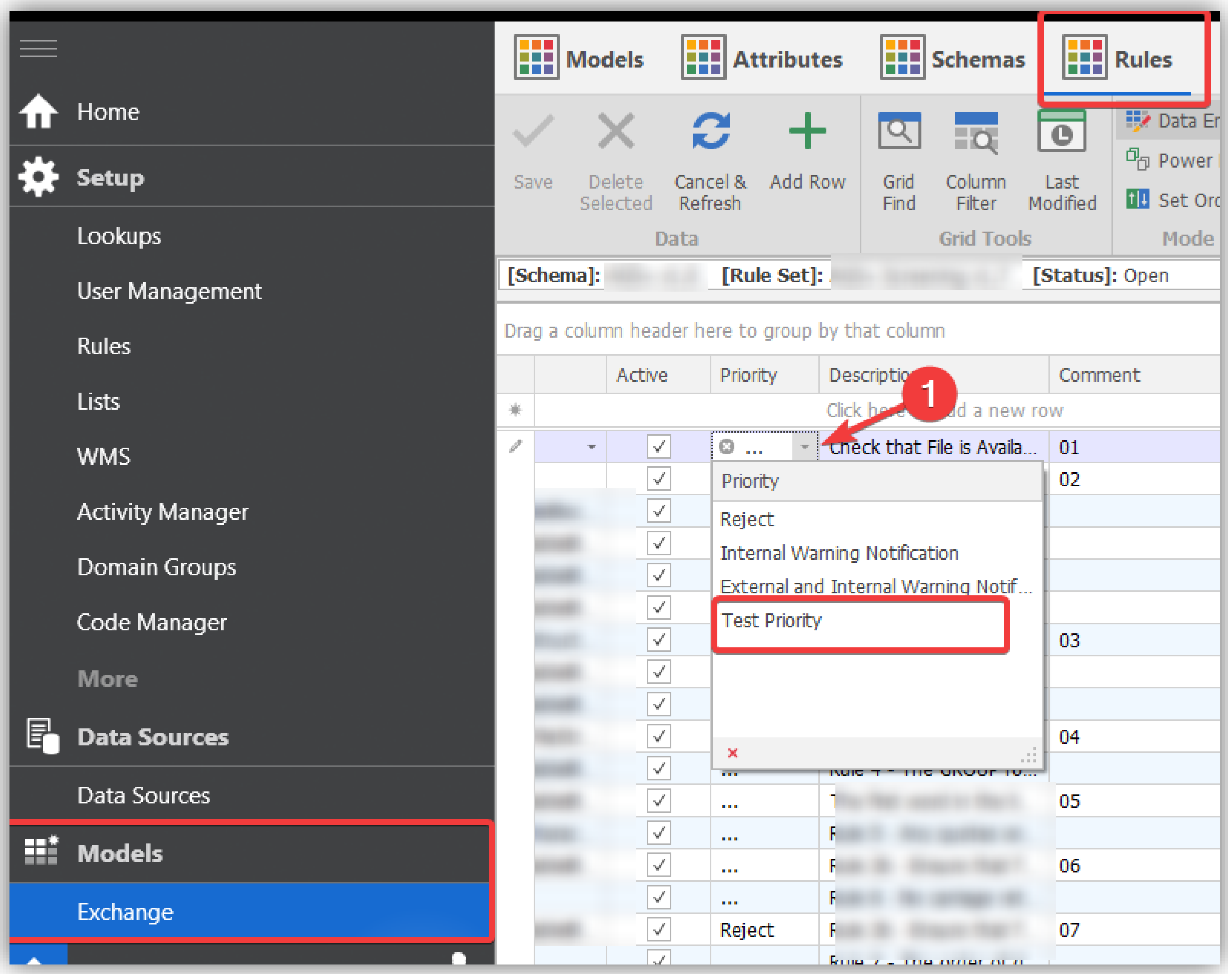
The **rules priority** can be used for indicating in which priority the rules are handled and/or (as in this example) for indicating what action a violation of the rule shall trigger.

Rule Priorities must me set in the **Lookups-module**(1) in the setup-menu. Expand the drop-down menu(2) and select **Rule Priority** and enter desired Priorities.

Remember to save the changes made.



The new Rule Priorities are now available from the Priority Drop-Down menu(1) in the Exchange Models Rules-view:



Home
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Data
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Column Filter
Last Modified
Grid Tools
Mode
[Schema]:
[Rule Set]:
[Status]: Open
Drag a column header here to group by that column
Active
Priority
Description
Comment
Check that File is Availa...
01
02
Priority
Reject
Internal Warning Notification
External and Internal Warning Notif...
Test Priority
03
04
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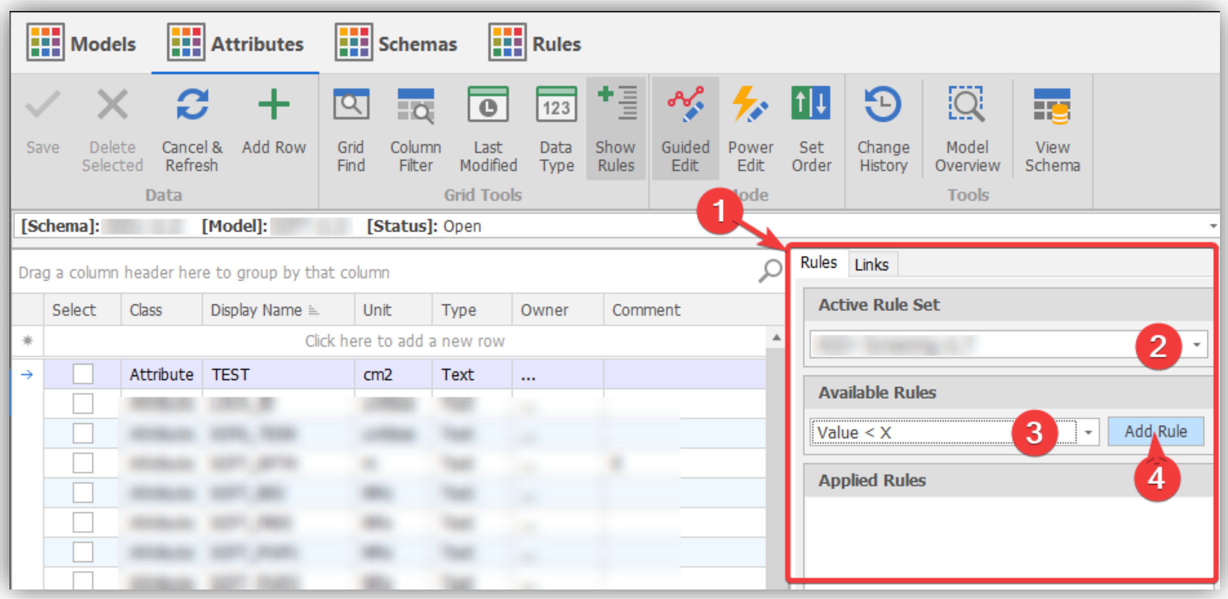
06
Reject
07
1

Conditional Rules

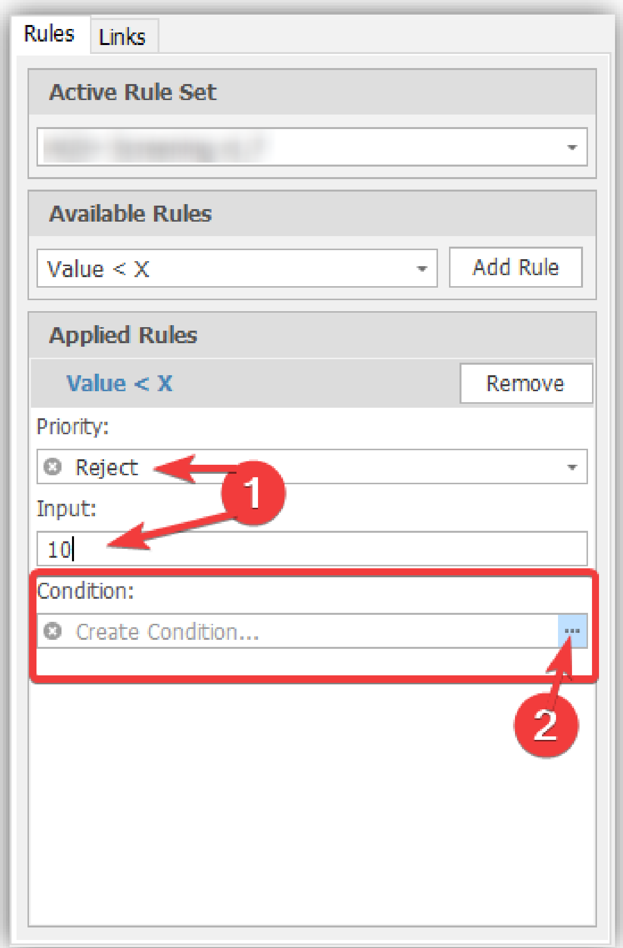
EI-CORE version number: 2.05.21.00
Document revision date: 2020-03-17

Conditional rules can be used for setting up a rule, that only apply when a certain criteria is met in another attribute that the one the rule applies to. E.g. if a value in table a exceeds a specified limit, another value in table B must not be NULL.

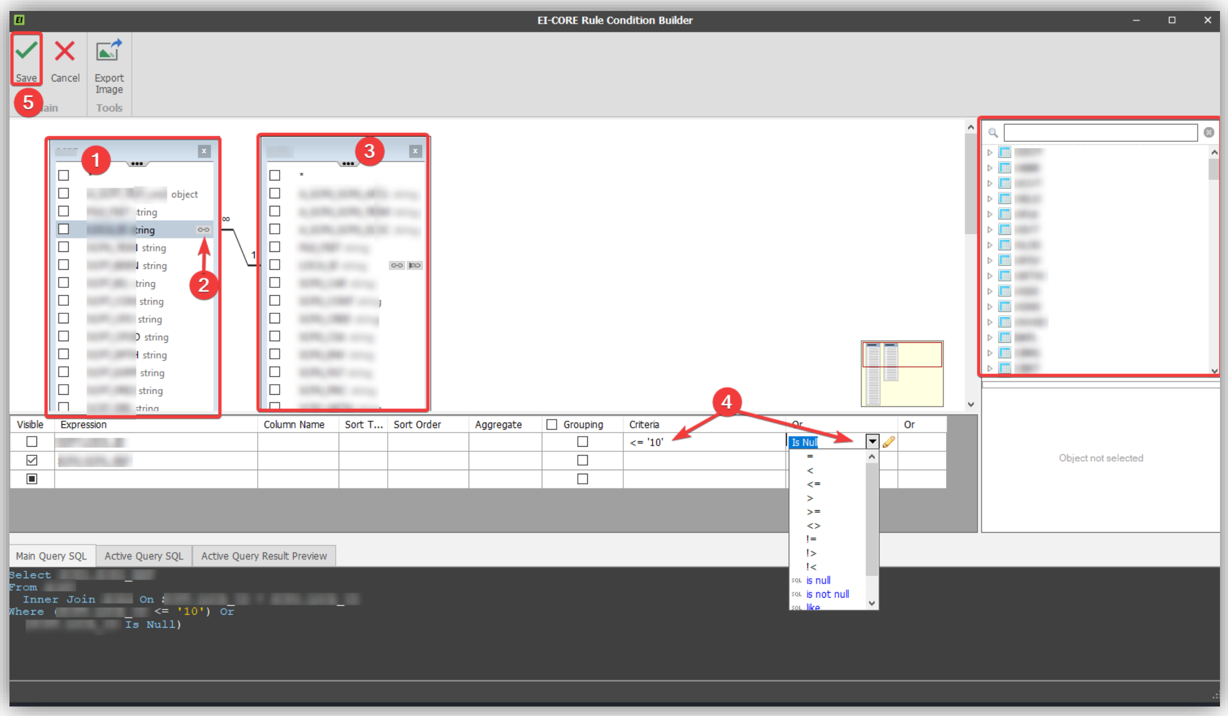
Rule-conditions are set per attribute in the **Rules pane** to the right(1). Select s Rule Set(2) and the rule that shall be applied under a certain condition(3). Click **Add Rule**(4):



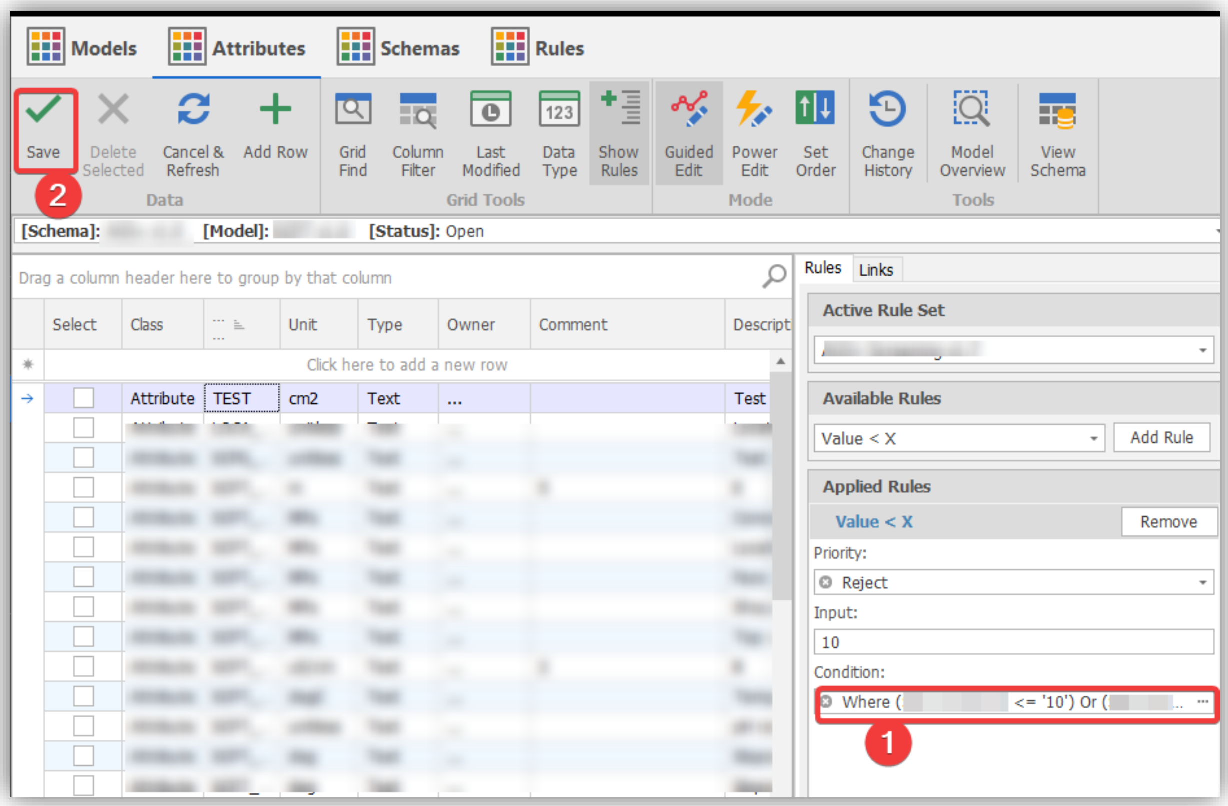
Supply the required parameters for priority and input value if applicable(1) and select the three dots(2) at the **Create Condition** field:



The **Rule Condition Builder** will open in a separate window with the attributes from the selected model are displayed in the main field(1). Where a **link icon(2)** is shown, click the icon to have the linked model displayed as well(3). Tick off the attributes that will provide the conditions and supply the criteria for the selected attributes(4). Save(5) when done:



The condition under which the rule applies, is now displayed in the **Condition** field(1). Save(2) the model to finish:



Lists

EI-CORE version number: 2.04.11.00
Document revision date: 2020-05-11

The **List** functionality in EI-CORE, provides an advanced entry point for managing multi-level listing. It consists of three main levels namely:

The **List** Models, the **List Attributes** and the **Table Viewer**. In most scenarios Lists will be used as a foundation for building content dependent rules for data.

For example, an inventory of toys in a Kindergarten could have the following form:

Each **List Model** holds a kind of toy in the kindergarten e.g.:

1) Cars
2) Lego bricks
3) Crayons

The **List Attribute** of the “Cars”-List shows the applicable parameters to Cars e.g.:

a) Color
b) Condition
c) Location

In the **Table Viewer** the possible/allowed formats of the attributes are defined:

Color:	**Condition:**	**Location:**
Red	As new	Storage
Green	Worn	Shelf
Blue	Broken	Playroom

Activity Manager

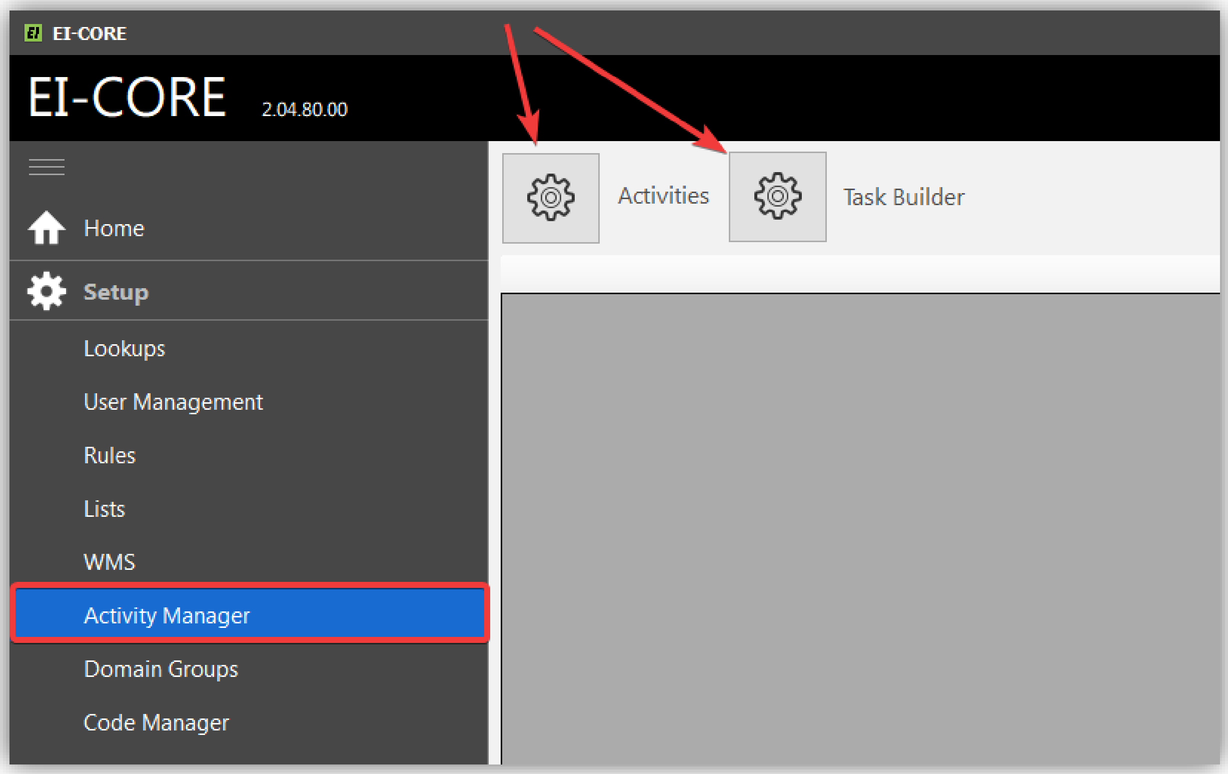
EI-CORE version number: 2.05.00.00
Document revision date: 2020-02-18

The **Activity Manager** offers the ability to append metadata to EI-core modules and use this data in multiple contexts.

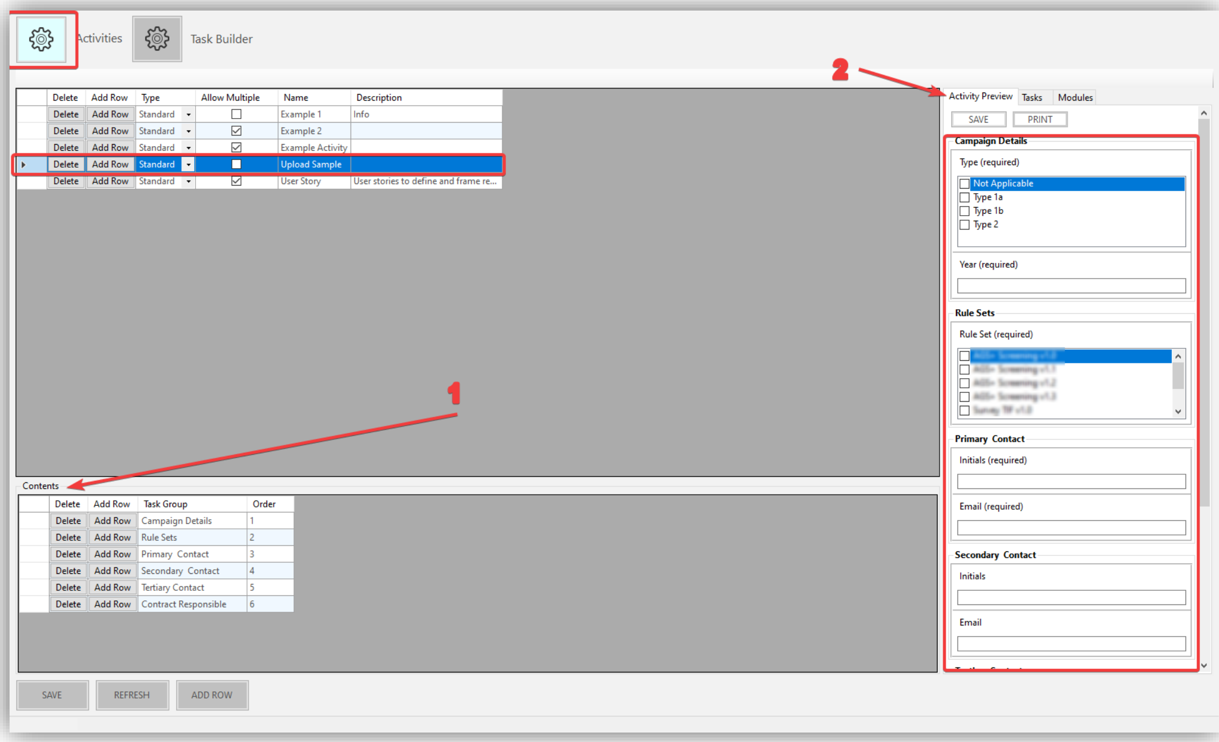
An **Activity** consists of a set of **Task Groups** each holding a number of individual **Tasks**.

A task can be a generic value or predefined in numerous ways both directly on creation of the task, and by drawing information from other EI-CORE modules such as **Lists** and **Rules.**

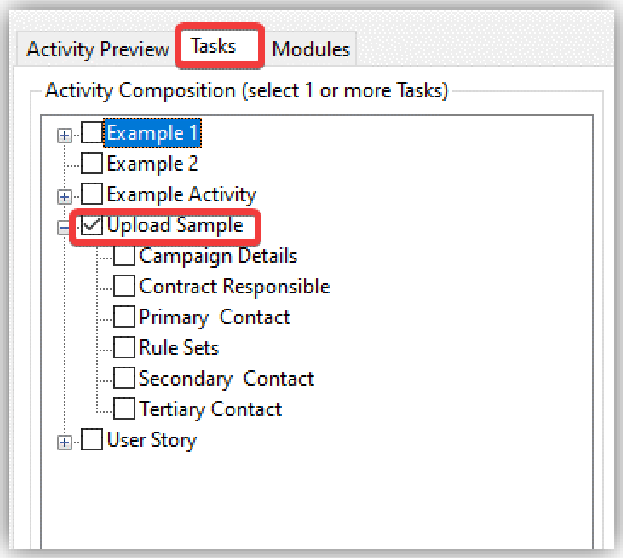
The **Activity Manager** module is located in the **Setup** menu. It consists of an **Activity overview** and a **Task Builder**:



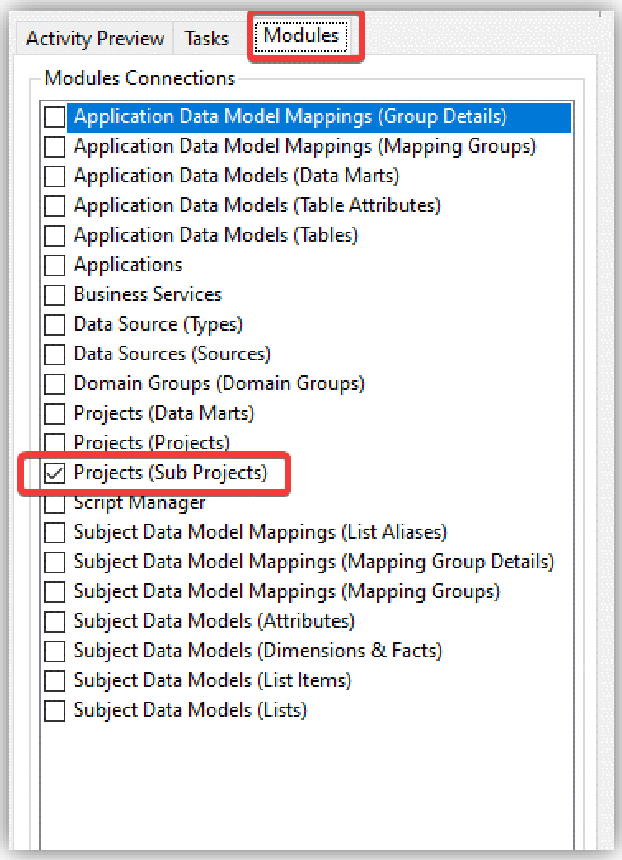
In the **Activities Menu**, highlighting a row displays a view of the content (1) and a preview of the Activities (2) as they will be assigned to the selected **module:**



In the **Tasks tab** activities are selected for assignment to a (selection of) module(s):

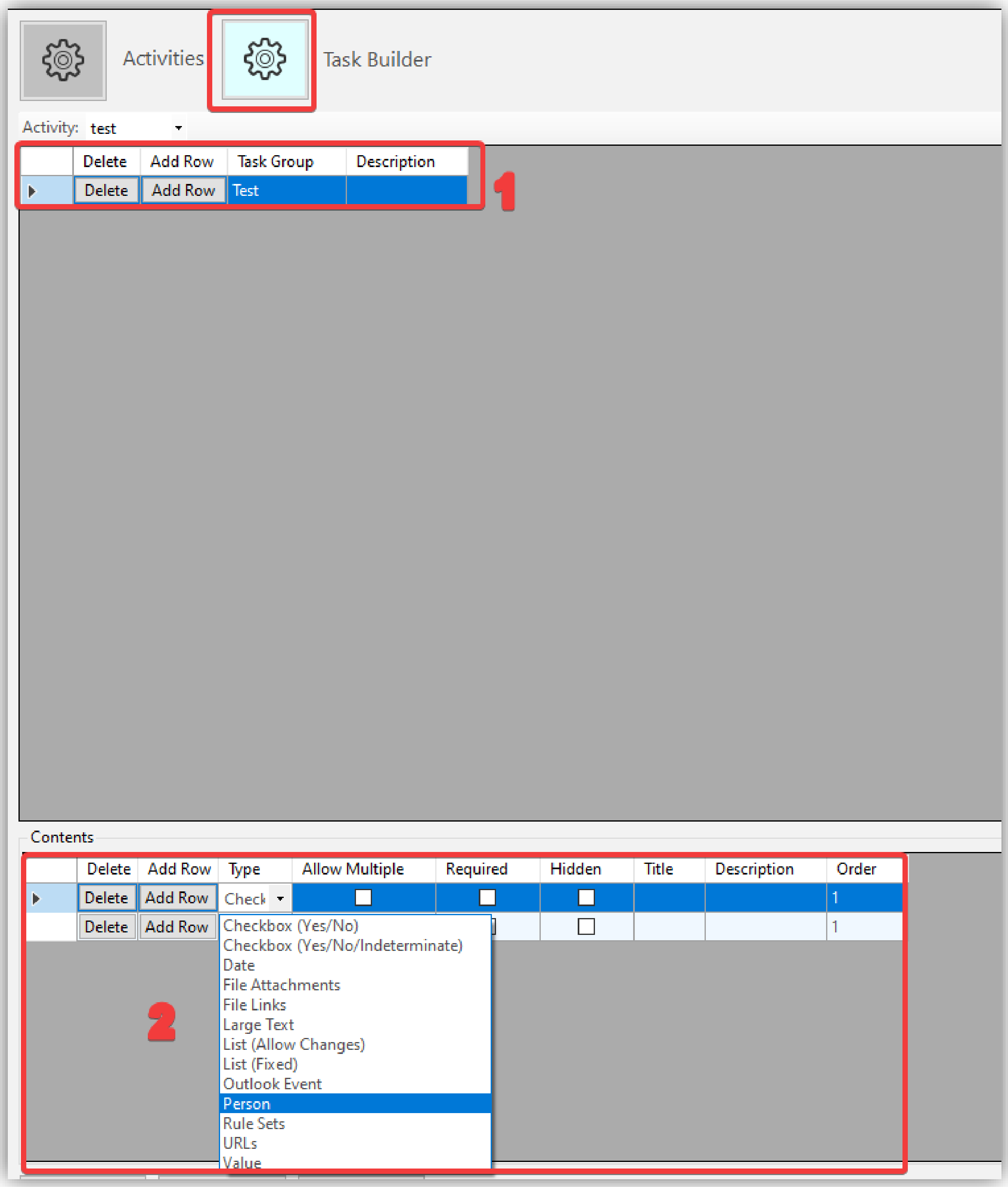


The **Modules Tab** selects the module(s) where to apply the Activities:

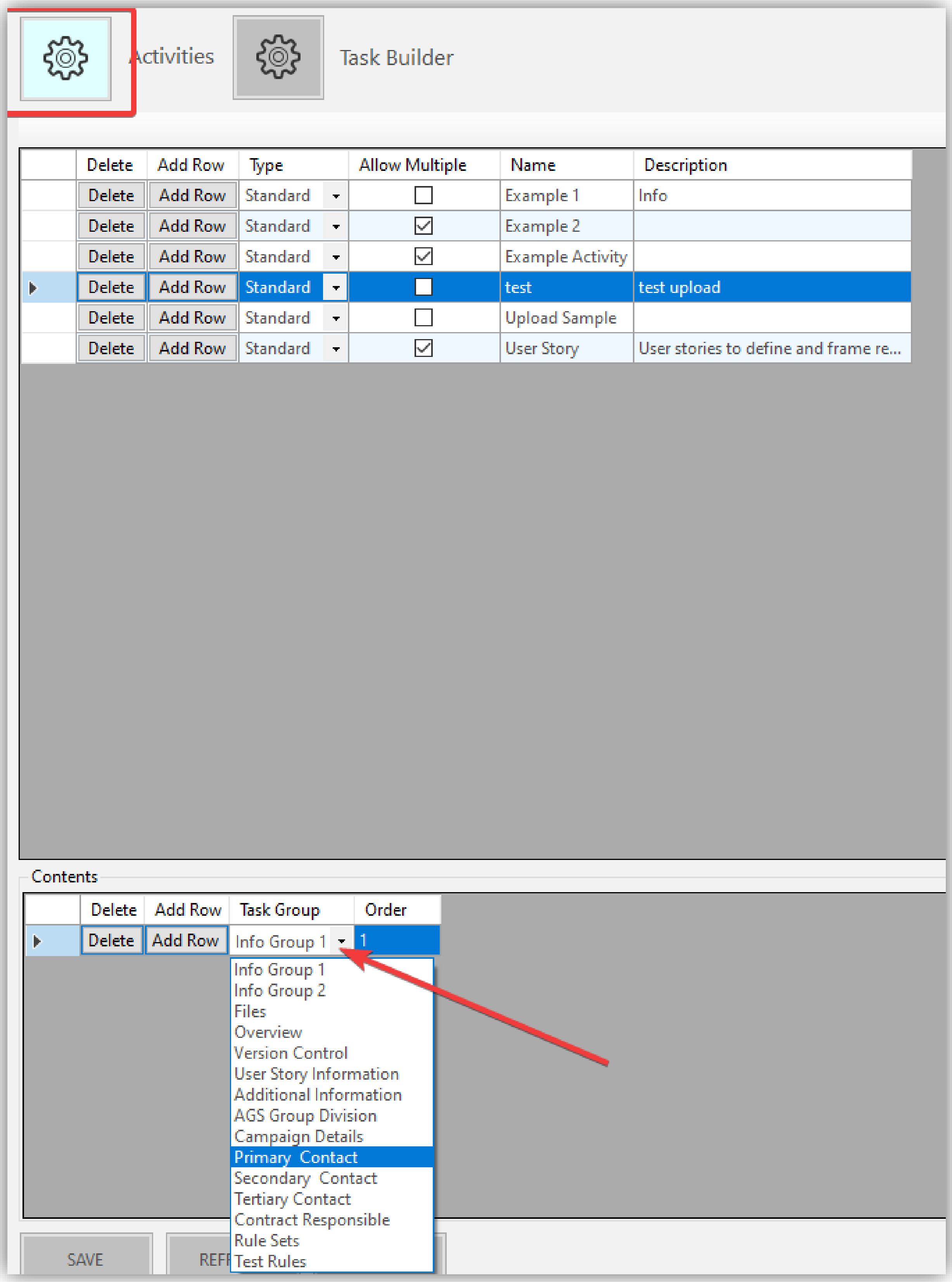


The **Task Builder** is used for assigning **new** content to an activity. Add or select the **Task Group** in the **Task pane** (1) and add new Content in the **Content Pane** (2).

The **Type** determines the functionality of the task. **Allow Multiple**, **Required** and **Hidden** allows for further customization of the task.


Activities
Task Builder
Activity: test
Delete
Add Row
Task Group
Description
Test
1
Contents
Type
Allow Multiple
Required
Hidden
Title
Order
Check
Checkbox (Yes/No)
Checkbox (Yes/No/Indeterminate)
Date
File Attachments
File Links
Large Text
List (Allow Changes)
List (Fixed)
Outlook Event
Person
Rule Sets
URLs
Value
2

Existing Task Groups can be assigned in the content view from the **Activity menu**:

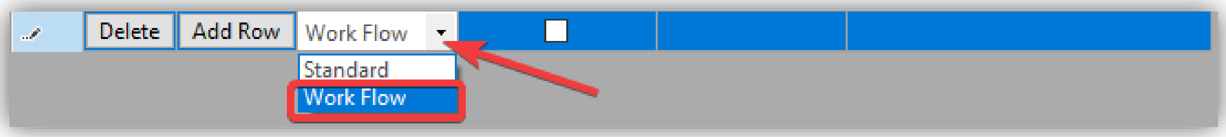

Activities
Task Builder
Delete
Add Row
Type
Allow Multiple
Name
Description
Standard
Example 1
Info
Example 2
Example Activity
test
test upload
Upload Sample
User Story
User stories to define and frame re...
Contents
Task Group
Order
Info Group 1
1
Info Group 2
Files
Overview
Version Control
User Story Information
Additional Information
AGS Group Division
Campaign Details
Primary Contact
Secondary Contact
Tertiary Contact
Contract Responsible
Rule Sets
Test Rules
SAVE

Work Flows in Activity Manager

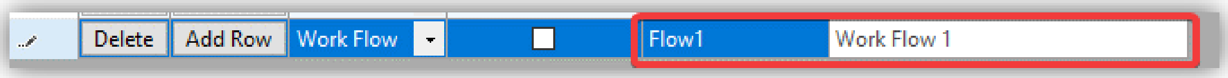
The Work Flow type activity, has a slightly different behavior than the standard activity. Where Standard activities provides a set of properties that can be assigned all at once to a module, the Work Flow properties are conditional. E.g: If a workflow has property A-B-C, Property A must be provided before property B that again is required for property C.

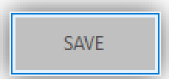
Create Work Flow

From the Activity Manager, select **Add Row** from the activities grid. Select **Work Flow** as type:

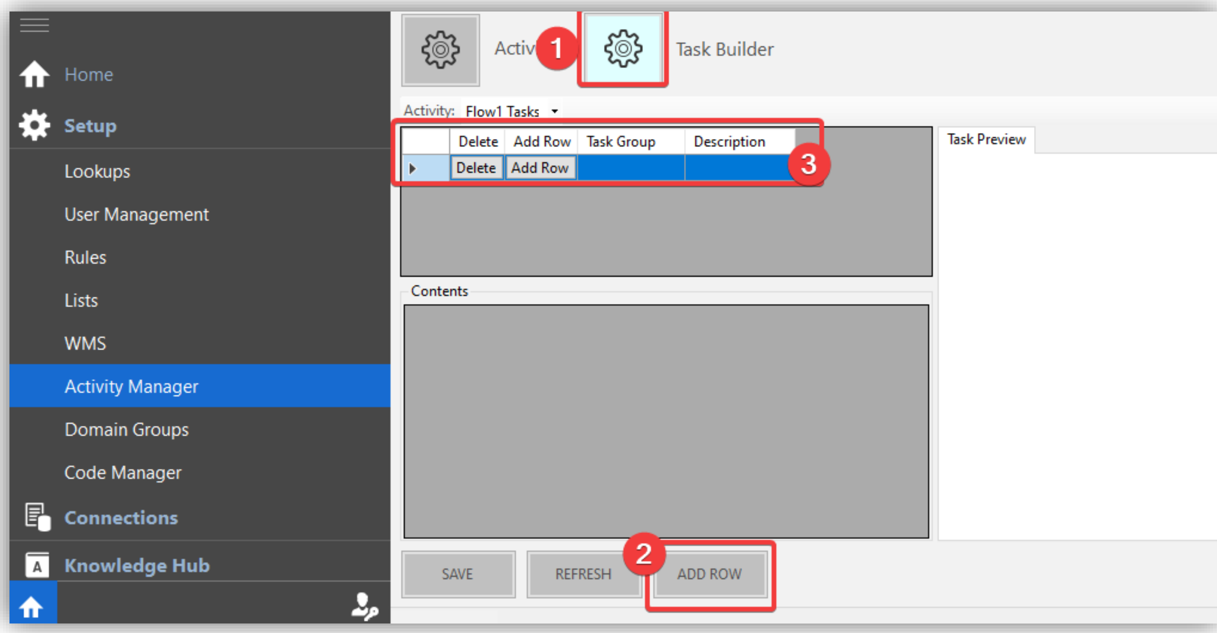


Provide Name and Description and save the activity:

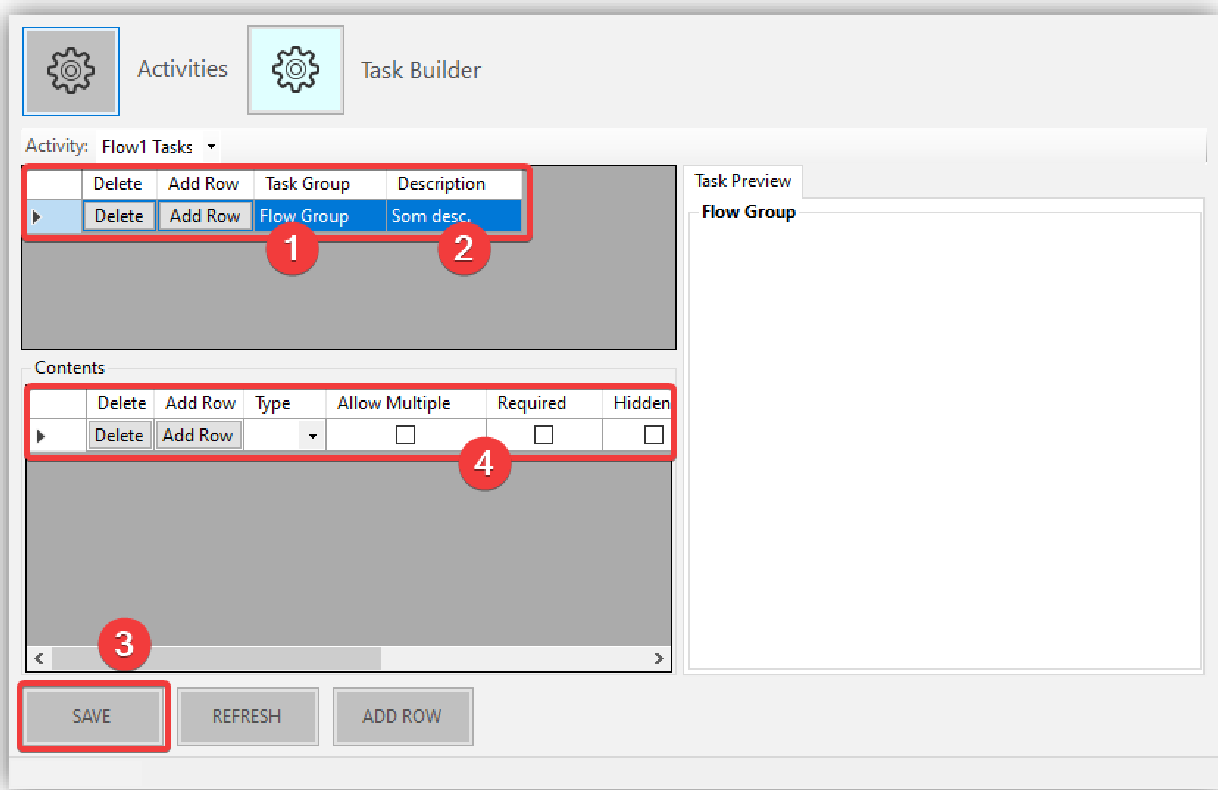




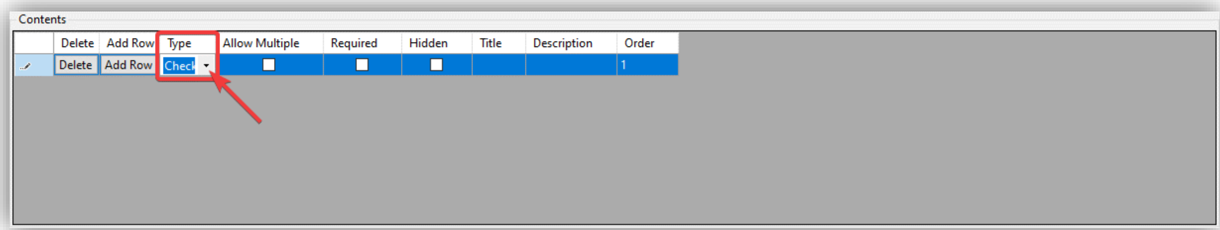
Highlight the new activity, go to **Task Builder(1)** and click **Add Row(2).** A new activity row(3) is now available:



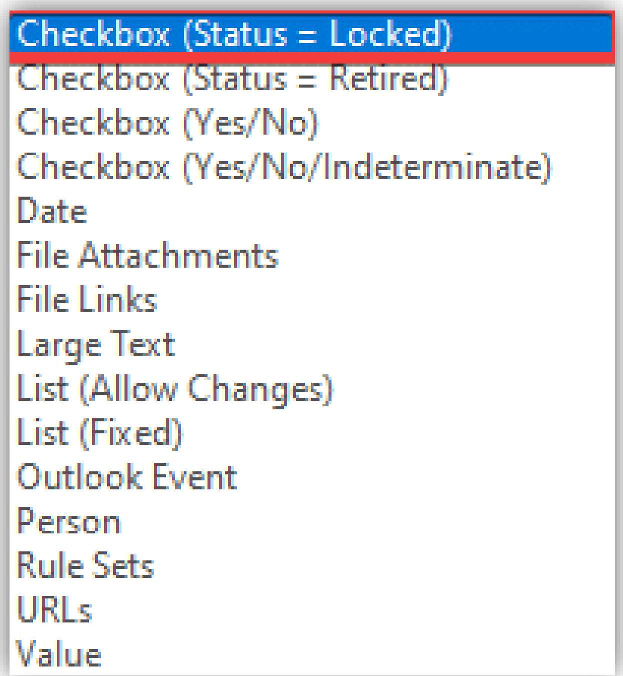
Provide Task Group Name(1) and – Description(2) and click **Save(3).** A new **Content Row(4)** is now available in the contents window:



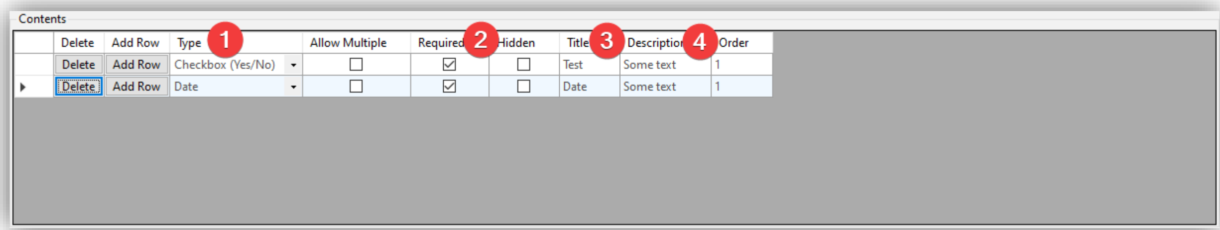
Expand the **Type drop-down menu**:



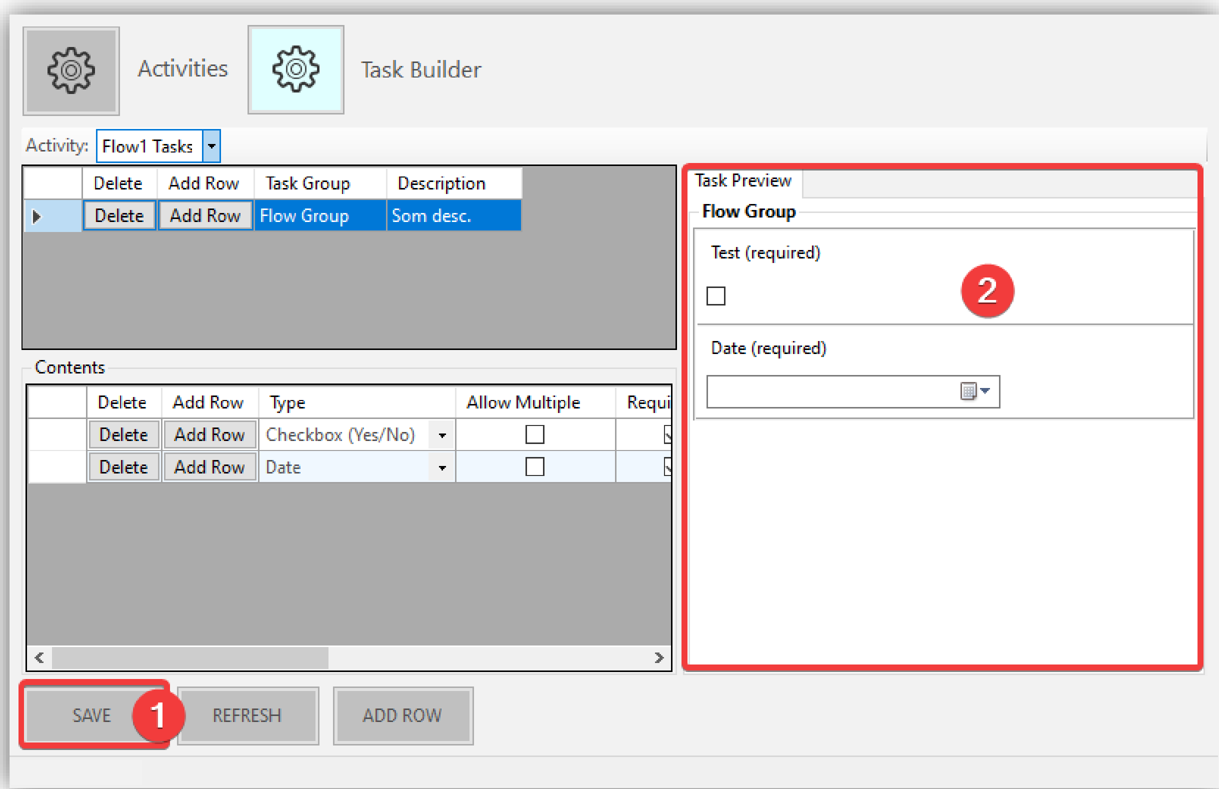
Select from the type menu. Notice the **Locked** type Checkbox. This type allows for version-locking of the target schema through the work-flow:



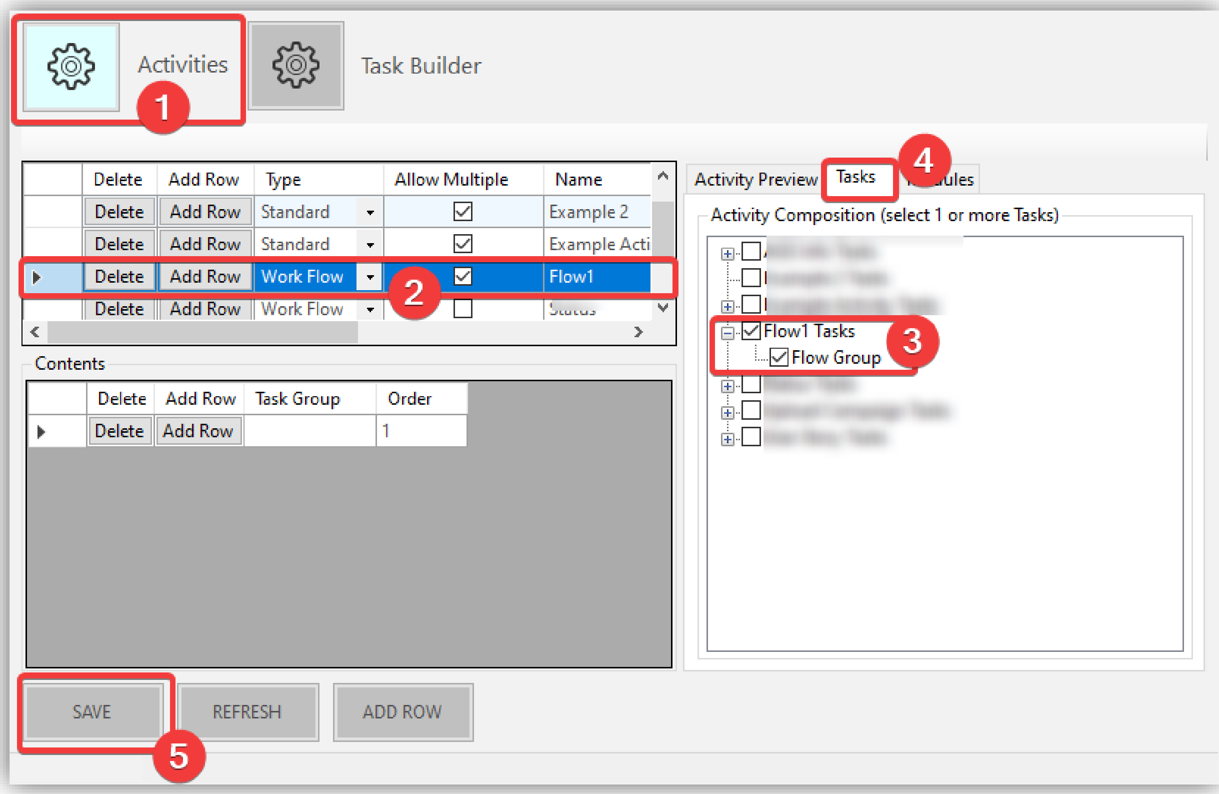
Once desired type(1) I selected, mark the **Required** check-box(2) Failing to do so, may cause unexpected behavior from the workflow. Provide **Title** and **Description.** Add additional workflow-items at will.



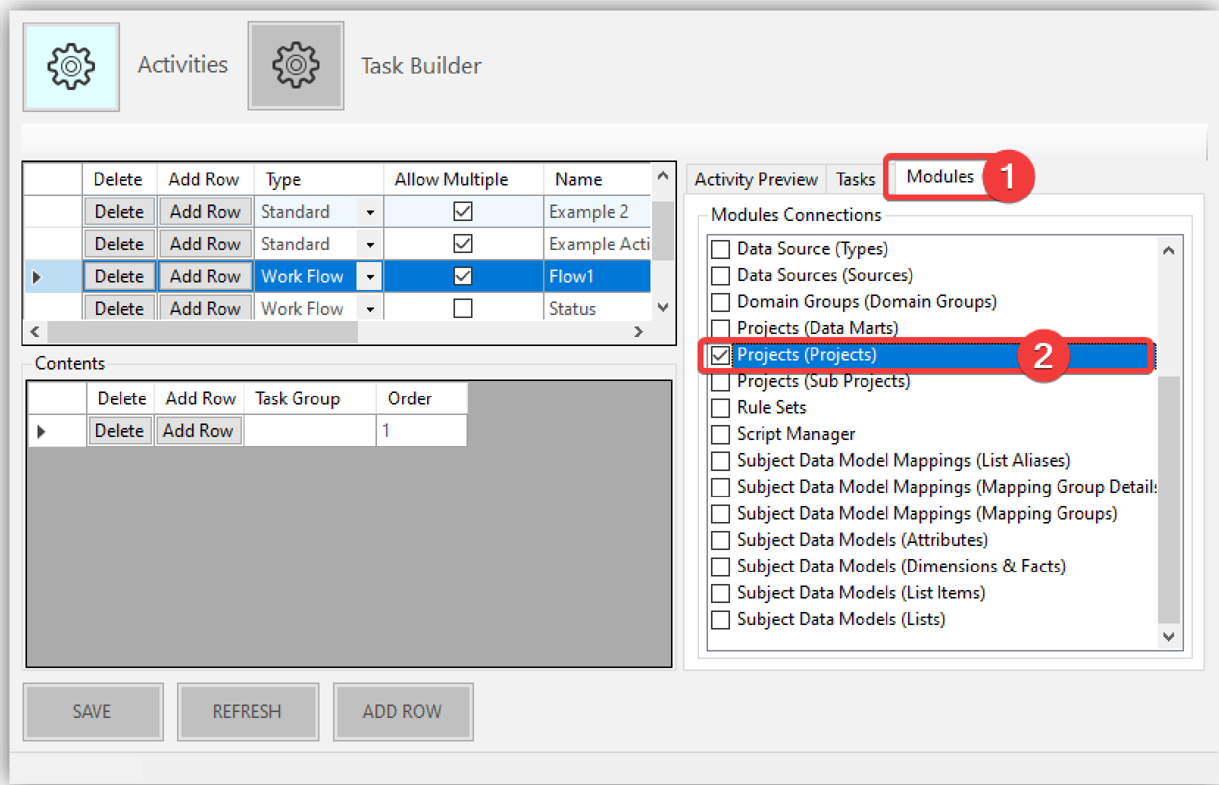
Save (1) when done. The work flow-steps will be displayed in the preview pane (2) Add additional Task Groups if desired:



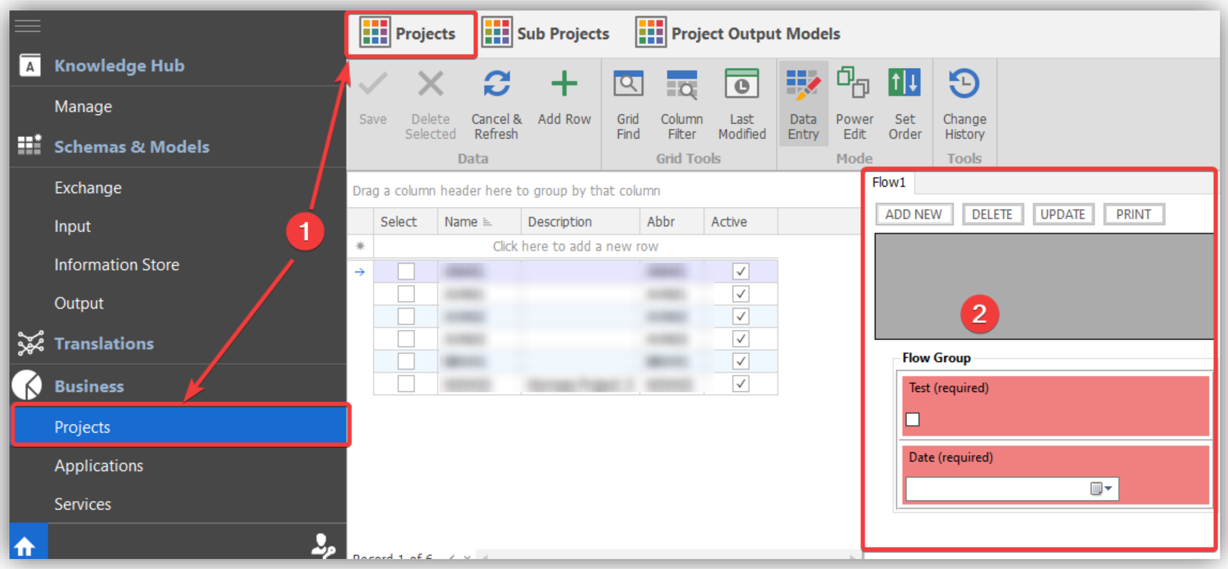
Return to the **Activities view(1)**. Highlight the work-flow activity (2) and assign the new task(3) from the task tab(4). Save(5) when done:



Navigate to the **Modules tab(1)** and select the target module(2). Remember to save:



Navigate to the target module(1)(In this example the projects module). The new work flow is now applied to the module(2):

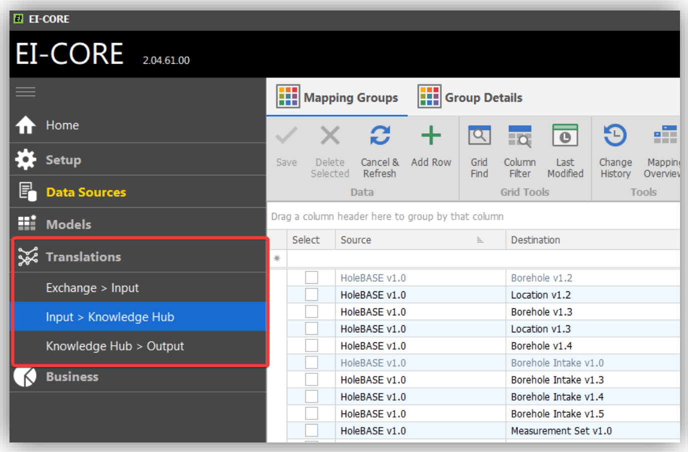

Knowledge Hub
Manage
Schemas & Models
Exchange
Input
Information Store
Output
Translations
Business
Projects
Applications
Services
Projects
Sub Projects
Project Output Models
Save
Delete Selected
Cancel & Refresh
Add Row
Data
Grid Find
Column Filter
Last Modified
Grid Tools
Data Entry
Power Edit
Mode
Set Order
Change History
Tools
Drag a column header here to group by that column
Select
Name
Description
Abbr
Active
Click here to add a new row
Flow1
ADD NEW
DELETE
UPDATE
PRINT
Flow Group
Test (required)
Date (required)
1
2

Group- and filter functionality

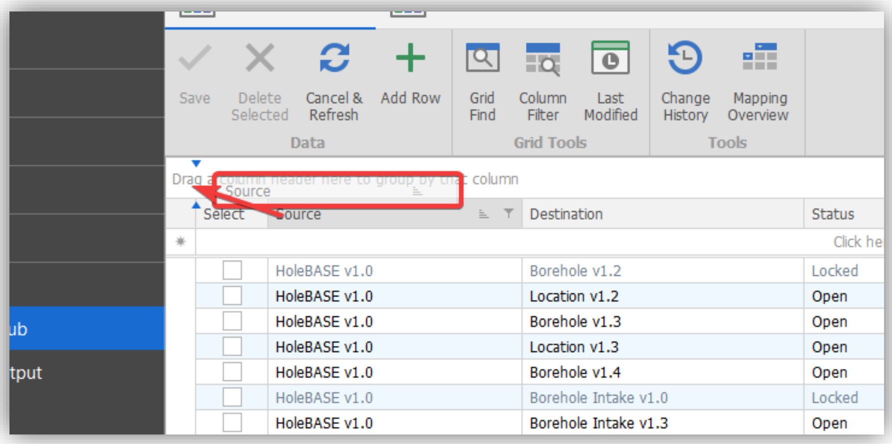
EI-CORE version number: 2.04.61.00
Document revision date: 2019-12-13

As from EI-CORE version 2.04.61.00, The design-view is replaced by **Translations** and split up into three subcategories namely: **Exchange>input**, **Input>Knowledge Hub** and **Knowledge hub>Output**. It comes with a highly customizable search- and filter functionality.

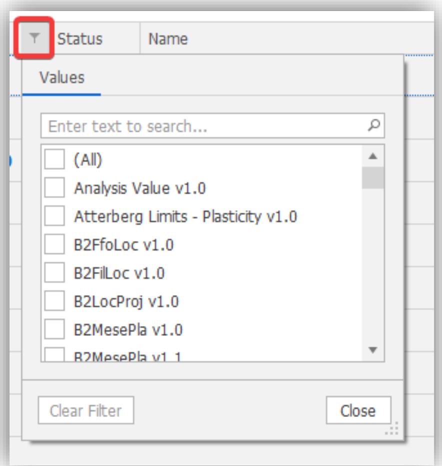
1 Mapping Groups are located in the "Translations" Menu:



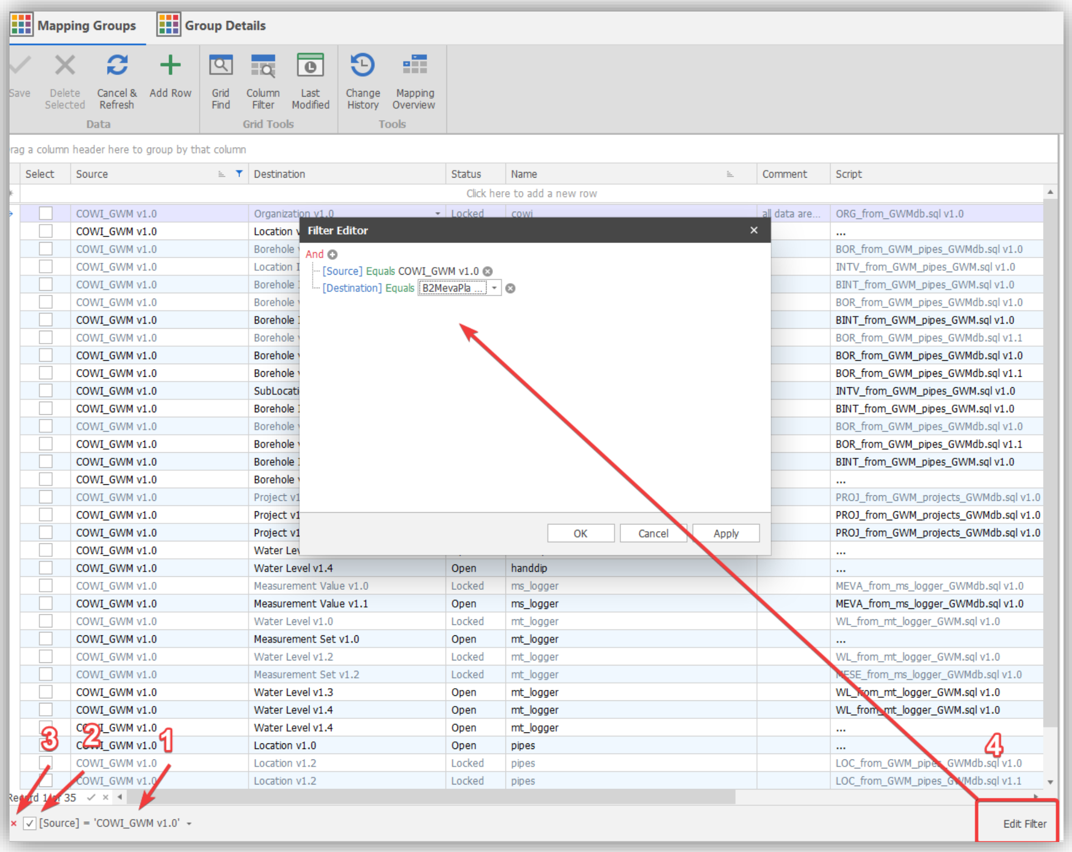
2 To group a table by columns, Drag desired Column Header to the **Group line** over the cokumn headings:



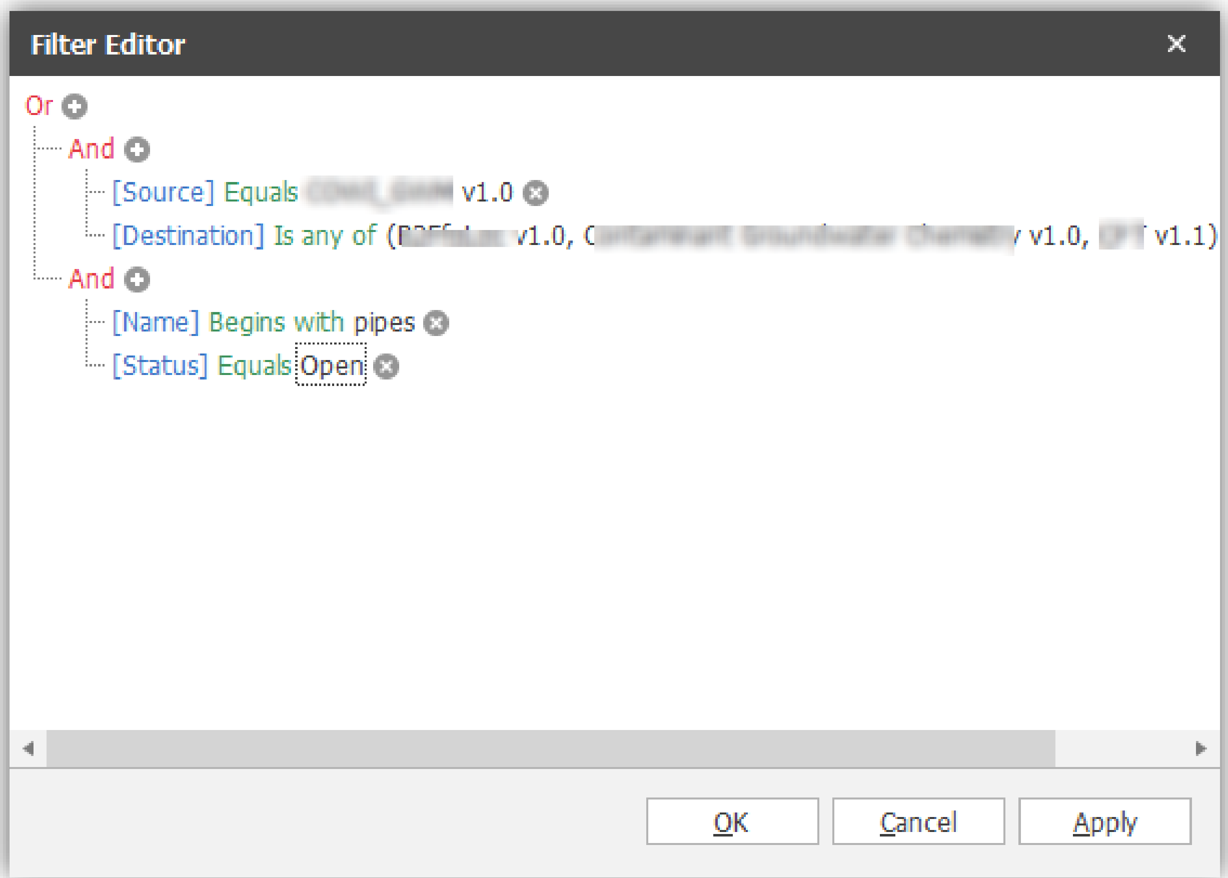
3 When mouse I hovered over a column heading a filter icon appears. Click **filter icon** to filter by column:



4 Once a filter is applied, value can be changed(1), filter can be toggled on/off(2) or deleted(3). Select **Edit Filter**(4) to open advanced filter editing:



5 Customize filter as desired in the Filter Editor:

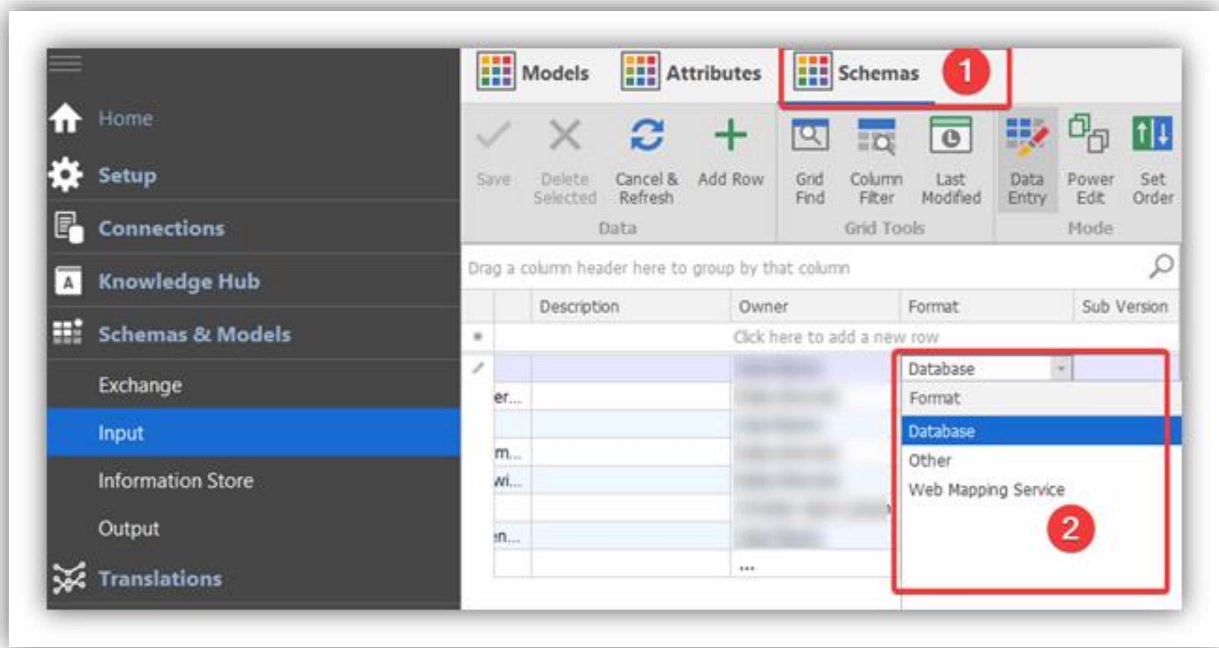


Data Sources and Connections

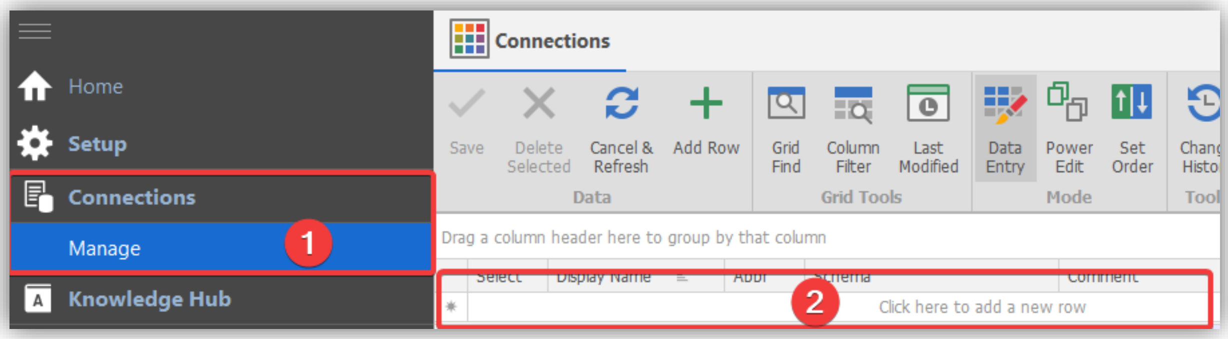
EI-CORE version number: 2.05.00.00
Document revision date: 2020-02-06

The **Exchange- Input-** and **Output schemas**, are local representations of external resources. In order to apply data from EI-CORE to production data from an external resource a **Connection** must be made to that resource.

Select appropriate **Format(2)** for the schema(1):



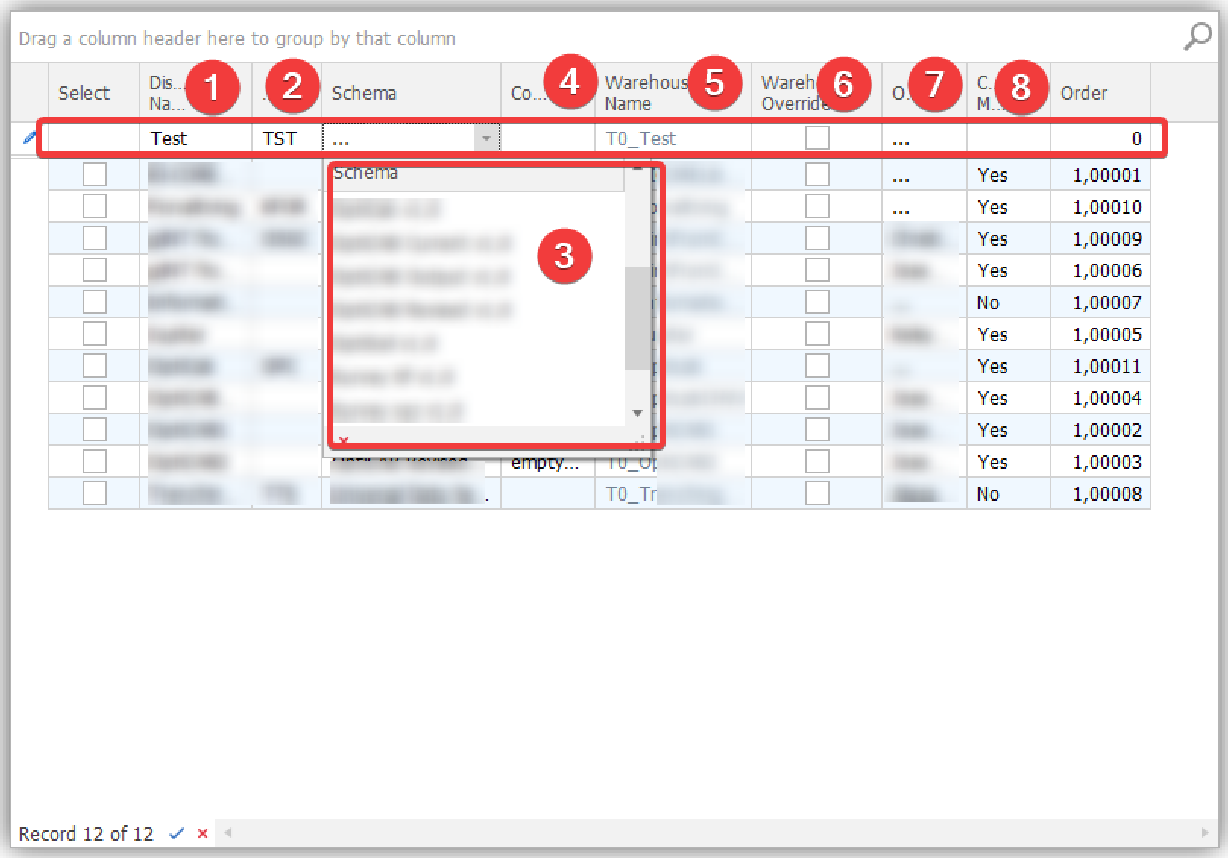
The connections are managed from the **Connections Menu(1).** To set a new connection, add a new row(2):



Enter **Display Name(1)** and **Abbreviation(2)**. Now choose a **Schema(3)** from the drop-down menu(4) to connect from. Warehouse Name(5) is automatically generated by EI-CORE, but in order to assign a custom warehouse name, the **Warehouse Override** box(6) can be checked and the Warehouse name can now be edited. If the override box is again unchecked, the custom name will be deleted and default to the auto generated name.

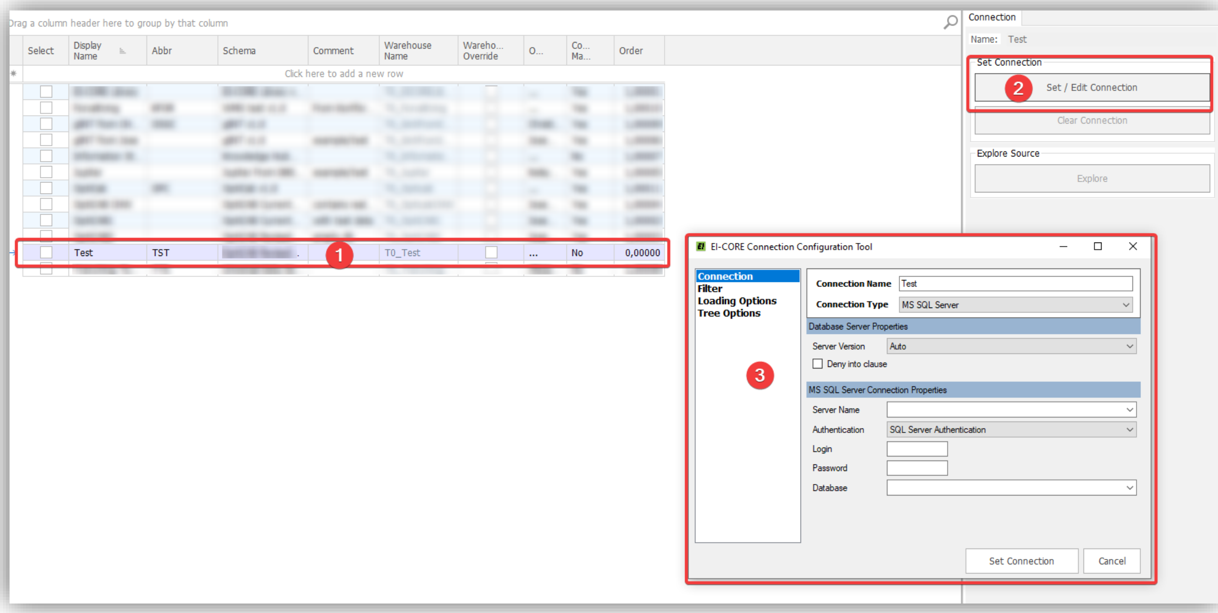
Apply an owner(7) at will. (8) indicates if a connection has been made.

Save when all is done.



Set connection properties, by highlighting the appropriate Connection(1) and select **Set / Edit Connection** from the connection tab(2). In the **Connection Configuration Tool** window; enter Connection Properties as provided by the external resource manager.

Filter-options and other connection settings are available from the menu o the left(3).


Drag a column header here to group by that column
Select
Display Name
Abbr
Schema
Comment
Warehouse Name
Wareho... Override
O...
Co... Ma...
Order
Click here to add a new row
Test
TST
T0_Test
No
0,00000
1
Connection
Name: Test
Set Connection
2
Set / Edit Connection
Clear Connection
Explore Source
Explore
EI-CORE Connection Configuration Tool
Connection
Filter
Loading Options
Tree Options
3
Connection Name
Test
Connection Type
MS SQL Server
Database Server Properties
Server Version
Auto
Deny into clause
MS SQL Server Connection Properties
Server Name
Authentication
SQL Server Authentication
Login
Password
Database
Set Connection
Cancel

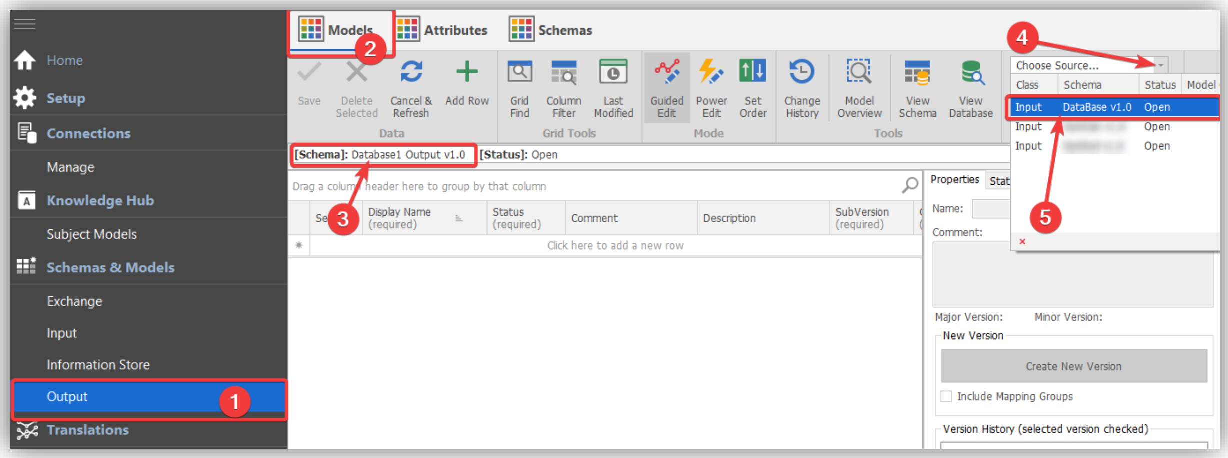
Generate Models from Source

EI-CORE version number: 2.05.28.00
Document revision date: 2020-04-07

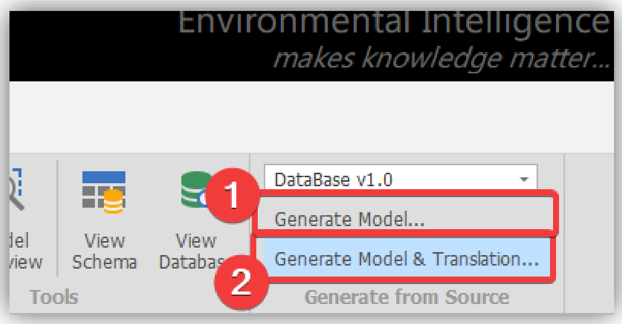
From EI-CORE version 2.05.28 it is possible to generate Output Models based on Input Models.

Generate output model:

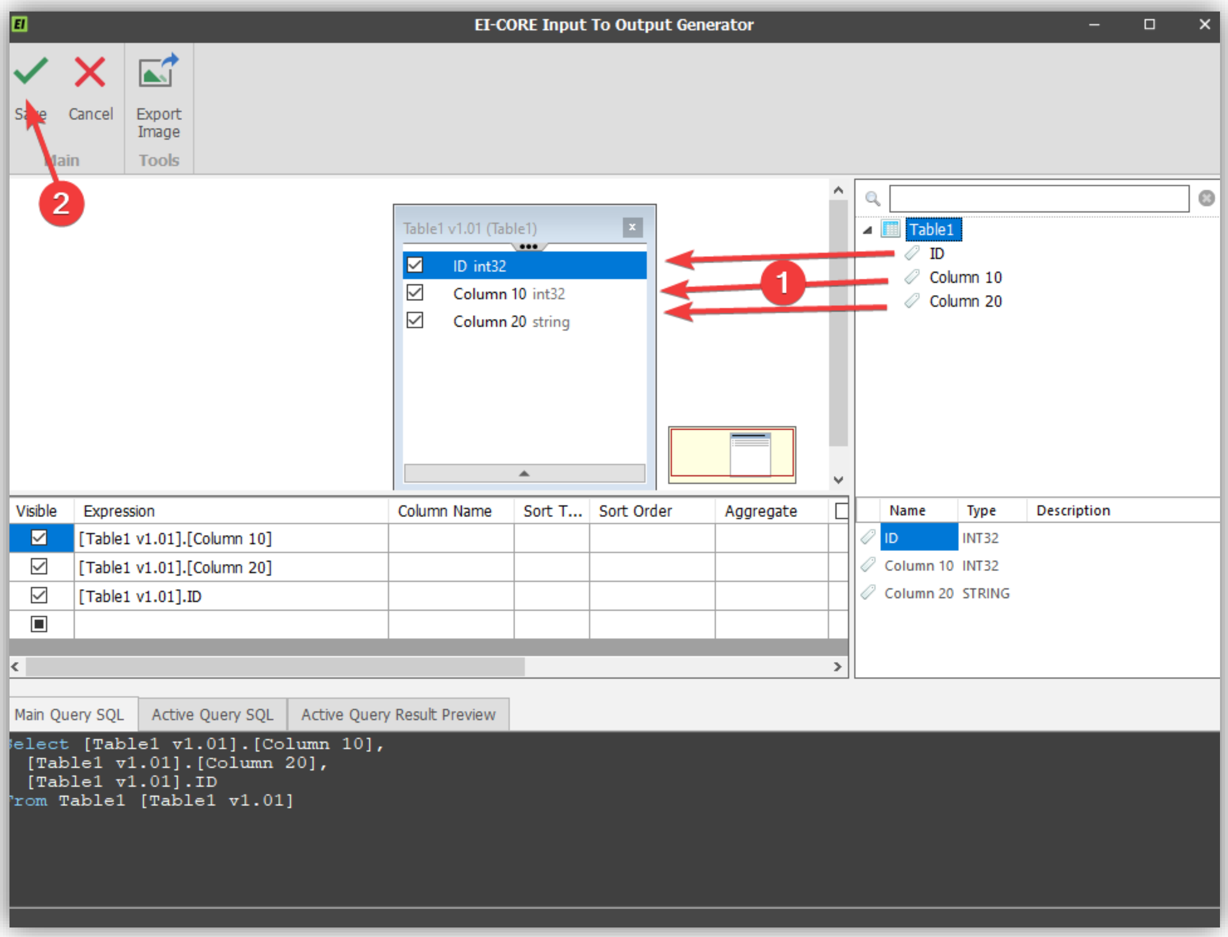
Navigate to **Output Models(1)**, **Models(2).** Select the desired **Output Schema(3)** and choose appropriate **Input Schema** as source(4,5):



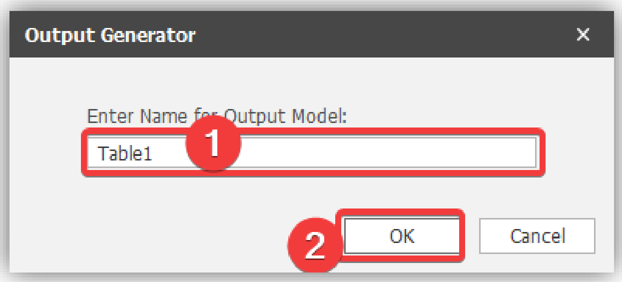
Select weather to generate output model only(1) or to **map** the input- and output model in the process(2):



Select the desired attributes from the Source model in the Query-window by dragging (or dubble-clicking) them from the right- to the main pane(1). Save(2) when done:



Enter Output Model Name(1) and save(2):



Done! The new Output Model has been created along with the mapping between Input and Output if that has been selected.

Synchronize input model with external source

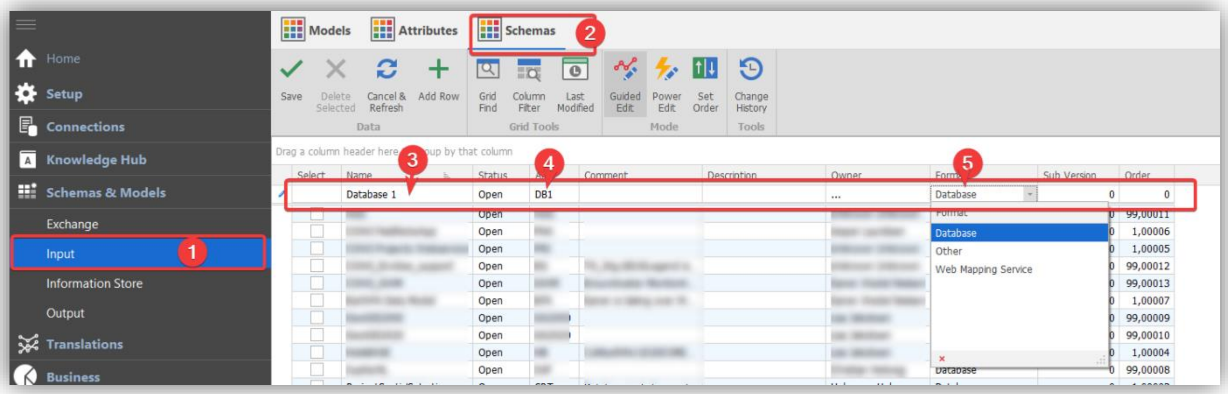
EI-CORE version number: 2.05.51.00

Document revision date: 2020-04-24

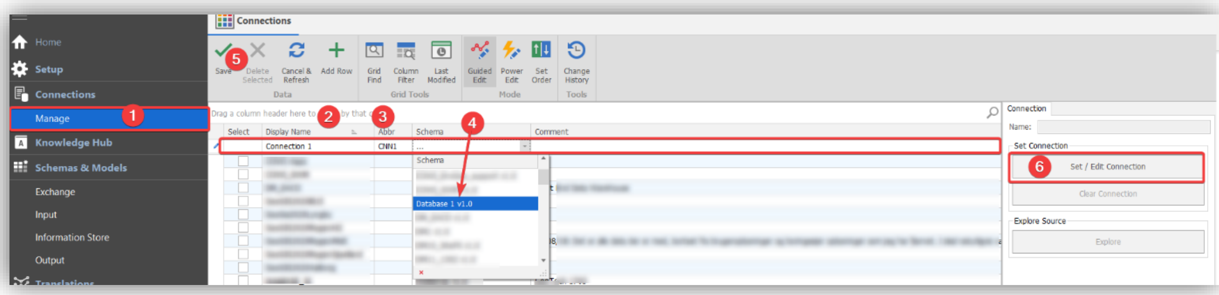
When a connection has been made from EI-CORE to an external source, EI-CORE can import and synchronize from the external source.

Create Input model:

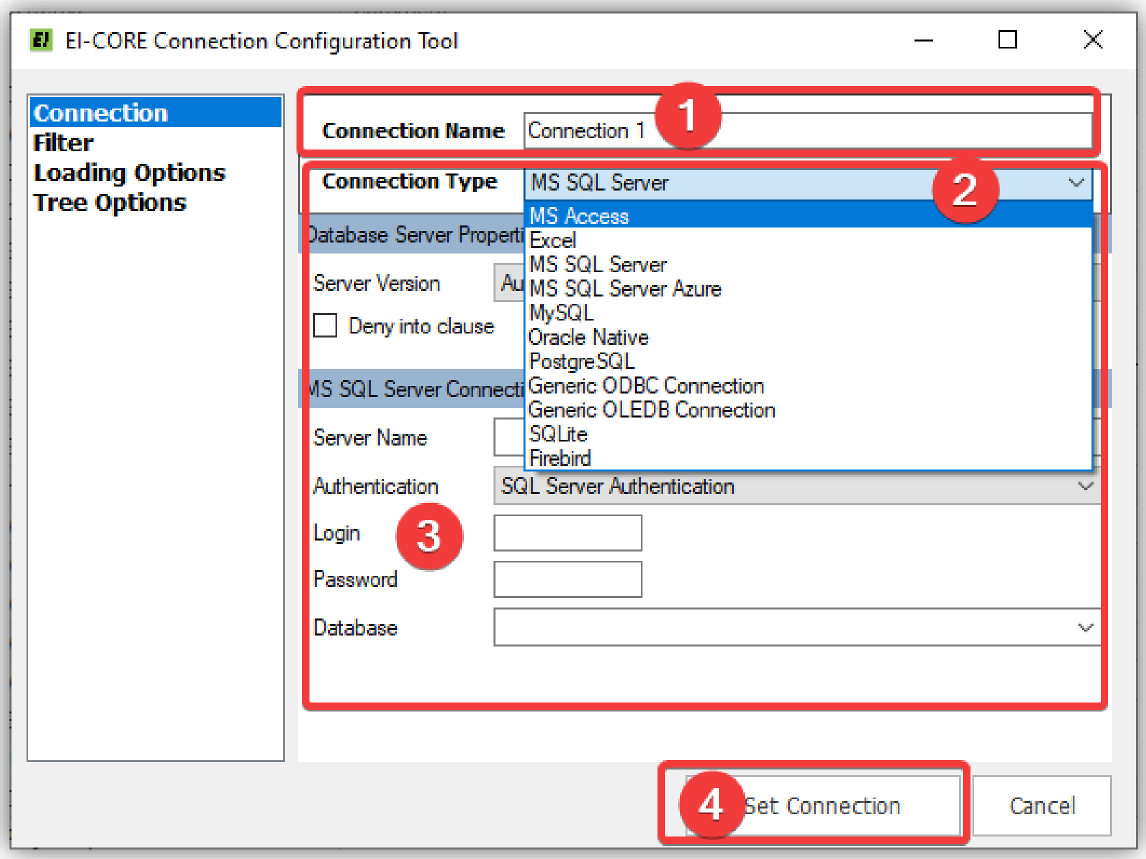
Navigate to **Input(1)** under **Schemas & Models.** Select **Schemas(2)** and start editing a new row, providing **Name(3)** and **Abbriviation**(4). Apply Comment, Description and owner at will. Now select **Format(5)** from the drop-down menu. **Save** when done:



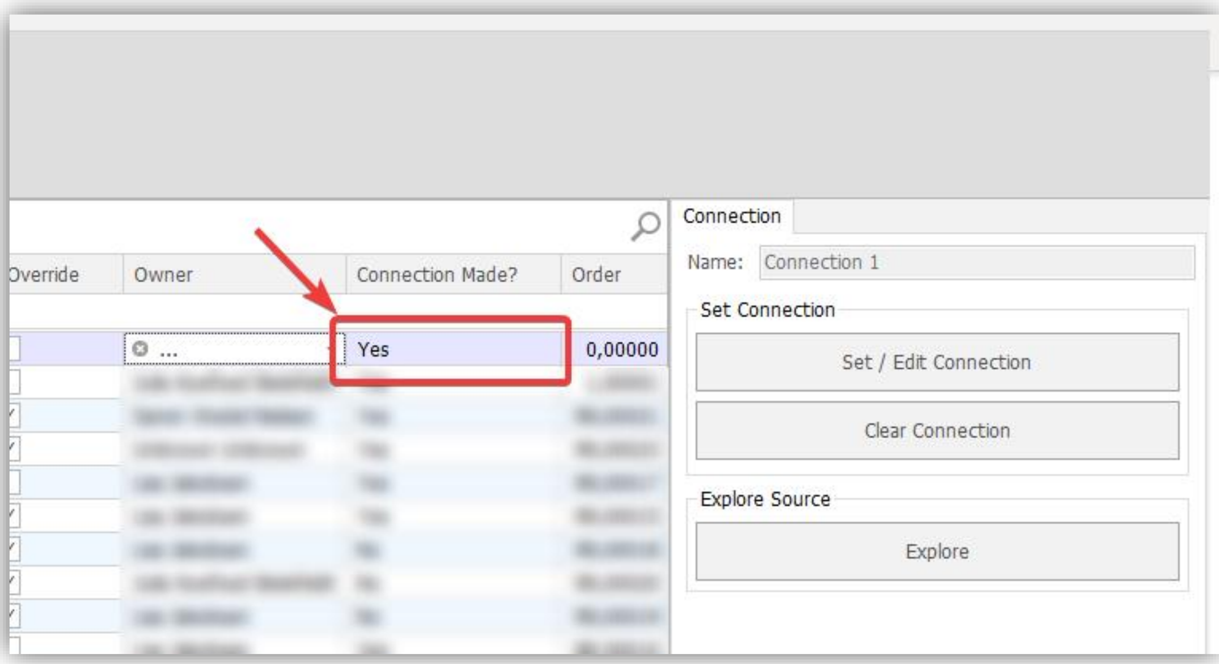
Navigate to Manage **Connections(1)** and create a new connection providing **Display Name(2)** and **Abbriviation**. Select the**Schema(4)** created previously. **Save(5)** the schema and select **Set/Edit Connection(6):**



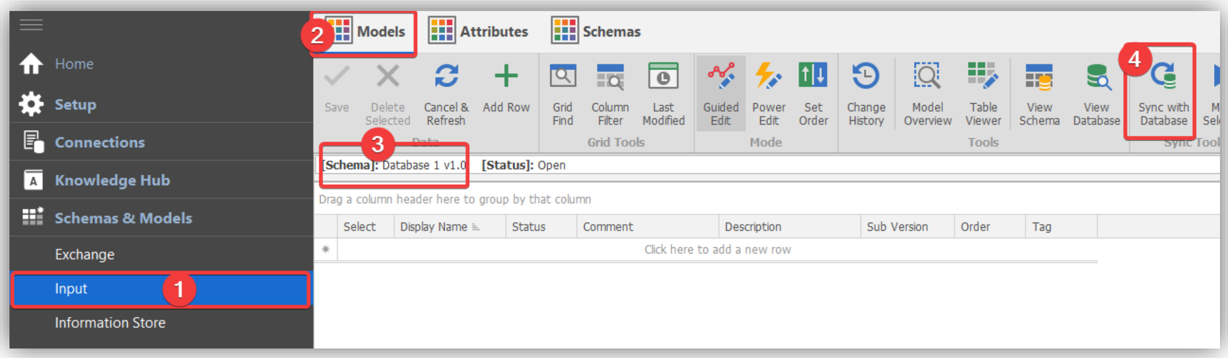
In the Connection Configuration Tool, provide **Connection name**(1) and -**Type**(2). Provide required credentials(3). Select **Set Connection(4):**



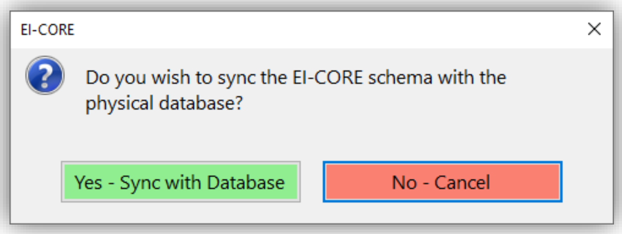
Notice that a connection has now been made:



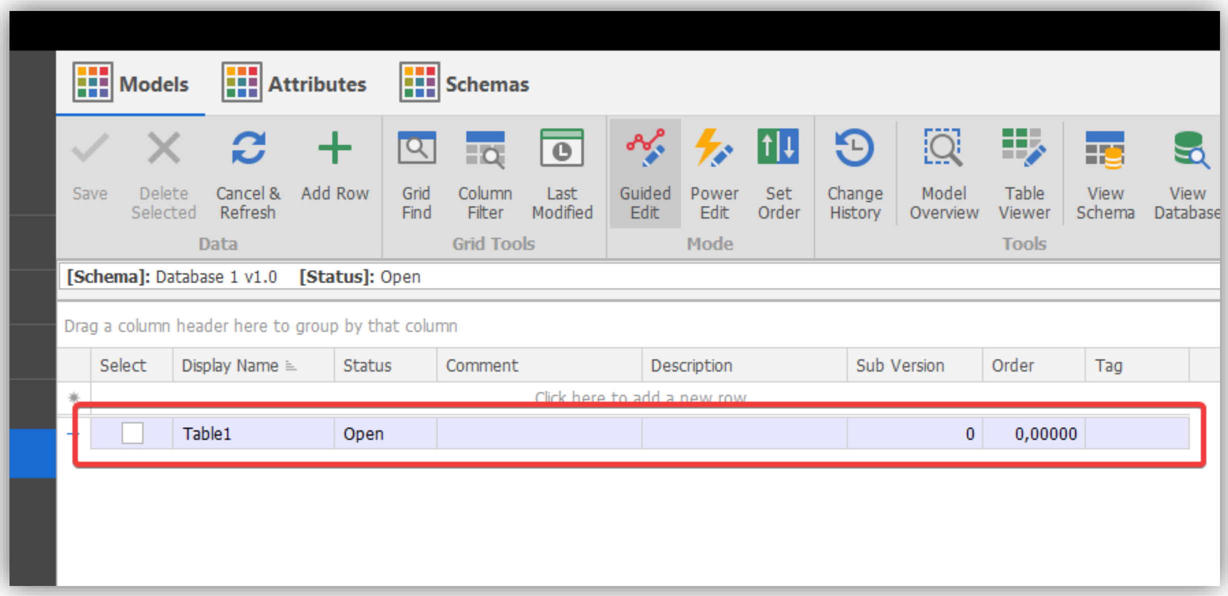
Navigate back to **Input Models(1)(2)** and select the new Database Schema(3). And click the **Sync with Database button(4)**



Answer Yes in the prompt:



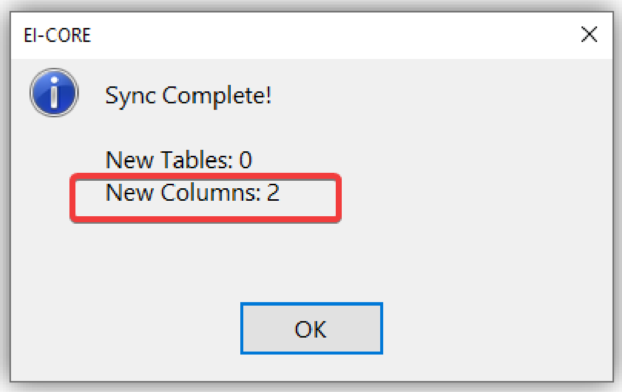
The input model will now update with the contents from the source:



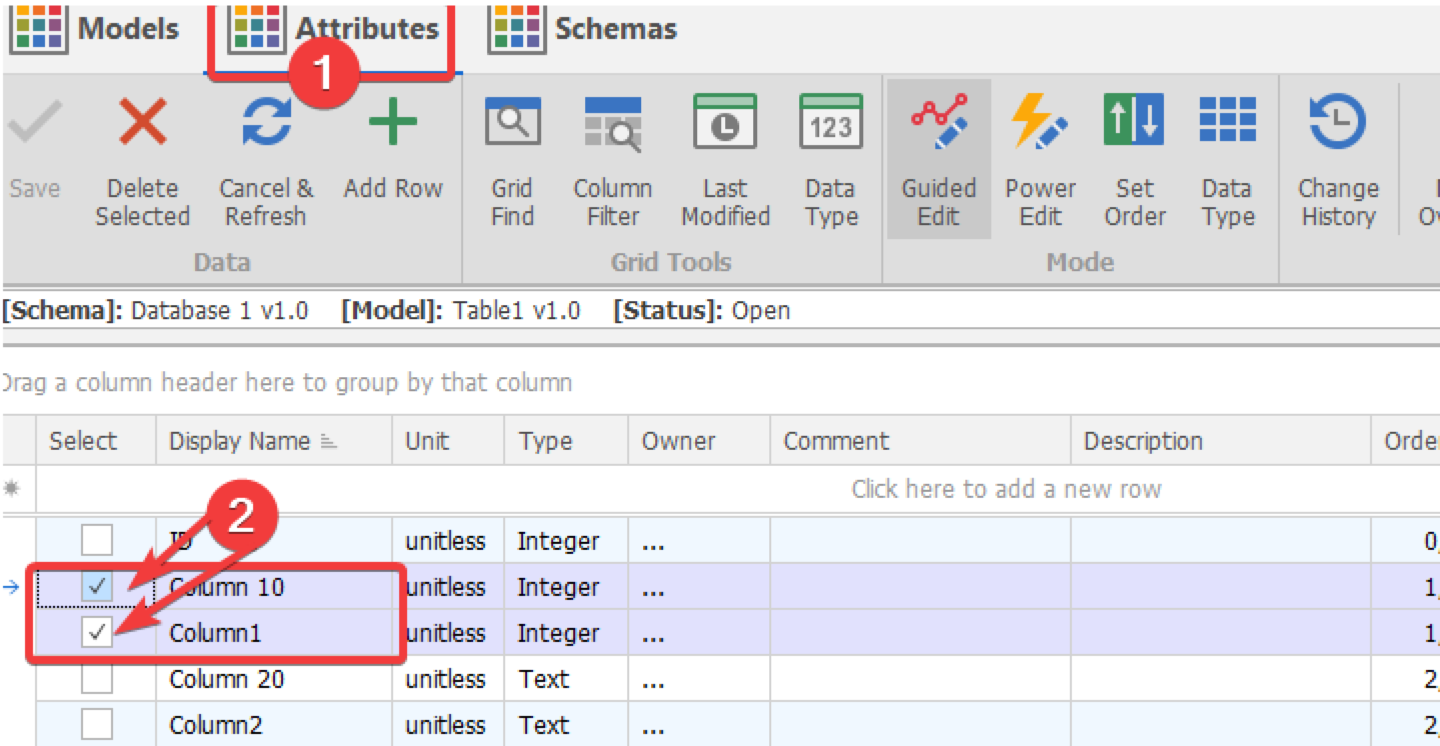
Merging Data

If an external source has its data changed, EI-CORE will import the altered data as new rows upon synchronization.

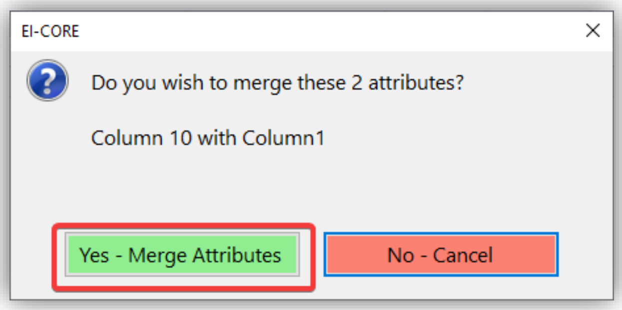
In this case the columns in the external database has been renamed from "column 1" and "column 2" to "column 10" and "column 20". When synchronizing the database once again the following notification is shown:



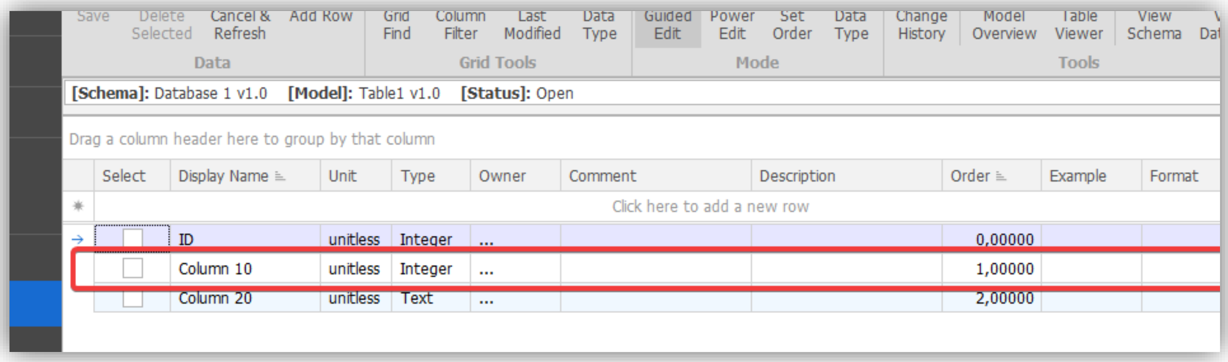
Click **OK** and navigate to the **Attributes** section(1). Select the rows that shall be merged(2), and click **Merge Selected(3).**



Accept the merge:

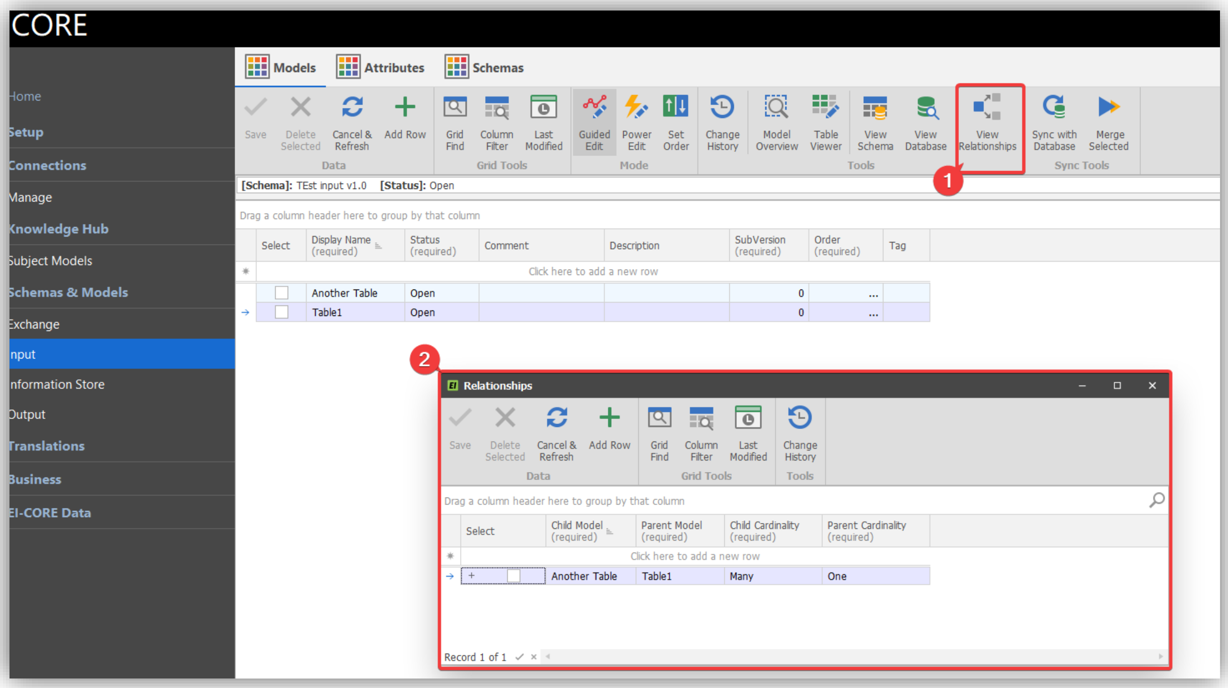


EI-CORE will now overwrite the **name** and the **type** from the newly added row into the already existing row:



Viewing Relationships

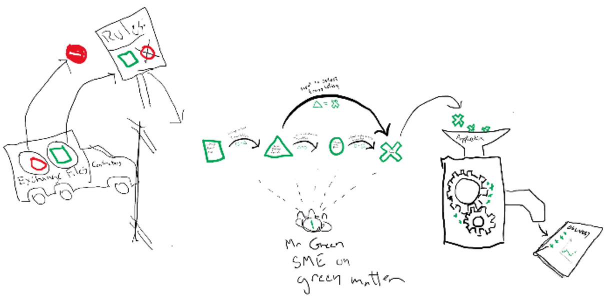
As from EI-CORE version 2.05.50.00 the external table relationships are imported as well. Once synchronized, select the **View Relationships** button(1) to open the relations window(2). It is also possible to edit the relationship between the imported models, but this will usually cause a mismatch between the EI-CORE representation and the original database and is under most circumstances not recommended.


CORE
Home
Setup
Connections
Manage
Knowledge Hub
Subject Models
Schemas & Models
Exchange
Input
Information Store
Output
Translations
Business
EI-CORE Data
Models
Attributes
Schemas
Save
Delete Selected
Cancel & Refresh
Add Row
Grid Find
Column Filter
Last Modified
Guided Edit
Power Edit
Set Order
Change History
Model Overview
Table Viewer
View Schema
View Database
View Relationships
Sync with Database
Merge Selected
Data
Grid Tools
Mode
Tools
Sync Tools
[Schema]: TEst input v1.0 [Status]: Open
Drag a column header here to group by that column
Select
Display Name (required)
Status (required)
Comment
Description
SubVersion (required)
Order (required)
Tag
Click here to add a new row
Another Table
Open
Table1
1
2
Relationships
Child Model (required)
Parent Model (required)
Child Cardinality (required)
Parent Cardinality (required)
Many
One
Record 1 of 1

Translations

EI-CORE version number: 2.05.25.00
Document revision date: 25-03-2020

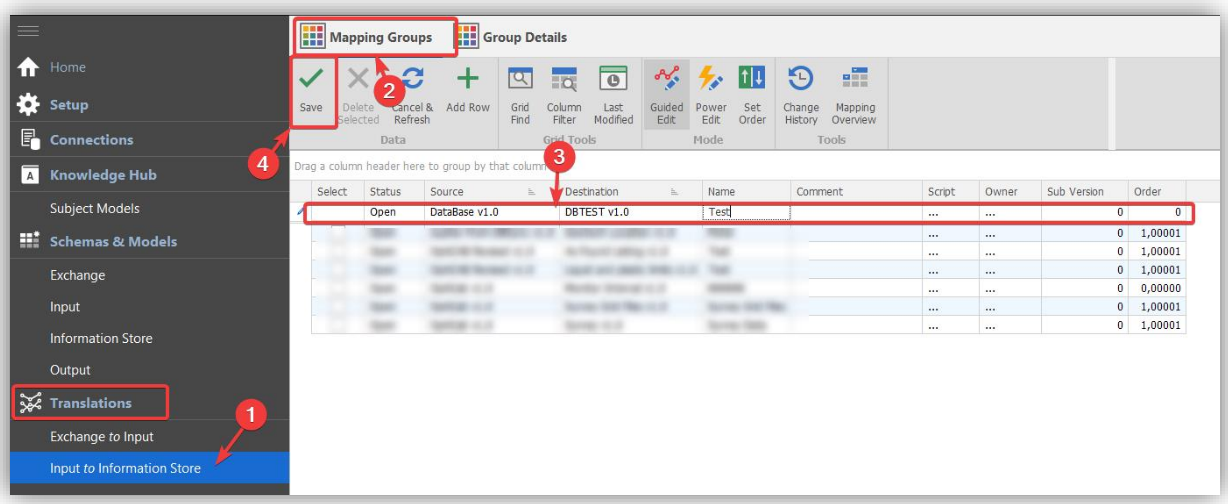
Translations is the mapping and transformation of data between models. It may be a simple identification (e.g.: Data x in model 1 is the same as data y in model 2) or it may involve transformation of data (e.g.: Data x in model 1 is the same as half of data y in model 2):



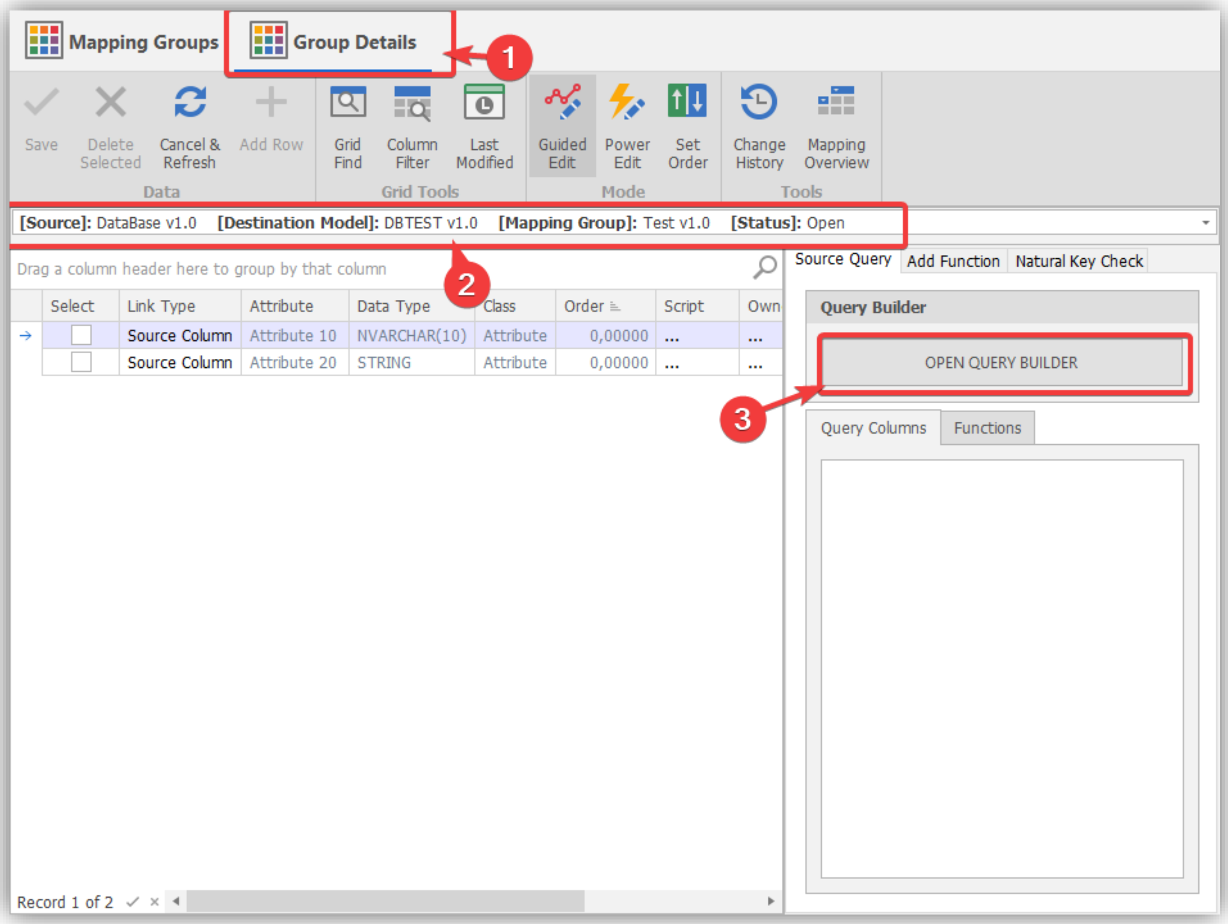
Translations can be set by either a predefined script, or by using EI-CORE’s build in **Query builder**

Translations using Query Builder

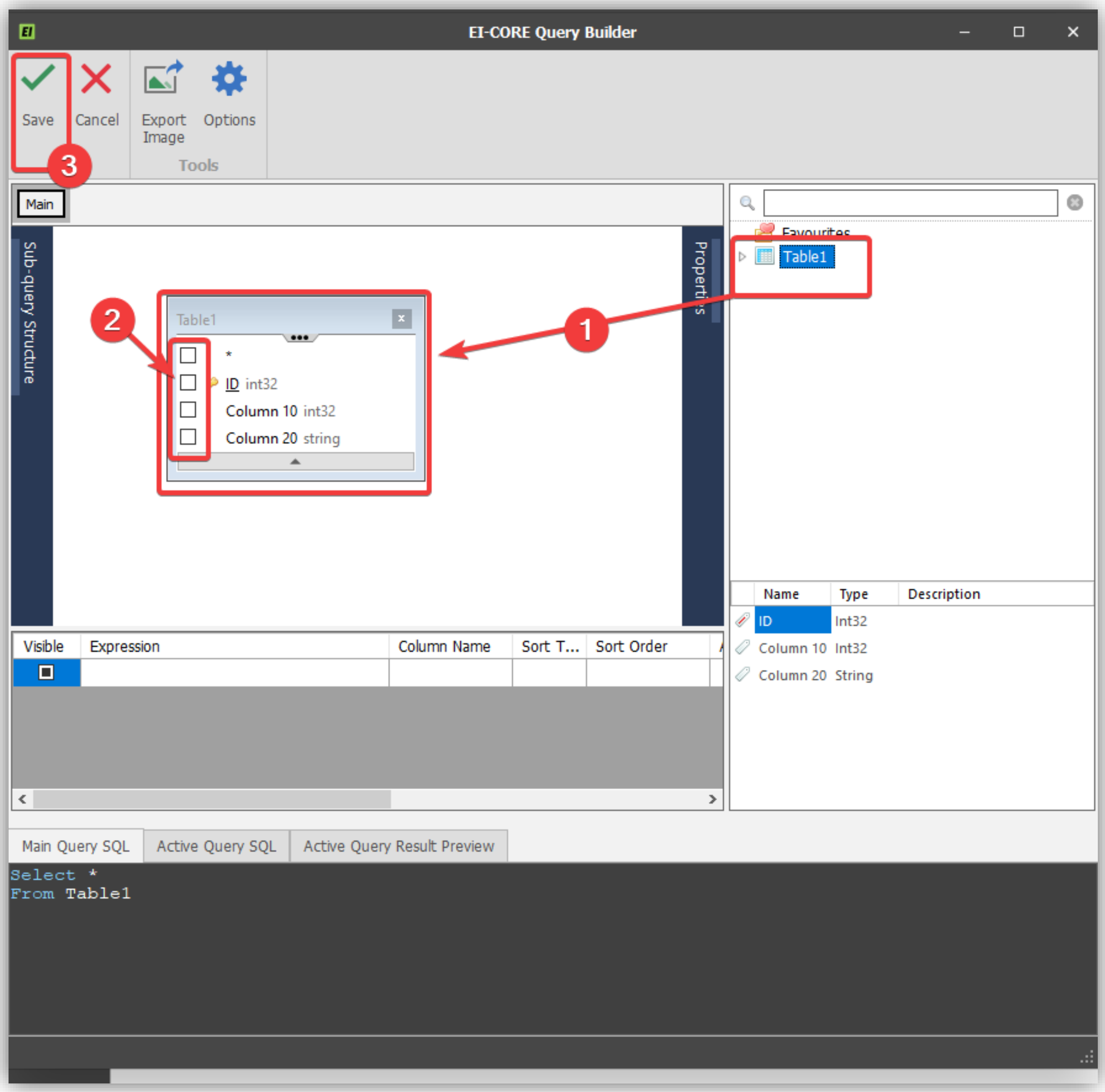
Navigate to desired translation(1) (in this example Input to Information Store), select **Mapping Groups**(2). Choose an existing mapping group or create a new by providing Source and destination group (3). Save(4) the new mapping group.



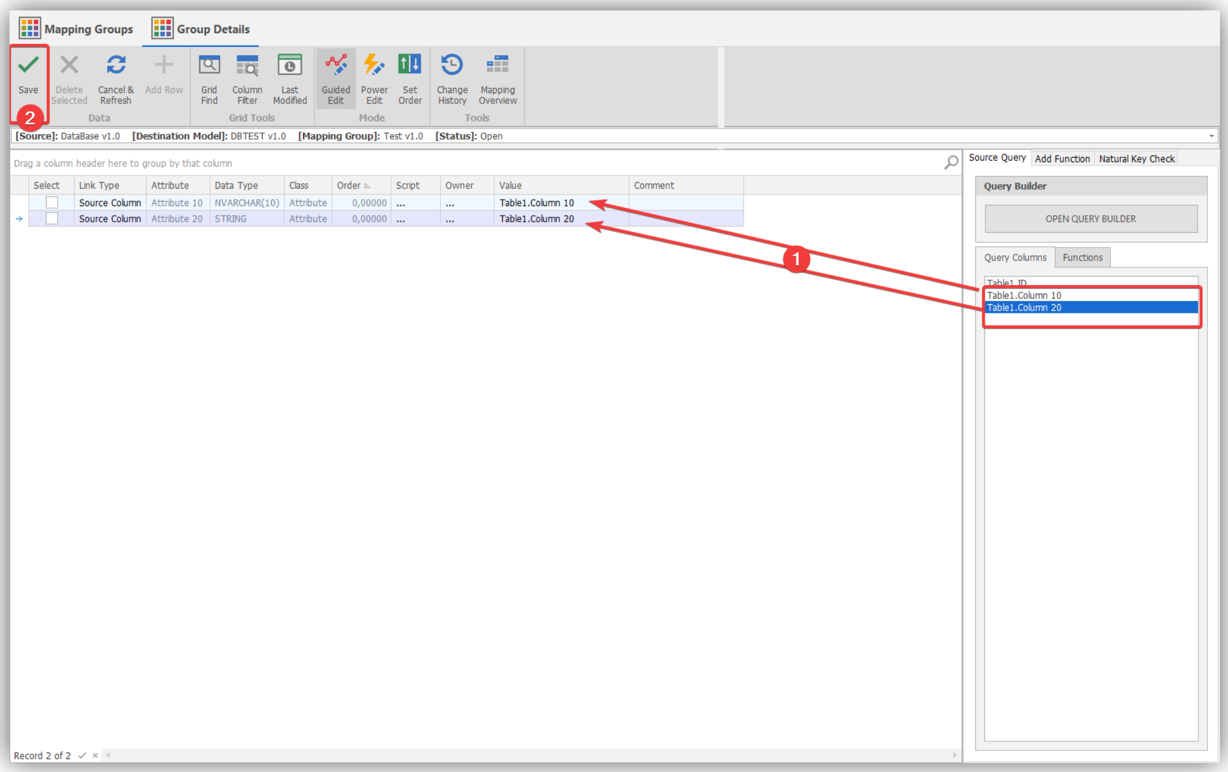
Go to **Group Details(1)**. Make sure the correct mapping group is displayed in the **Locator Bar(2)** and select **Open Query Builder(3):**



In the **Query Builder Window**, select and drag the desired source model(s) from the right pane to the left(1). Select Desired Attributes by ticking off the appropriate tick boxes(2) or leave all blank to select all. **Save**(3) the query:



Drag desired values from the Query window to the value-column for the appropriate Attribute(1). Save(2) when done.



Translations using Scripts

This section has not been written yet. Please contact EI-group.

Links

EI-CORE version number: 2.05.00.00
Document revision date: 2020-02-06

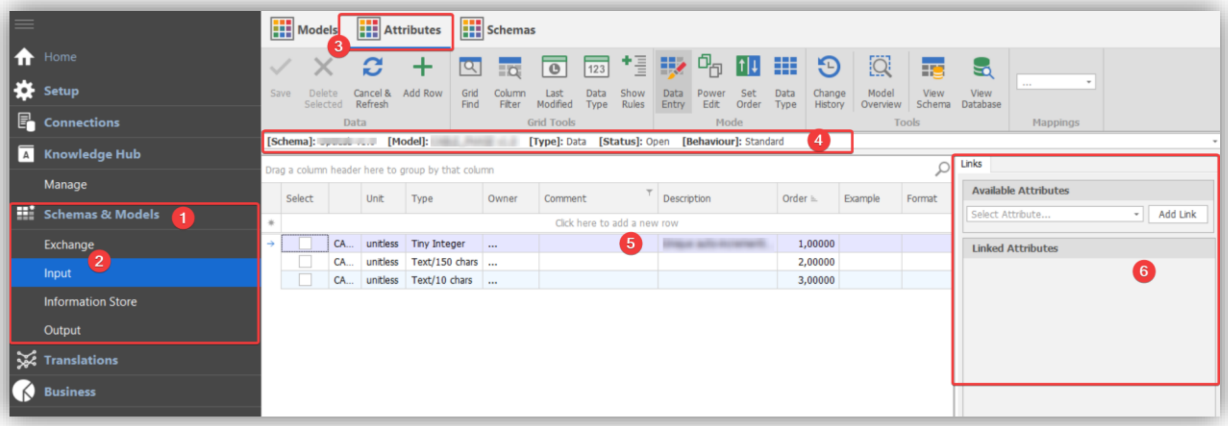
About Links

When an attribute in a Source-model is used within a subject area, it is useful to link the data entry with the subject area. This can be done in EI-CORE by the use of **Links**. Besides referring attributes, the link-feature also links to the attribute Description. Thus the descriptions made by subject matter experts in the knowledge hub, can be linked to a data field drawn from an Exchange- or Input model.

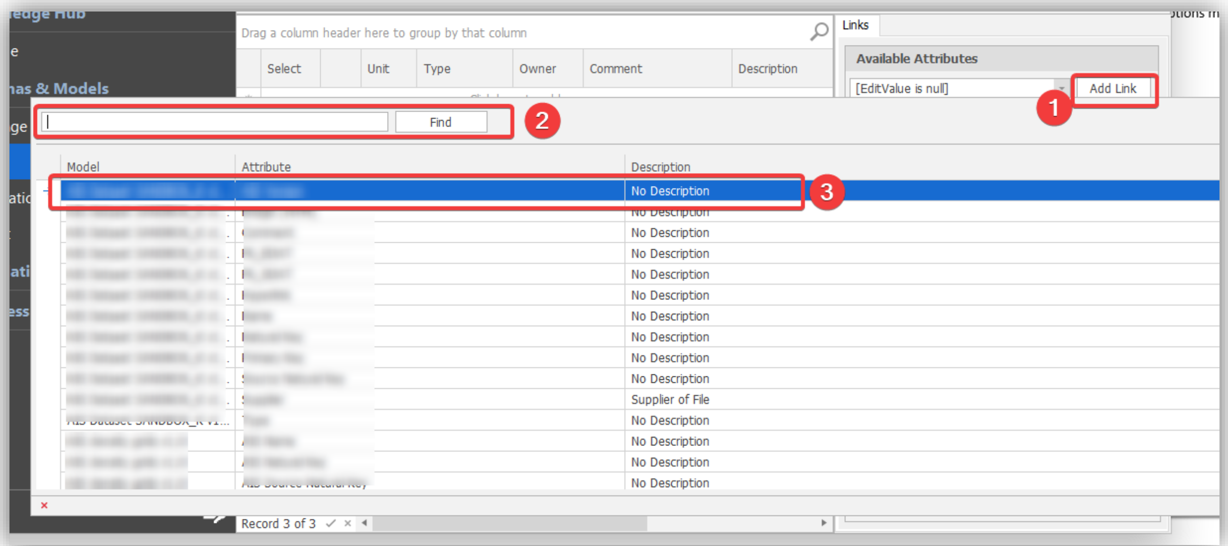
Setup a Link

Links can be made from Exchange- and Input Model attributes and are set and viewed from the link tab in the right pane of these schemas. To do so, navigate to the **Schemas & Models** menu(1) and select **Input** og **Exchange**(2). Go to **Attributes(3)** of the desired model. If needed select a model from the locator bar(4).

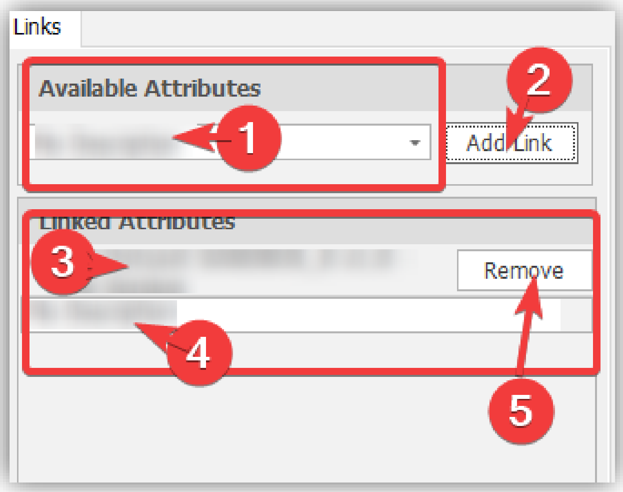
When an attribute is highlighted(5) existing links will show in the **Links** tab in the right pane(6):



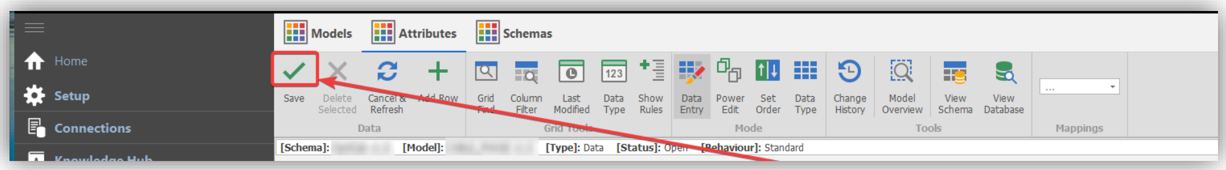
Click **Add Link** button(1) to view a list of available attributes. Scroll down to desired attribute, or use the **Search Field**(2) to find the appropriate entry. Once located, select the desired Attribute(3) and the List-menu will close.



Once an attribute I selected, It will present it self with its description(1). Press **Add Link(2)** to execute. The link is now shown as **Linked Attributes** with its Display Name(3) and description(4). To remove a link press **Remove button(5).**



Save the model when done:



Expressions syntax and elements

EI-CORE version number: 2.04.88.00
Document revision date: 2020-01-230

The EI-CORE Schema Rules are used when it is necessary to store rules as to how a file should 'look'. This can be essential when requesting files from consultants or exchanging files with other organizations. Often these rules are written into contracts. It is also vital when developing tools to import or process the files.

EI-CORE contains an Expression Builder so that rules that are typically described by words can also be described in a standardized way.

As an example, in plain words a rule could state "A file should be larger than 1MB". Using the expression builder the rule would be represented as: File.Size >= 1000000. Another file could be described by someone else as "Files should be less than 100MB" whereas the expression builder would provide a consistent approach, in this case: File.Size <= 100000000.

By default, EI-CORE contains a predefined expression set that allows you to describe the format and structure of a file. The expression builder syntax largely mimics c# but should be no more difficult than working with Excel formula syntax.

Syntax

An Expression consists of a **reference** an **operator** and a **value.** The reference denotes what part of a file the rule applies to. Operators states the kind of validation to be performed. Values are the constraints set by the rule in question. In plain words, a rule could state that a file should be larger than 1MB. In that case "file" is the reference, "larger than" is the operator and "1MB" is the value. In EI-CORE Expression Builder the syntax looks like this:

File.Size > 1000000

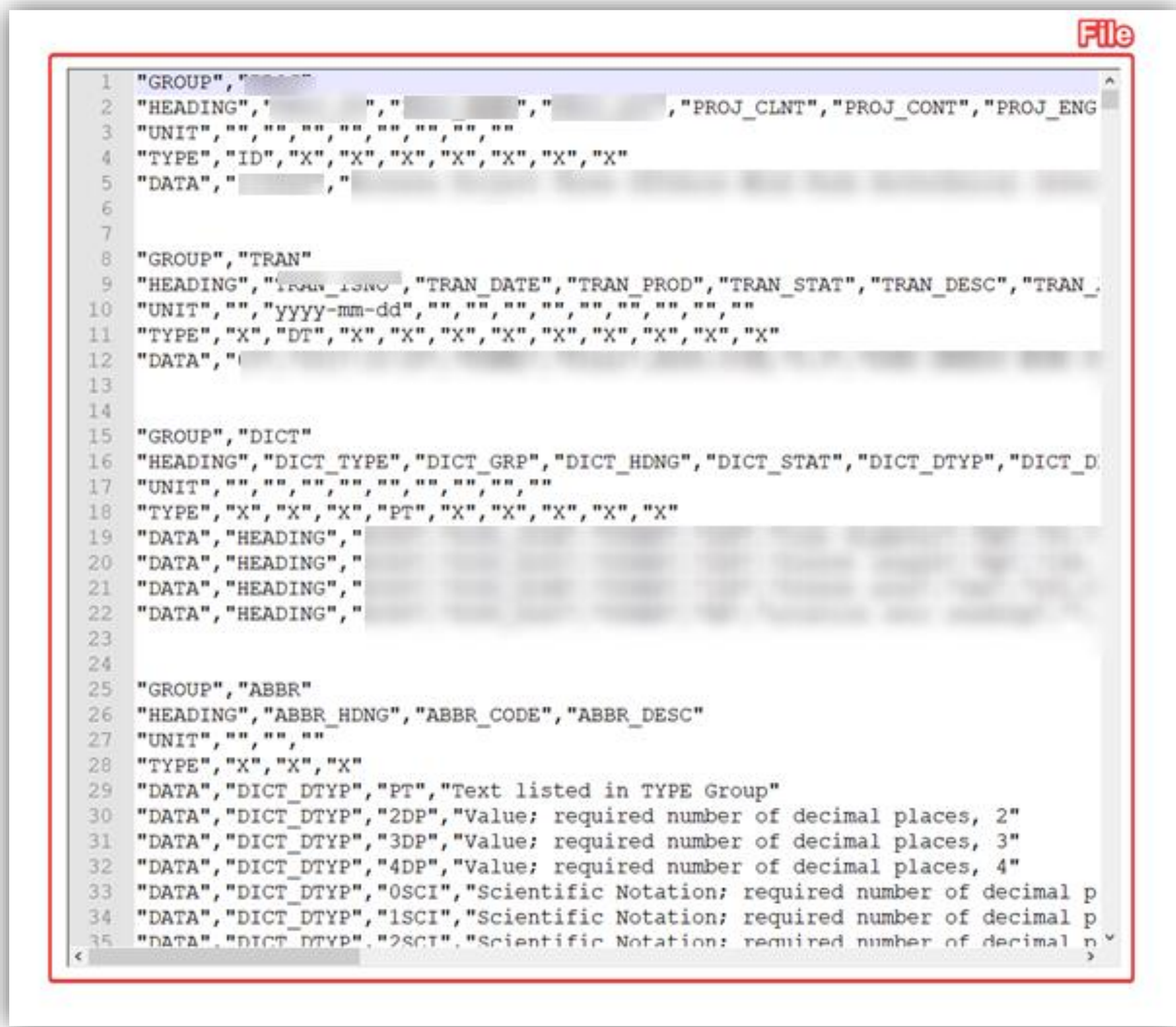
More complex expressions could refer to specific 'cells' within a file and compare them with a value from another cell.

References are expressed by a top-down approach. Always starting by the file and separating the sub-elements of the reference by a punctuation mark [.]

Main Elements

File

- A File can contain one or more sheets
    - A CSV file would contain just one sheet
    - An Excel file could contain multiple sheets
- The sheets collection is called **Sheets**




```
"GROUP","
"HEADING","","","",,"PROJ_CLNT","PROJ_CONT","PROJ_ENG
"UNIT","","","","","","","",""
"TYPE","ID","X","X","X","X","X","X","X"
"DATA","",


"GROUP","TRAN"
"HEADING","","TRAN_DATE","TRAN_PROD","TRAN_STAT","TRAN_DESC","TRAN_
"UNIT","","yyyy-mm-dd","","","","","","","","",""
"TYPE","X","DT","X","X","X","X","X","X","X","X","X"
"DATA","


"GROUP","DICT"
"HEADING","DICT_TYPE","DICT_GRP","DICT_HDNG","DICT_STAT","DICT_DTYP","DICT_D
"UNIT","","","","","","","","",""
"TYPE","X","X","X","PT","X","X","X","X","X"
"DATA","HEADING","
"DATA","HEADING","
"DATA","HEADING","
"DATA","HEADING","


"GROUP","ABBR"
"HEADING","ABBR_HDNG","ABBR_CODE","ABBR_DESC"
"UNIT","","",""
"TYPE","X","X","X"
"DATA","DICT_DTYP","PT","Text listed in TYPE Group"
"DATA","DICT_DTYP","2DP","Value; required number of decimal places, 2"
"DATA","DICT_DTYP","3DP","Value; required number of decimal places, 3"
"DATA","DICT_DTYP","4DP","Value; required number of decimal places, 4"
"DATA","DICT_DTYP","0SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","1SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","2SCI","Scientific Notation; required number of decimal p
```

Sheets

- The Sheets collection can contain one or more sheets
- Sheets[0] refers to the first sheet
- A CSV file would only ever contain one sheet: Sheets[0]

Sheets[0]

```
"GROUP","PROJ"
"HEADING","PROJ_ID","PROJ_NAME","PROJ_LOC","PROJ_CLNT","PROJ_CONT","PROJ_ENG
"UNIT","","","","","","","",""
"TYPE","ID","X","X","X","X","X","X","X"
"DATA",


"GROUP","TRAN"
"HEADING","TRAN_ISNO","TRAN_DATE","TRAN_PROD","TRAN_STAT","TRAN_DESC","TRAN_
"UNIT","","yyyy-mm-dd","","","","","","","","",""
"TYPE","X","DT","X","X","X","X","X","X","X","X","X"
"DATA",


"GROUP","DICT"
"HEADING","DICT_TYPE","DICT_GRP","DICT_HDNG","DICT_STAT","DICT_DTYP","DICT_D
"UNIT","","","","","","","","",""
"TYPE","X","X","X","PT","X","X","X","X","X"
"DATA",
"DATA",
"DATA",
"DATA",


"GROUP","ABBR"
"HEADING","ABBR_HDNG","ABBR_CODE","ABBR_DESC"
"UNIT","","",""
"TYPE","X","X","X"
"DATA","DICT_DTYP","PT","Text listed in TYPE Group"
"DATA","DICT_DTYP","2DP","Value; required number of decimal places, 2"
"DATA","DICT_DTYP","3DP","Value; required number of decimal places, 3"
"DATA","DICT_DTYP","4DP","Value; required number of decimal places, 4"
"DATA","DICT_DTYP","0SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","1SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","2SCI","Scientific Notation; required number of decimal p
```

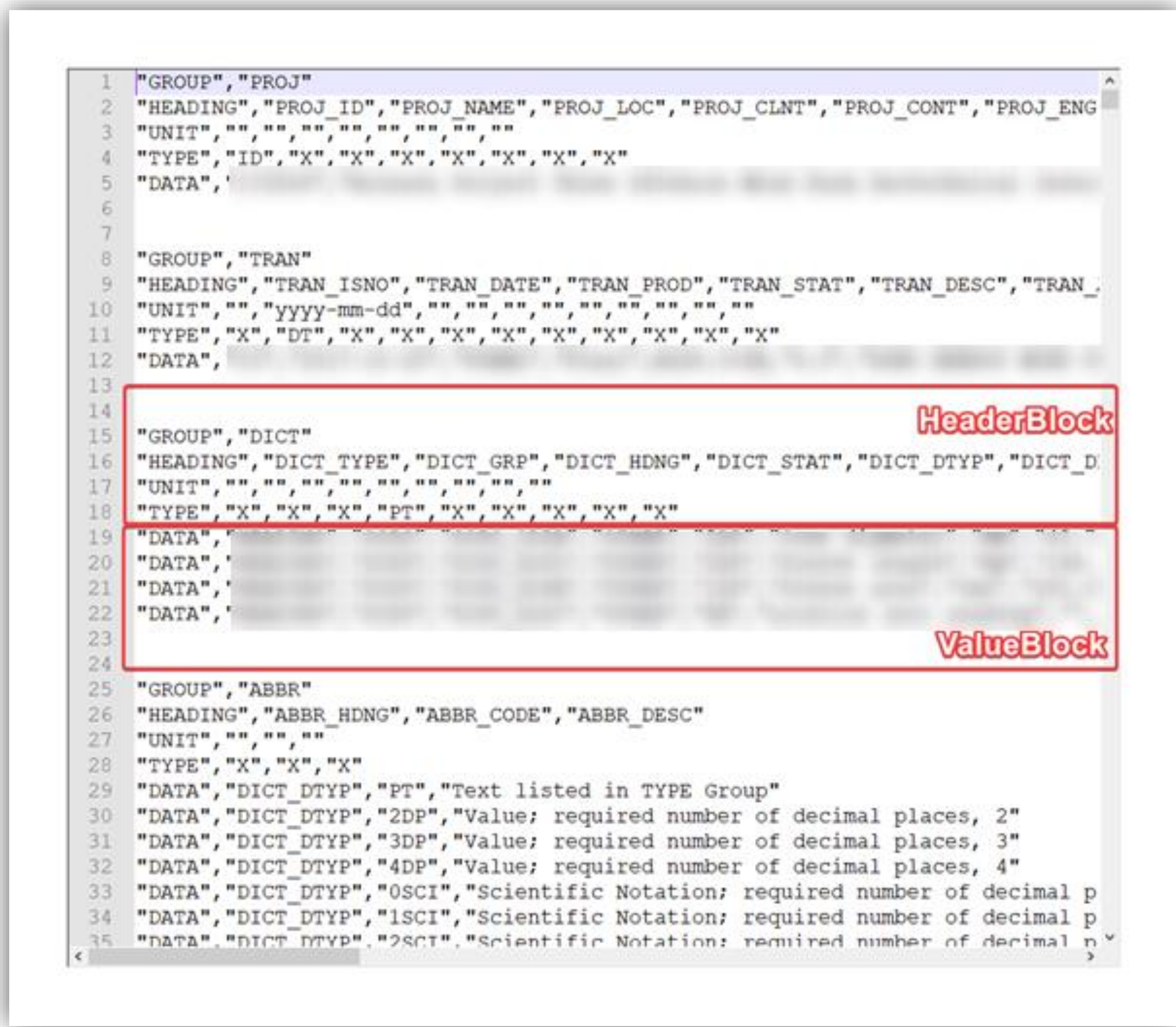
TableBlocks

- A Table Block is a block of data
- A sheet can contain one or more Table Blocks
- The Table Blocks collection is called **TableBlocks**
- The first table block is referred to as TableBlocks[0]


```
"GROUP","PROJ"
"HEADING","PROJ_ID","PROJ_NAME","PROJ_LOC","PROJ_CLNT","PROJ_CONT","PROJ_ENG
"UNIT","","","","","","","",""
"TYPE","ID","X","X","X","X","X","X","X"
"DATA",


"GROUP","TRAN"
"HEADING","TRAN_ISNO","TRAN_DATE","TRAN_PROD","TRAN_STAT","TRAN_DESC","TRAN_
"UNIT","","yyyy-mm-dd","","","","","","","","",""
"TYPE","X","DT","X","X","X","X","X","X","X","X","X"
"DATA","


"GROUP","DICT"
"HEADING","DICT_TYPE","DICT_GRP","DICT_HDNG","DICT_STAT","DICT_DTYP","DICT_D
"UNIT","","","","","","","","",""
"TYPE","X","X","X","PT","X","X","X","X","X"
"DATA","
"DATA","
"DATA","
"DATA","


"GROUP","ABBR"
"HEADING","ABBR_HDNG","ABBR_CODE","ABBR_DESC"
"UNIT","","",""
"TYPE","X","X","X"
"DATA","DICT_DTYP","PT","Text listed in TYPE Group"
"DATA","DICT_DTYP","2DP","Value; required number of decimal places, 2"
"DATA","DICT_DTYP","3DP","Value; required number of decimal places, 3"
"DATA","DICT_DTYP","4DP","Value; required number of decimal places, 4"
"DATA","DICT_DTYP","0SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","1SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","2SCI","Scientific Notation; required number of decimal p
```

HeaderBlock & ValueBlock

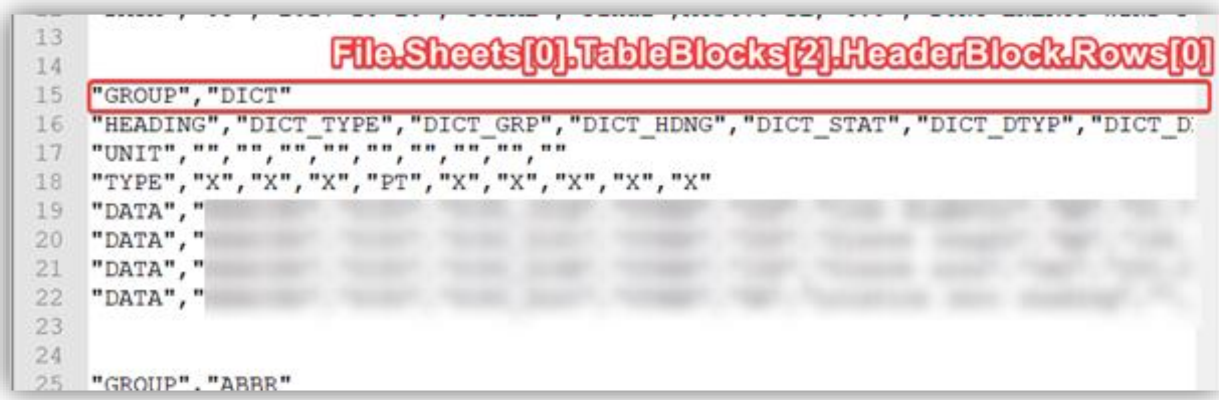
- Each Table Block can have a **HeaderBlock** and **ValueBlock**




```
"GROUP","PROJ"
"HEADING","PROJ_ID","PROJ_NAME","PROJ_LOC","PROJ_CLNT","PROJ_CONT","PROJ_ENG
"UNIT","","","","","","","",""
"TYPE","ID","X","X","X","X","X","X","X"
"DATA",'


"GROUP","TRAN"
"HEADING","TRAN_ISNO","TRAN_DATE","TRAN_PROD","TRAN_STAT","TRAN_DESC","TRAN_
"UNIT","","yyyy-mm-dd","","","","","","","","",""
"TYPE","X","DT","X","X","X","X","X","X","X","X","X"
"DATA",


"GROUP","DICT"
"HEADING","DICT_TYPE","DICT_GRP","DICT_HDNG","DICT_STAT","DICT_DTYP","DICT_D
"UNIT","","","","","","","","",""
"TYPE","X","X","X","PT","X","X","X","X","X"
"DATA",'
"DATA",'
"DATA",'
"DATA",'


"GROUP","ABBR"
"HEADING","ABBR_HDNG","ABBR_CODE","ABBR_DESC"
"UNIT","","",""
"TYPE","X","X","X"
"DATA","DICT_DTYP","PT","Text listed in TYPE Group"
"DATA","DICT_DTYP","2DP","Value; required number of decimal places, 2"
"DATA","DICT_DTYP","3DP","Value; required number of decimal places, 3"
"DATA","DICT_DTYP","4DP","Value; required number of decimal places, 4"
"DATA","DICT_DTYP","0SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","1SCI","Scientific Notation; required number of decimal p
"DATA","DICT_DTYP","2SCI","Scientific Notation; required number of decimal p
```

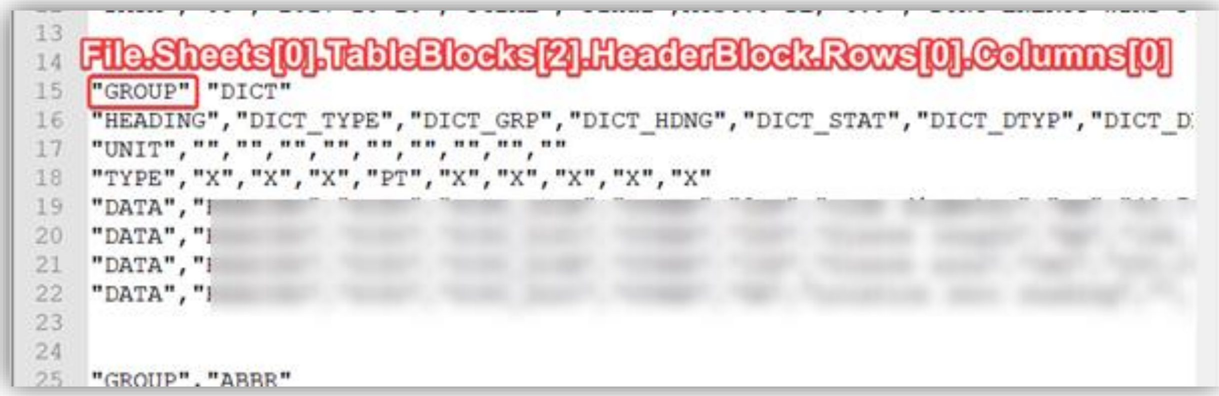
Rows

- Header Blocks and Value Blocks each have a **Rows** collection
- Rows[0] refers to the first row



Columns

- Each Row has a **Columns** collection
- Columns[0] refers to the first column



Additional Notes

- Whenever you need to refer to ALL objects of a certain type use AllTableBlocks, AllRows etc.
- Most items will have properties like **File.Sheets[0].TableBlocks.Count** in addition to more specific properties like **File.FileSize**. When using the EI-CORE expression builder, the built-in intelligence can guide you through the available options.

Properties

In addition to the main elements, each element can have additional properties. These include:

File.NoDataValue

The value that represents that no real data value is present.

File.Size

Size of the file, in bytes.

File.CompressionAlgorithm

The compression algorithm used

File.PixelDepth

color resolution (in bits per pixel)

File.NumberOfBands

For image files, the number of bands.

File.Extension

The extension of the file.

File.Type

The file type, either Ascii or Binary.

File.EOL

Specifies the expected end-of-line character.

File.Delimiter

The character used to separate columns of data.

File.ValueEncloseCharacter

Specifies the character that encloses data.

File.ValueEscapeCharacter

Indicates that the subsequent character should have a special interpretation.

File.Sheets[index]

Used to refer to a sheet in a file. An Excel file may contain multiple sheets. A CSV file would only ever contain one sheet: Sheets[0]

File.AllSheets

can be used to refer to all sheets in a file

File.Sheets.Count

can be used to refer to the sheet count

File.Sheets[index].TableBlocks[index]

A TableBlock is a block of data and contains one HeaderBlock and one ValueBlock. A Sheet can contain one or more TableBlocks. Refer to a single TableBlock by specifying an index such as TableBlocks[0]

AllTableBlocks

can be used to refer to all TableBlocks in a sheet

TableBlocks.Count

can be used to refer to the TableBlock count.

File.Sheets[index].TableBlocks[index].HeaderBlock

A HeaderBlock is one or more rows of header data in a TableBlock.

File.Sheets[index].TableBlocks[index].ValueBlock

A ValueBlock is one or more rows of values in a TableBlock

File.Sheets[index].TableBlocks[index].HeaderBlocks.Rows[index]

A Row is simply a row of data. Refer to a single Row by specifying an index such as Rows[0].
AllRows

can be used to refer to all rows

File.Sheets[index].TableBlocks[index].HeaderBlocks.Rows[index].Columns[index]

Refer to a single Column in the Row by specifying an index such as Column[0].

File.Sheets[index].TableBlocks[index].HeaderBlocks.Rows[index].Columns[index].Cell

A Cell is found at the intersection of a Row and Column

File.Sheets[index].TableBlocks[index].HeaderBlocks.Rows[index].Columns[index].Cell.Value

Represent the value of a cell.

Example: File.AllSheets.AllTableBlocks.ValueBlock.AllRows.Columns[0].Cell.ValueAsNumber > 0

In

Use the In function to check to see if a value matches with a list of values. For example:
Cell.Value.In("String1","String2","String3")

Value

Represents the TEXT value of a cell

Use when you wish to refer to the cell value as a string or text

Example: File.AllSheets.AllTableBlocks.HeaderBlock.Rows[0].Columns[0].Cell.Value == "HEADING1"

ValueAsNumber

Represents the NUMERIC value of a cell

Use when you wish to refer to the cell value as a number

Example: File.AllSheets.AllTableBlocks.ValueBlock.AllRows.Columns[0].Cell.ValueAsNumber > 0

Variables

StringVariables

File.Sheets[0].TableBlocks[0].ValueBlock.AllRows.Columns[0].Cell.ValueAsNumber > FileStructure.StringVariables["xxx"]

NumberVariables

Example: File.Sheets[0].TableBlocks[0].ValueBlock.AllRows.Columns[0].Cell.ValueAsNumber > FileStructure.NumberVariables["xxx"]

Operators

Equals

== true if its operands are equal.

Not Equal

!= not equal

Less than

< is `true` if its left-hand operand is less than its right-hand operand.

Greater Than

> is true if its left-hand operand is greater than its right-hand operand.

Less than or equal to

<= is true if its left-hand operand is less than or equal to its right-hand operand.

Greater than or equal to

>= is true if its left-hand operand is greater than or equal to its right-hand operand.

EI-CORE Data documentation

Document revision date: 2020-03-04

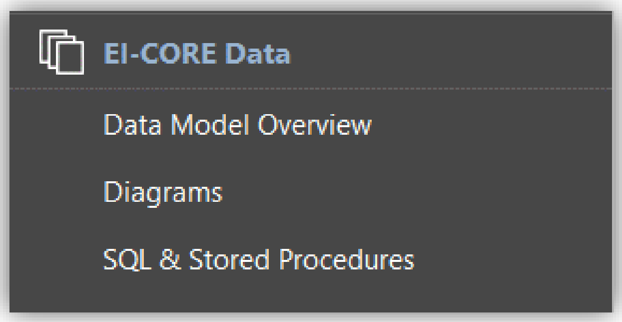
Data Model Documentation

There are two tools within EI-CORE that can be used to obtain an understand of how the underlying database is constructed.

The **Data Model Overview** module can be used to view a report that summarizes all tables within the EI-CORE database.

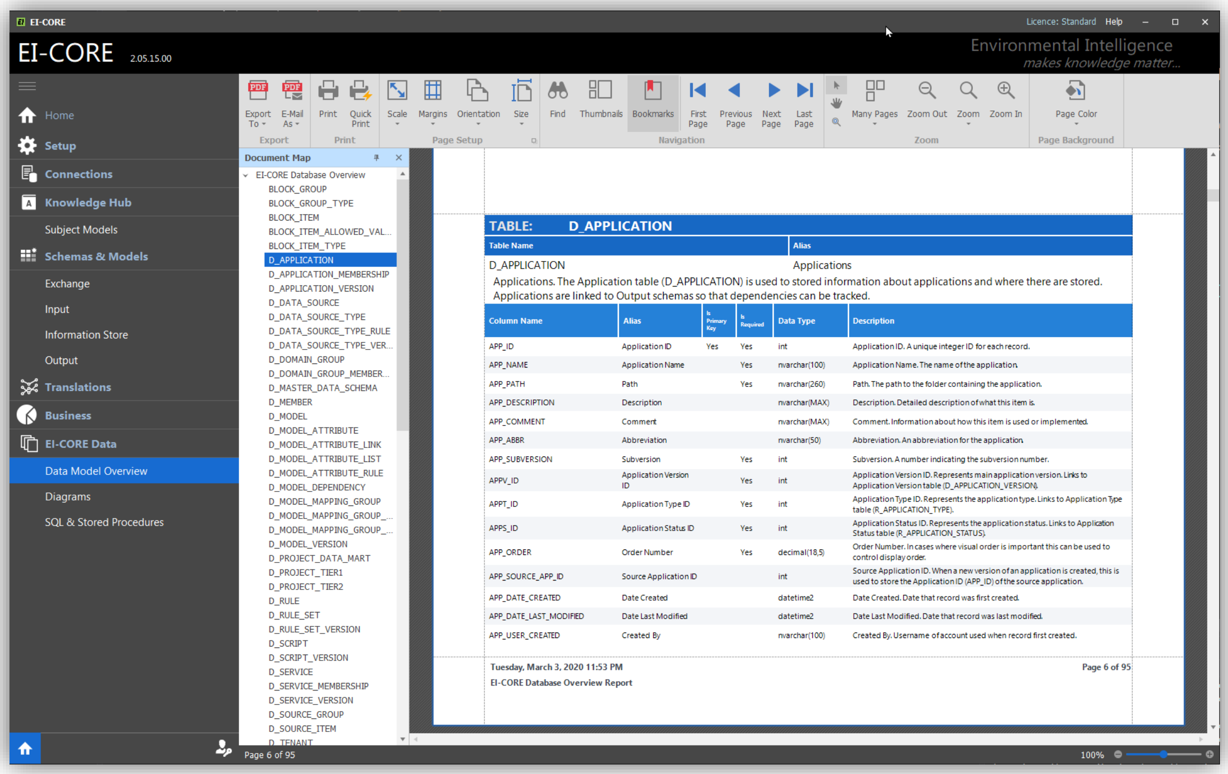
The **Diagrams** tool can be used to see how the main tables within the EI-CORE database are connected.

Both types of documentation are generated on-the-fly based on master documentation kept on our servers. As a result, the documentation can continuously be improved and updated without requiring new versions of EI-CORE to be installed.



Data Model Overview

The data model overview report can be generated by going to the Data Model Overview module, located under the EI-CORE data heading.



The report contains the following information.

For each table:

- Table Name – Name of the table as it appears in SQL Server
- Alias – A user-friendly name for the table
- Description – a description that contains the intended purpose for the table

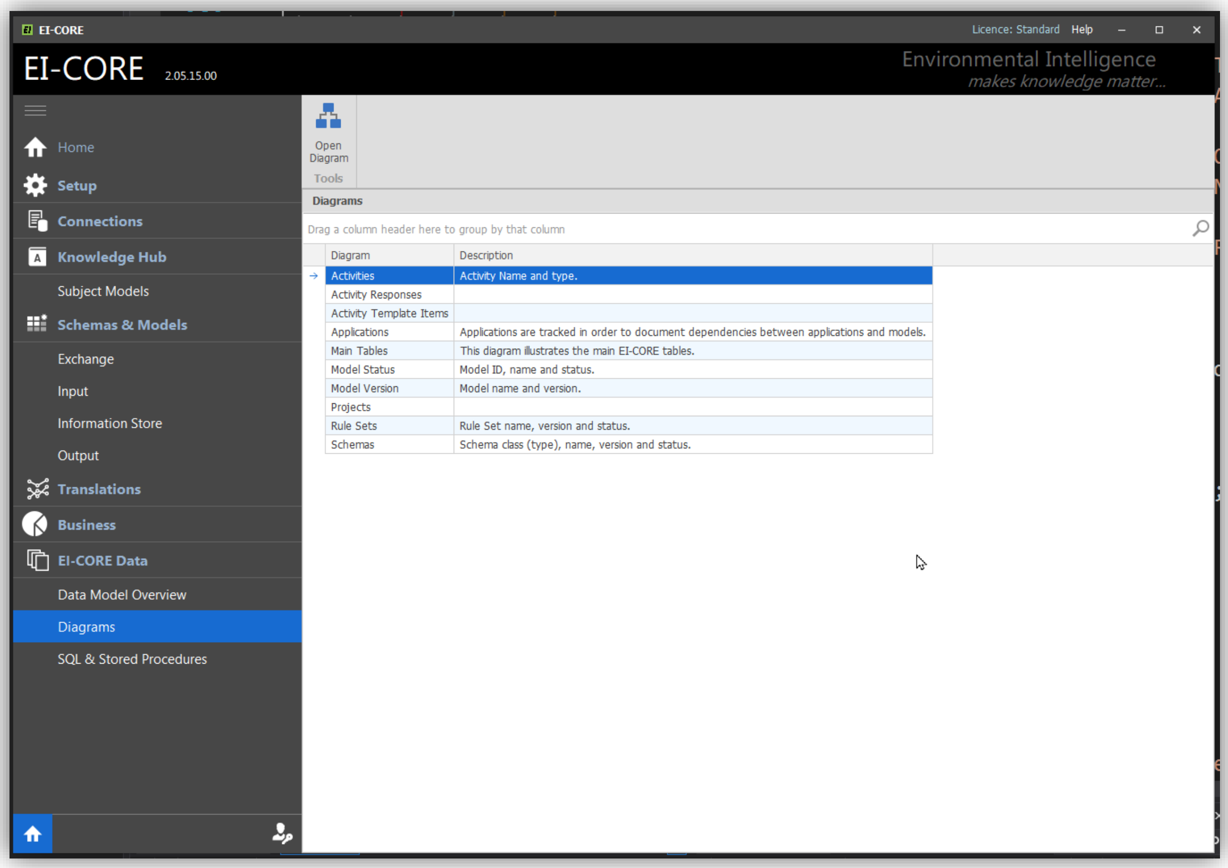
For each column (within each table):

- Column Name – the name of the column as it appears in SQL Server
- Alias – A user-friend name for the column
- Is Primary Key – Indicates whether the column is part of the table primary key or not
- Is Required – indicates whether the column is required (or optional)
- Data Type – the SQL Server data type assigned to the column
- Description – a description that contains the intended purpose for the column

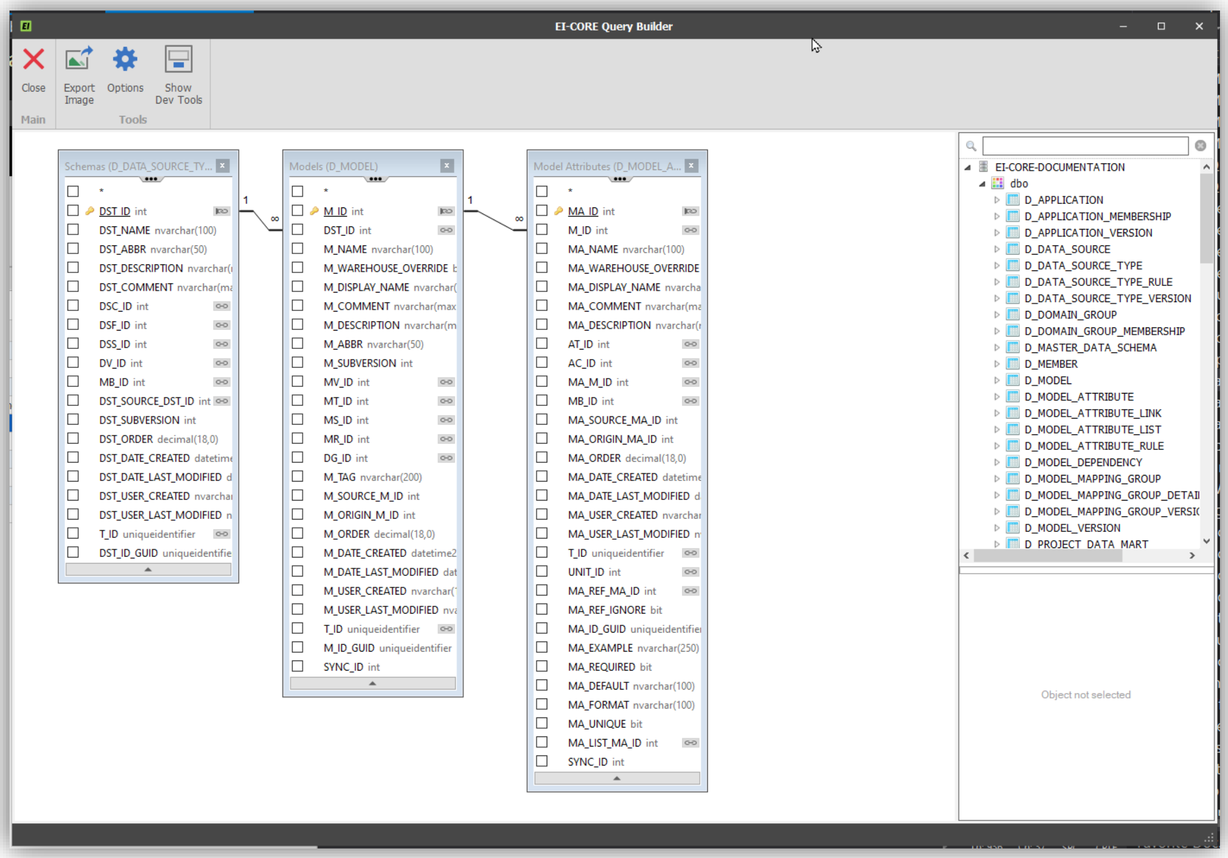
The Document Map at the left can be used to jump to any specific table in the database. The toolbar at the top can be used print, export and manipulate the report in other ways (e.g. zoom, page size etc).

Diagrams

The diagrams tool can be used to view diagrams that include the main database tables and how they are connected.

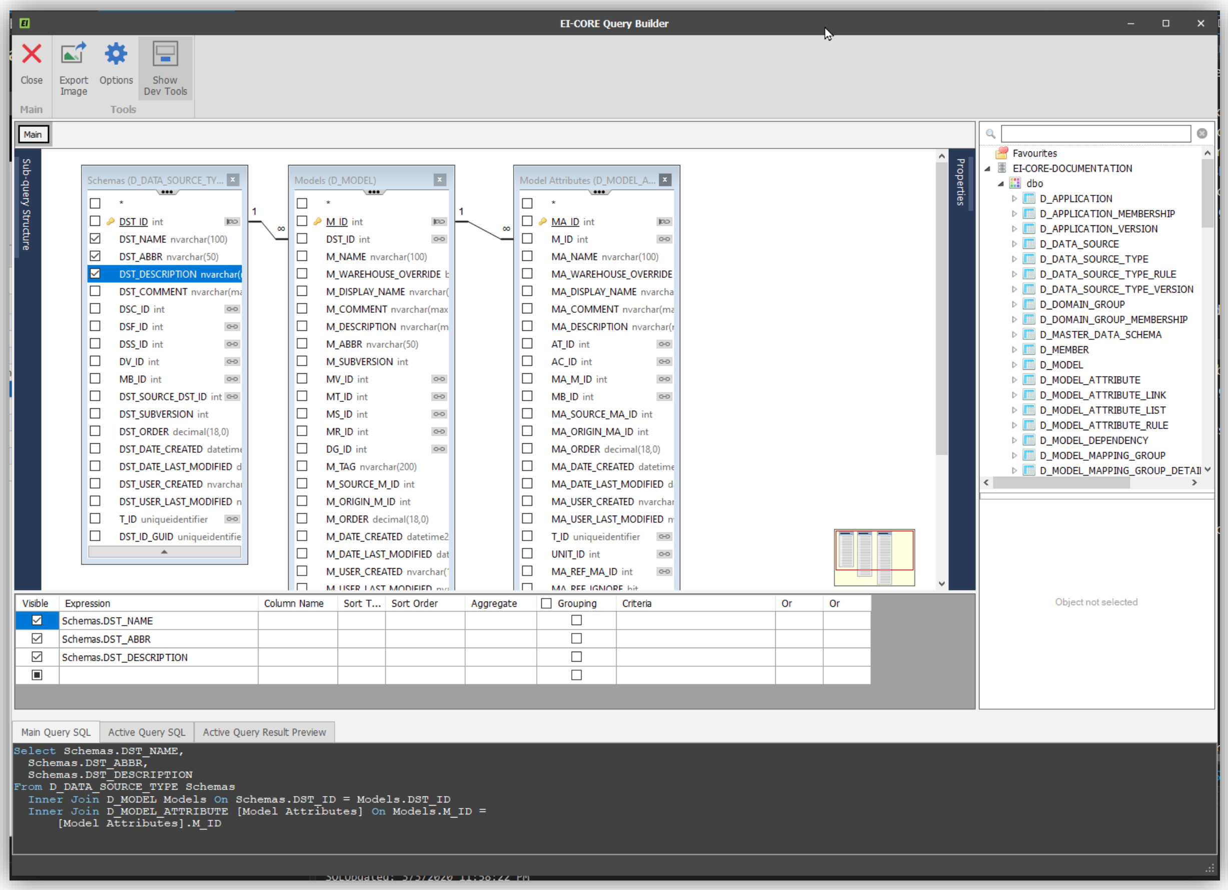


The diagrams are not static images and therefore the user can manipulate the diagram to gain a better understanding of the tables and relationships of the EI-CORE database.



Diagrams can be exported to .png images using the Export Image button on the toolbar.

The Diagrams viewer can also be used to generate SQL. By clicking the Show Dev Tools button, additional panels appear, and the tool operates as query builder.


EI-CORE Query Builder
Close
Export Image
Options
Show Dev Tools
Main
Tools
Schemas (D_DATA_SOURCE_TY...
Models (D_MODEL)
Model Attributes (D_MODEL_A...
Visible
Expression
Column Name
Sort Order
Aggregate
Grouping
Criteria
Or
Schemas.DST_NAME
Schemas.DST_ABBR
Schemas.DST_DESCRIPTION
Favourites
EI-CORE-DOCUMENTATION
dbo
Object not selected
Main Query SQL
Active Query SQL
Active Query Result Preview
Select Schemas.DST_NAME,
Schemas.DST_ABBR,
Schemas.DST_DESCRIPTION
From D_DATA_SOURCE_TYPE Schemas
Inner Join D_MODEL Models On Schemas.DST_ID = Models.DST_ID
Inner Join D_MODEL_ATTRIBUTE [Model Attributes] On Models.M_ID =
[Model Attributes].M_ID

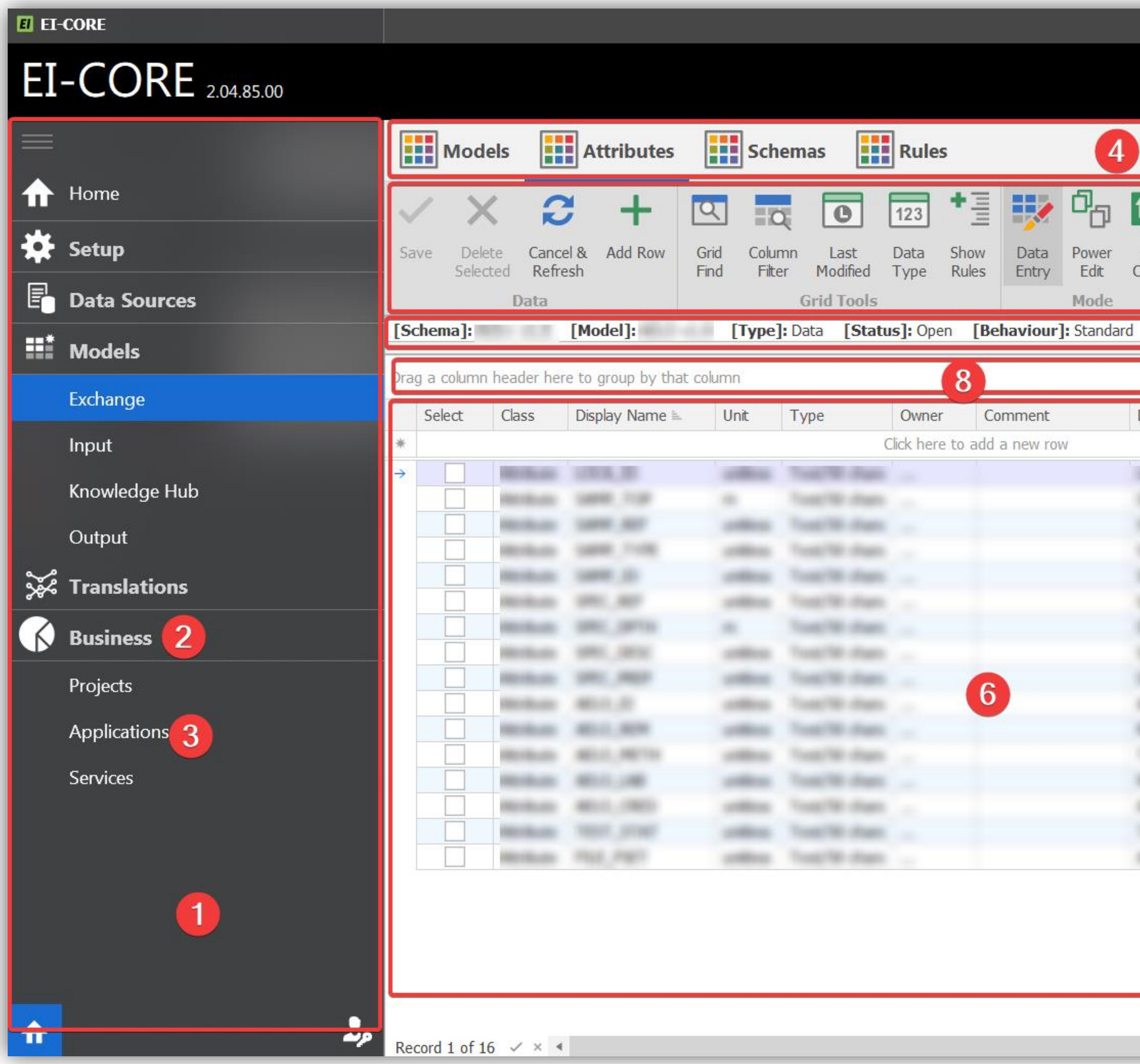
EI-CORE Overview

EI-CORE version number: 2.04.85.00
Document revision date: 2020-01-24

The EI-CORE user interface consists of several elements. Some are encountered in every view – others are context dependent and accessible only in certain views.

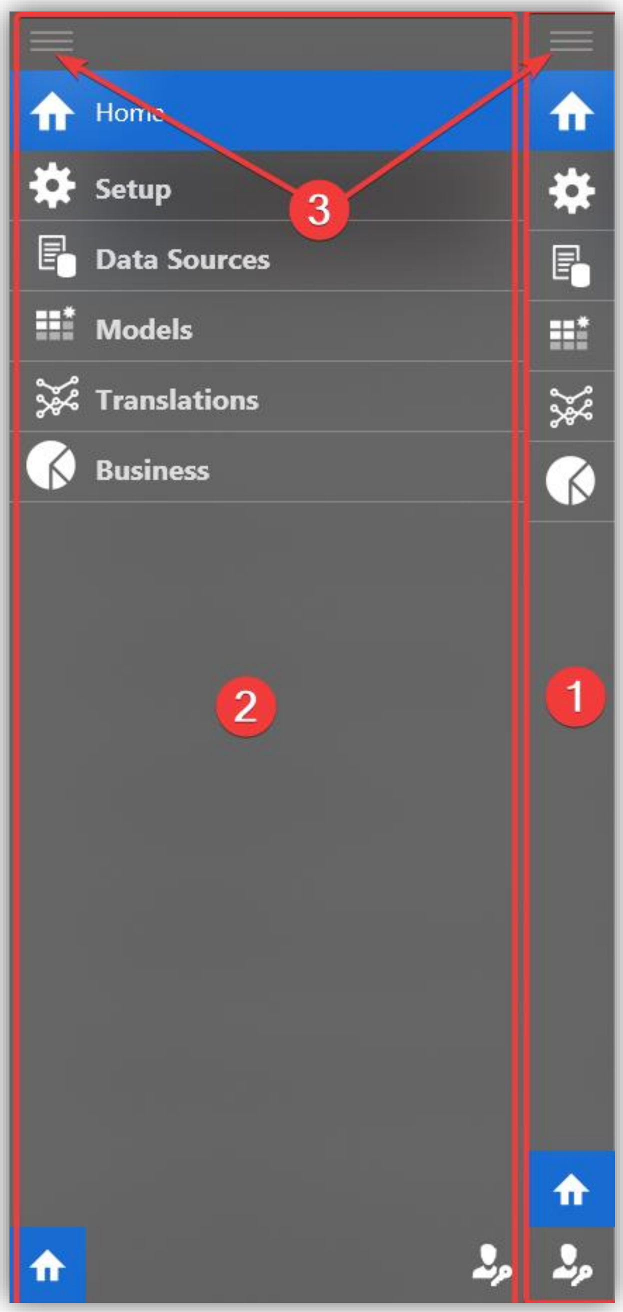
The basic elements are:
Menu Panel(1) Menus(2) Modules(3) Schema level selector(4) Task bar(5) Grid(6) Locator bar(7) Search- and group bar(8) Activity Pane(9) Header bar(10)

This guide offers a basic description of each.


EI-CORE
EI-CORE 2.04.85.00
Home
Setup
Data Sources
Models
Exchange
Input
Knowledge Hub
Output
Translations
Business
Projects
Applications
Services
Models
Attributes
Schemas
Rules
Save
Delete Selected
Cancel & Refresh
Add Row
Grid Find
Column Filter
Last Modified
Data Type
Show Rules
Data Entry
Power Edit
Data
Grid Tools
Mode
[Schema]:
[Model]:
[Type]: Data
[Status]: Open
[Behaviour]: Standard
Drag a column header here to group by that column
Select
Class
Display Name
Unit
Type
Owner
Comment
Click here to add a new row
Record 1 of 16
1
2
3
4
6
8

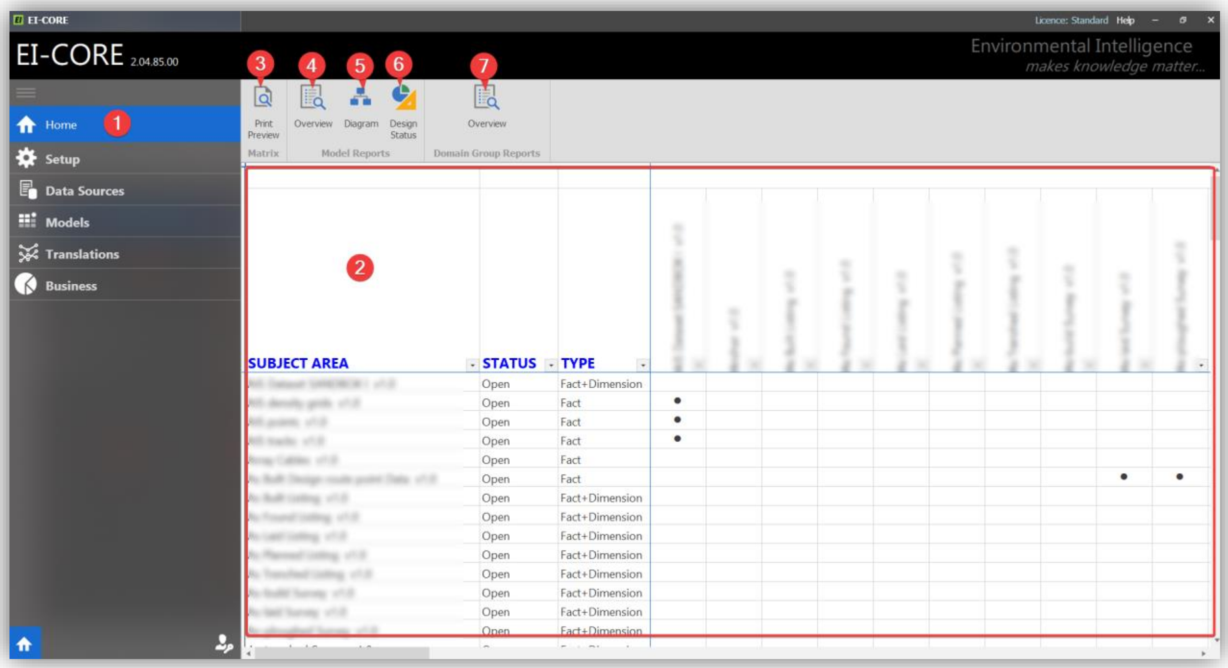
Menu Panel

The **Menu Panel** is the main entry for accessing EI-CORE functions, it can be collapsed(1) and expanded(2) by pressing the **Menu-Button(3)** in the top of the panel:



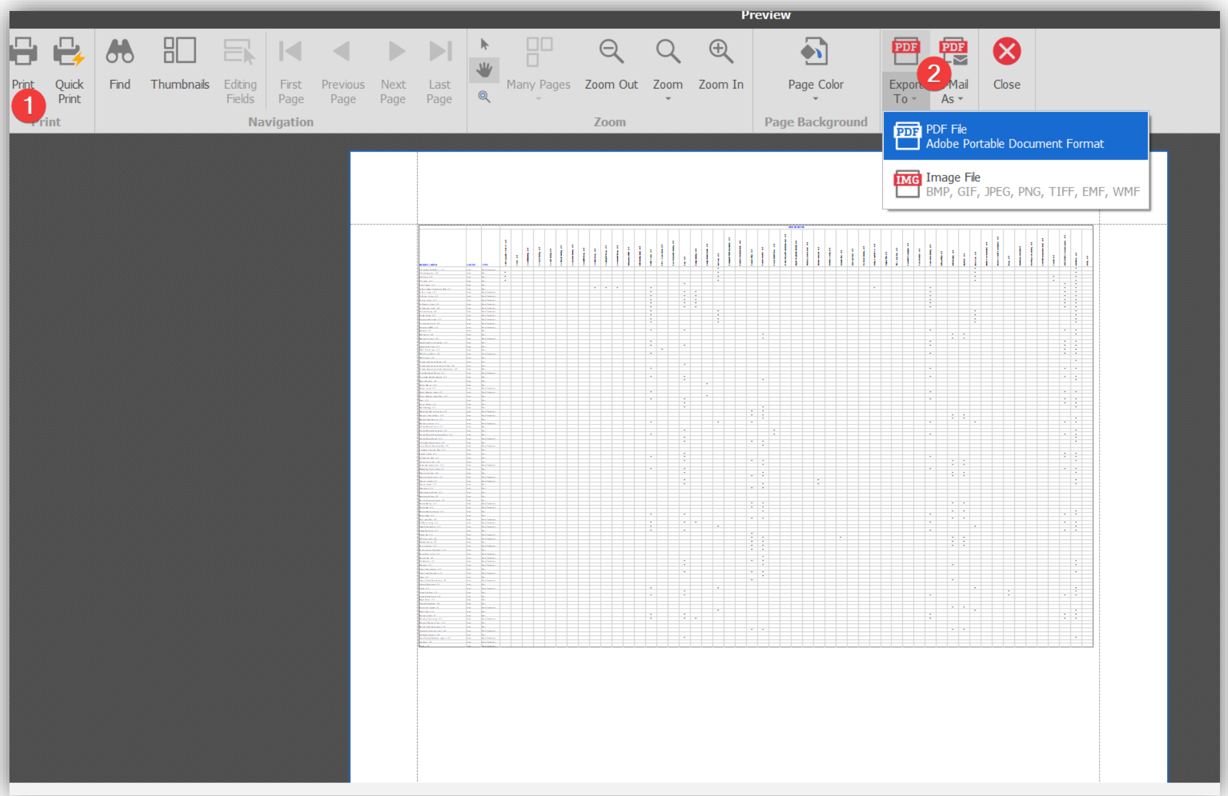
Home Menu

The home menu(1) displays a matrix of entered **Subject Models** relations(2) and some features for basic insight and sharing explained in the below sections:



Print Preview

Opens a separate print- and share window for the matrix. Select **Print(1)** to send to a connected printer or export it to a file or email(2):



Menus

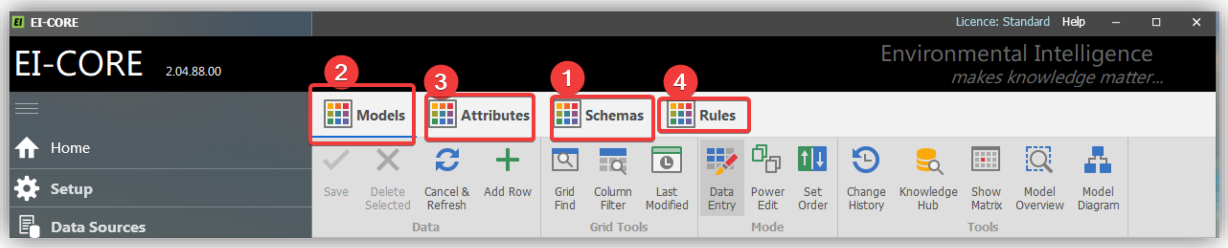
Menus groups related functions under a common headline.

Modules

Modules are defined areas of functionality.

Schema level selector

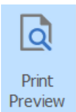
An EI-CORE module usually hierarchically structured with the top level being the **Schema(1).** A Schema consists of **Models(2)** and a model has certain **Attributes(3).** In addition, some modules grants additional options like **Rules(4)** that can be applied to certain modules. Navigating the Schema is done in the Schema level selector above the Task bar by selecting the appropriate button:



Task Bar

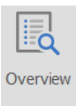
The task bar presents the tasks that can be performed in the given view. Not every task can be performed in every view, and tasks may result in different outcome dependent of the context it is executed within:

Print Preview



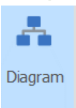
Opens a separate print- and share window

Overview



Generates a summarizing report for printing and/or saving

Diagram

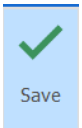


Shows a simplified relational diagram

Design Status

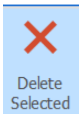
Generates a report of design progress.

Save



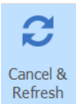
Saves changes made

Delete Selected



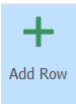
Deletes Rows in the grid that has been selected for deletion

Cancel and Refresh



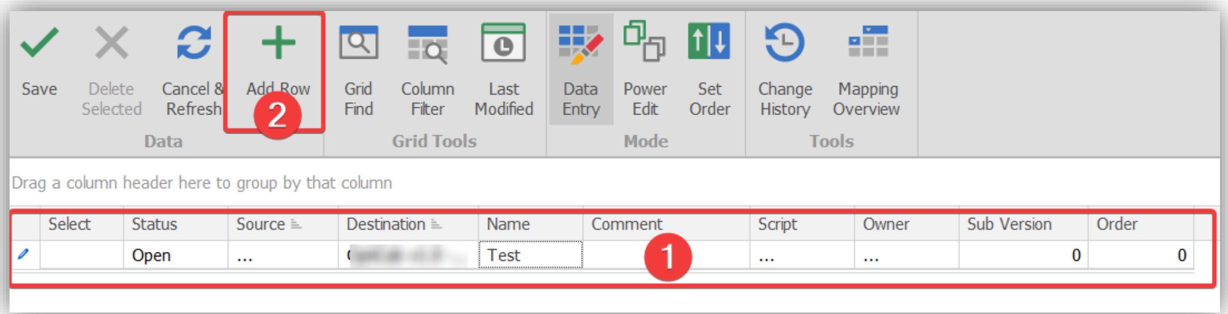
Cancels any changes and refreshes the view

Add Row

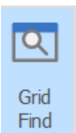


When a new row has been entered this button adds it to the grid:

When editing a new row(1), that row is added to the grid by selecting the **Add Row** button. Clicking anywhere else outside the new row will do the same though:



Grid Find

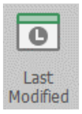


Displays a search field in the top of the grid

Column Filter

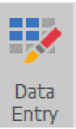
Toggles on/off a filter row in the top of the grid

Last Modified



Toggles on/off the Columns: *"Date Last Modified", "Created By", "Date Created"* and *"Last modified by"*.

Data Entry



The default mode for entering data in EI-CORE.

Power Edit

Switches from Data Entry Mode to Power Edit mode for advanced editing.

Grid

The grid is where data entered, viewed and otherwise handled.

Locator Bar

The locator bar shows which data is currently in the grid and allows for navigation within the selected module.

Search- and Group Bar

Data from the grid, can be grouped by dragging column headlines into it. It also contains a search field.

Activity Pane

If activities are assigned to the current module, they are shown and handled in the activity pane.

Header Bar

Beside general window-controls (resize, maximize, minimize, close), the header bar contains the license button and the help button.

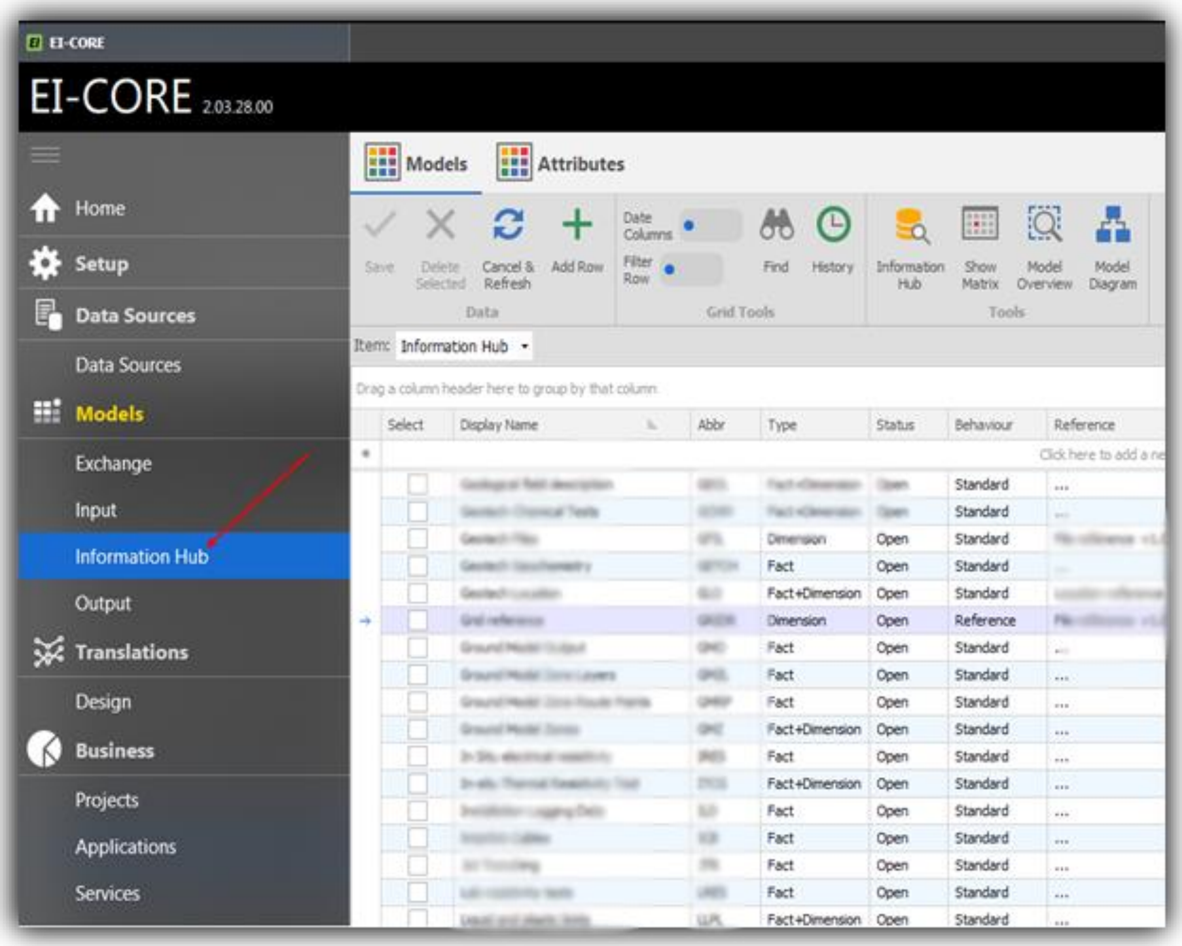
EI-CORE Walk Throughs

The EI-CORE Walk Throughs provide a set of easy to follow instructions in frequently used operations.

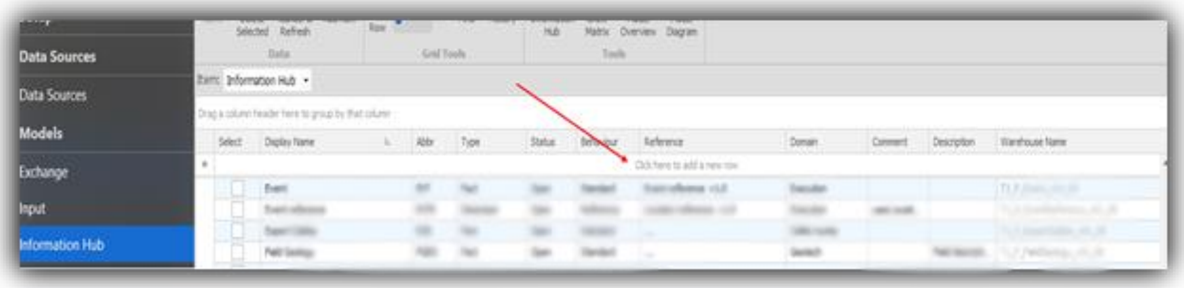
Creating new Subject Model

V. 2.03.28.00 06-08-2019

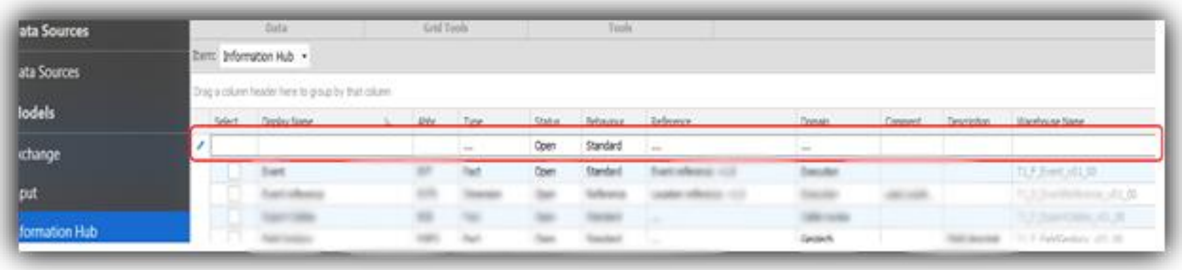
✓ Locate to the **Models** menu from the start up screen, and select the **Information Hub** sub-menu:



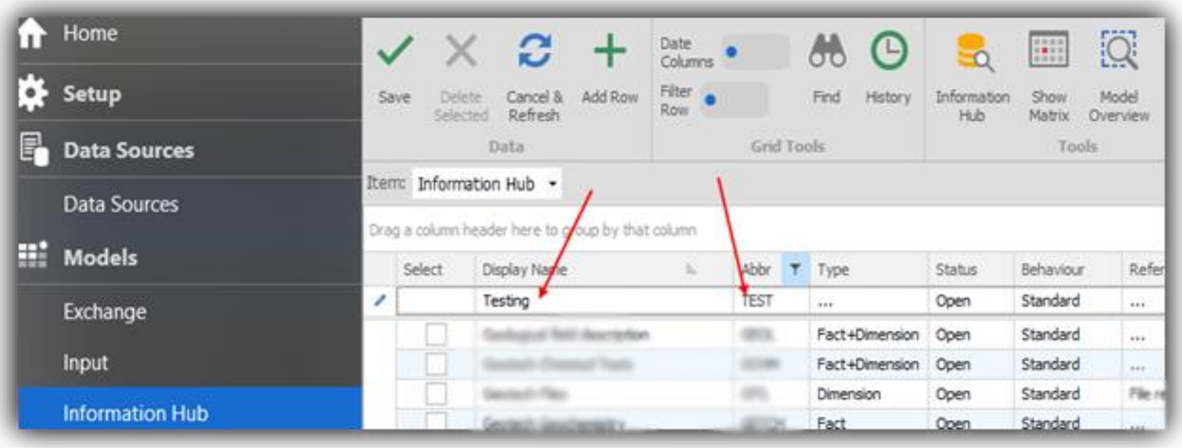
✓ Locate the blank row at the top of the grid:



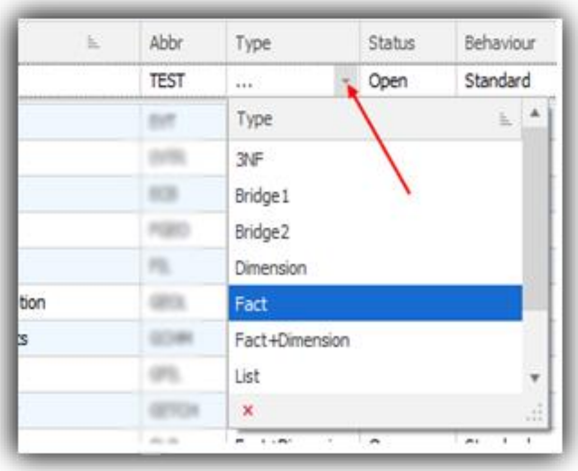
✓ Click the blank row once to start editing:



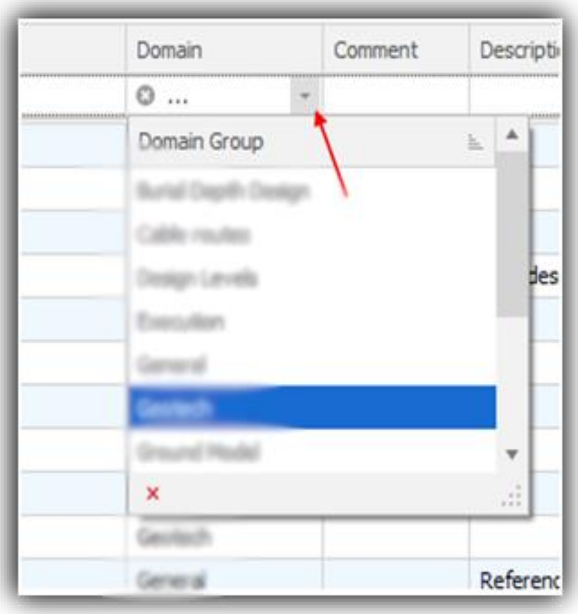
✓ Enter **Display Name** and **Abbreviation:**



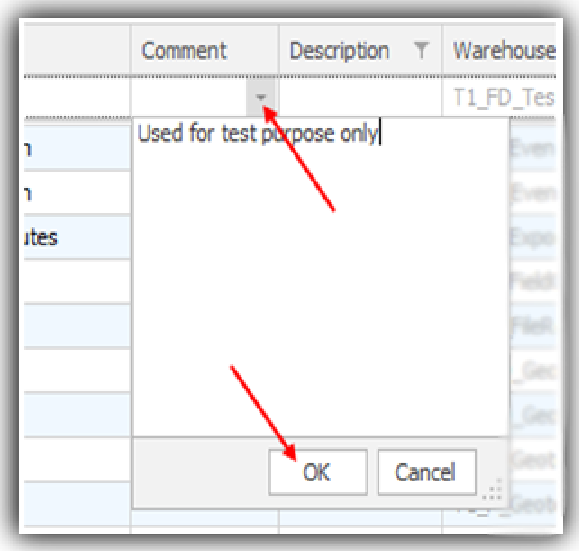
- ✓ Select appropriate Type from the **Type drop-down menu**:



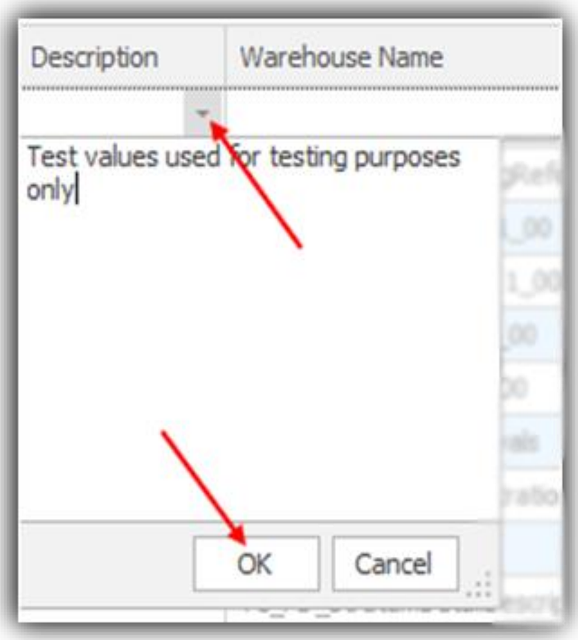
- ✓ Select Domain from the **Domain drop-down menu:**



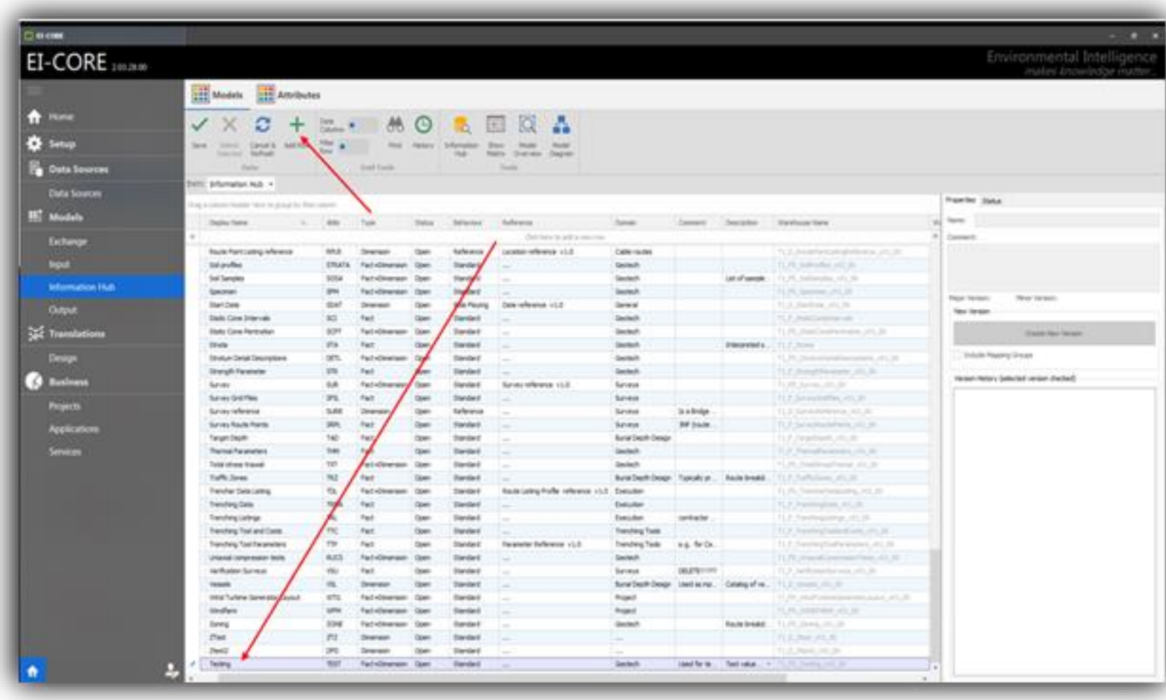
✓ Enter any comments in the optional **Comment** drop-down menu and click **OK** button to save:



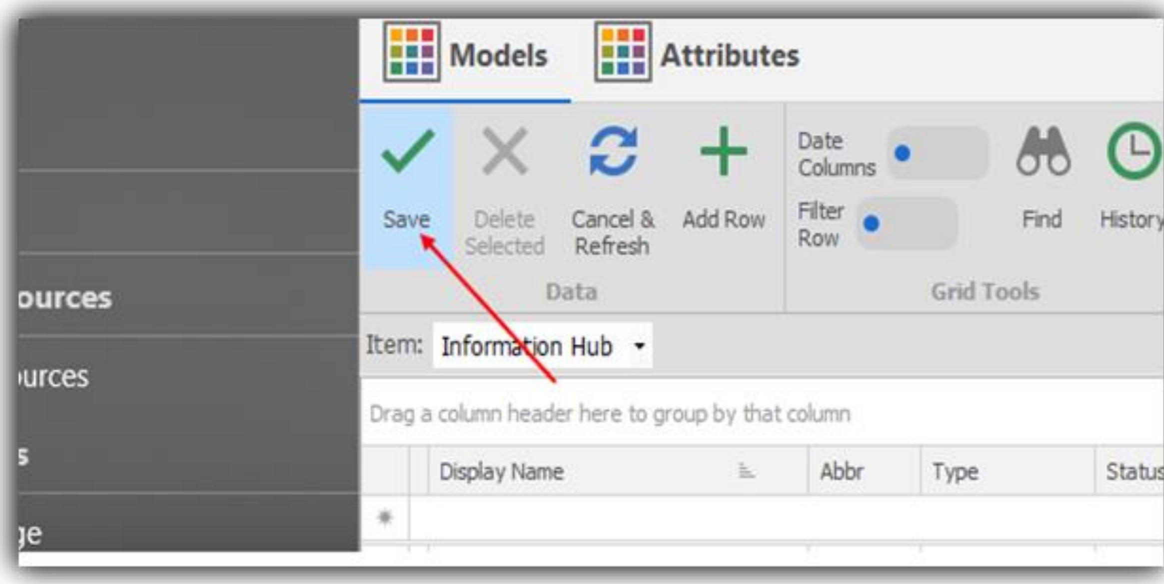
- ✓ Enter a description in the optional **Description** drop-down menu and click **OK** button to save:



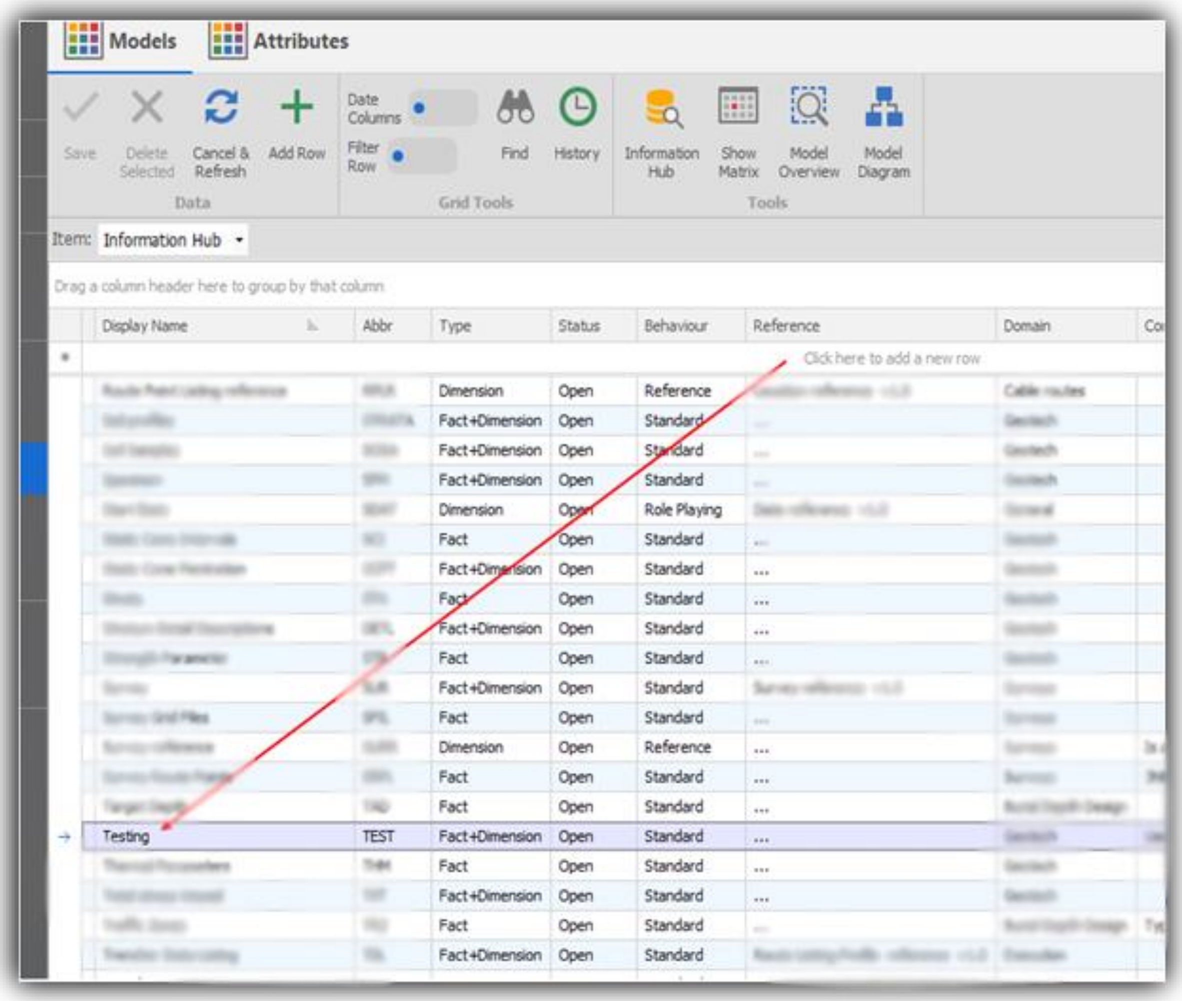
- ✓ Click **Add Row.** The new row will appear in the bottom of the grid (clicking anywhere inside the grid will do the same):



✓ Click **Save**:


Models
Attributes
Save
Delete Selected
Cancel & Refresh
Add Row
Date Columns
Filter Row
Find
History
Data
Grid Tools
ources
urces
Item: Information Hub
Drag a column header here to group by that column
Display Name
Abbr
Type
Status

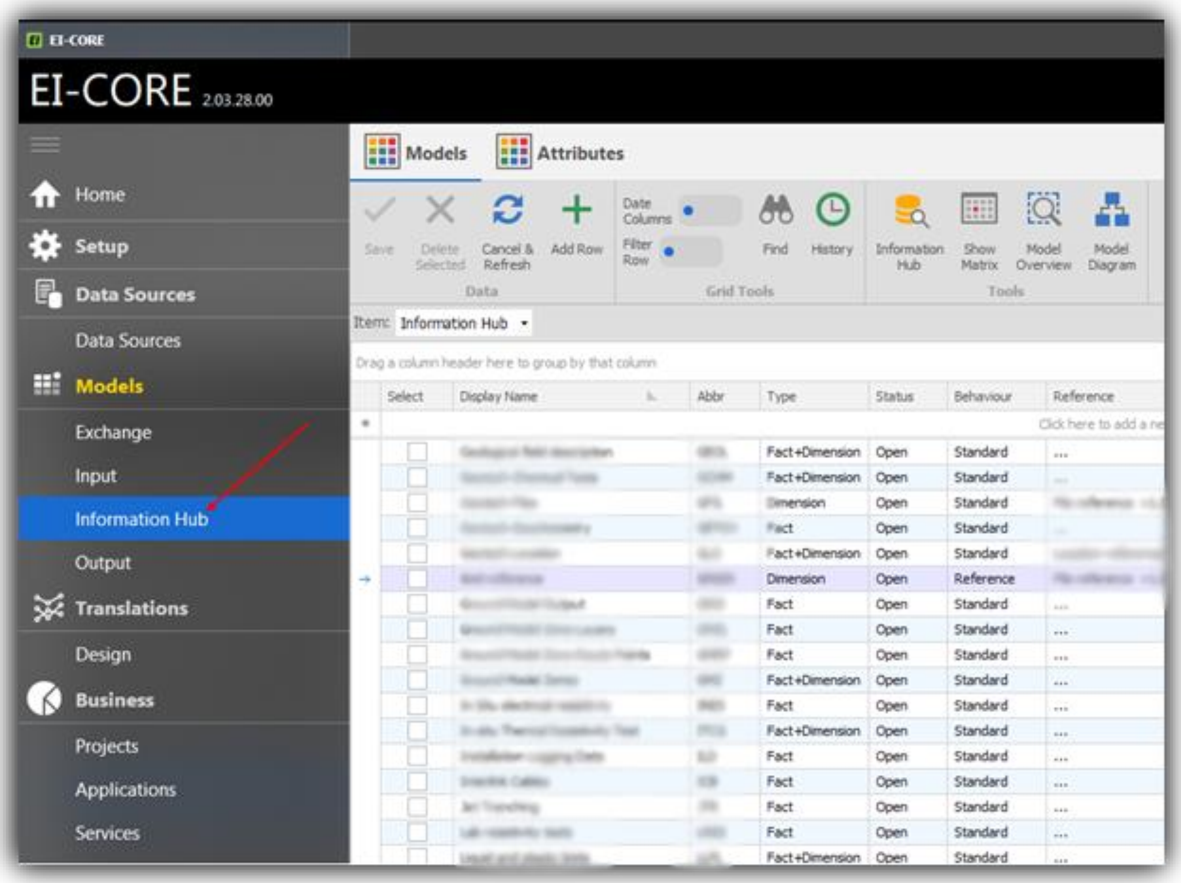
- Done!
  The new model is now saved in EI-CORE:



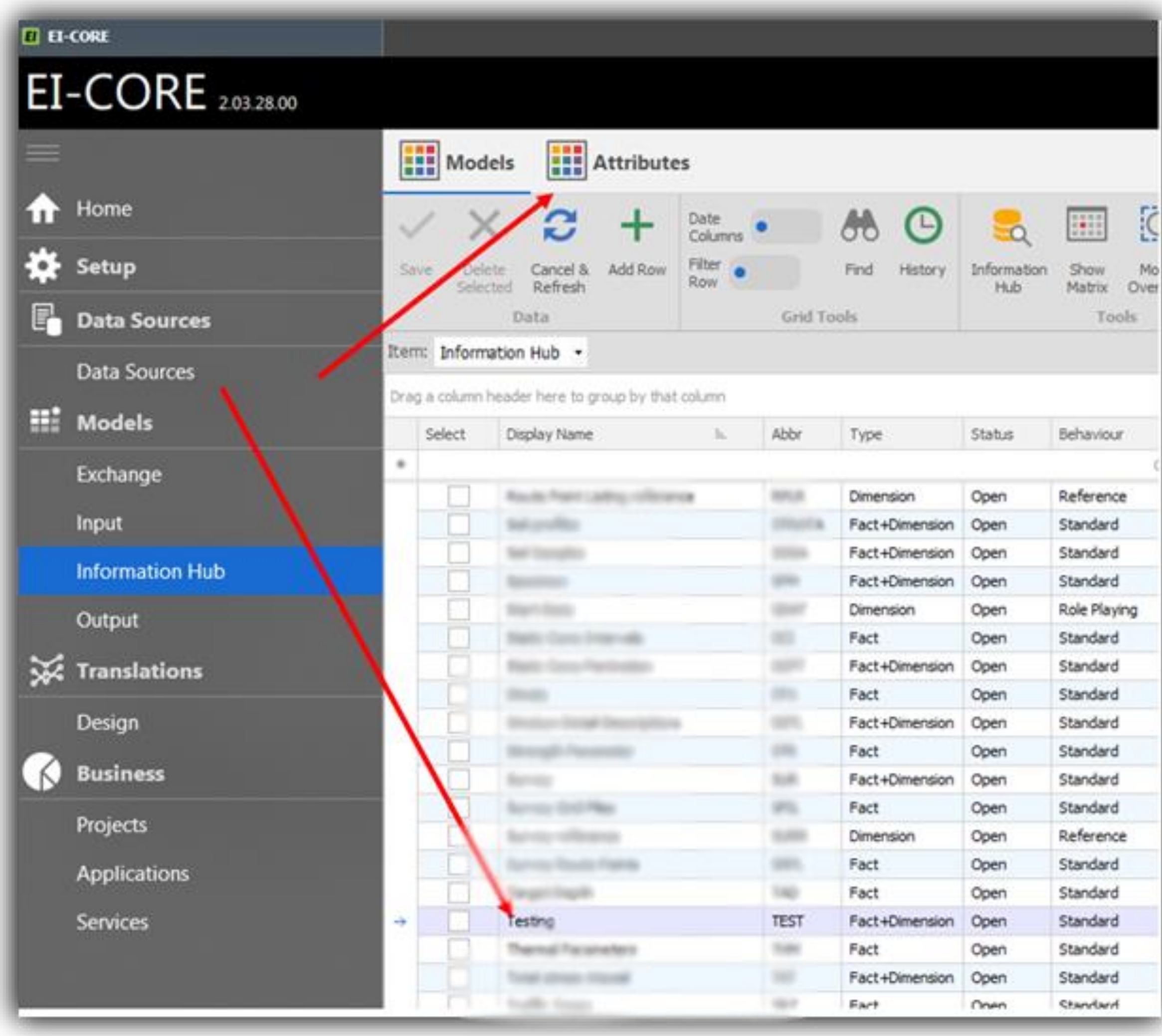
Assigning other-model relations to Subject Models

V. 2.03.28.00 06-08-2019

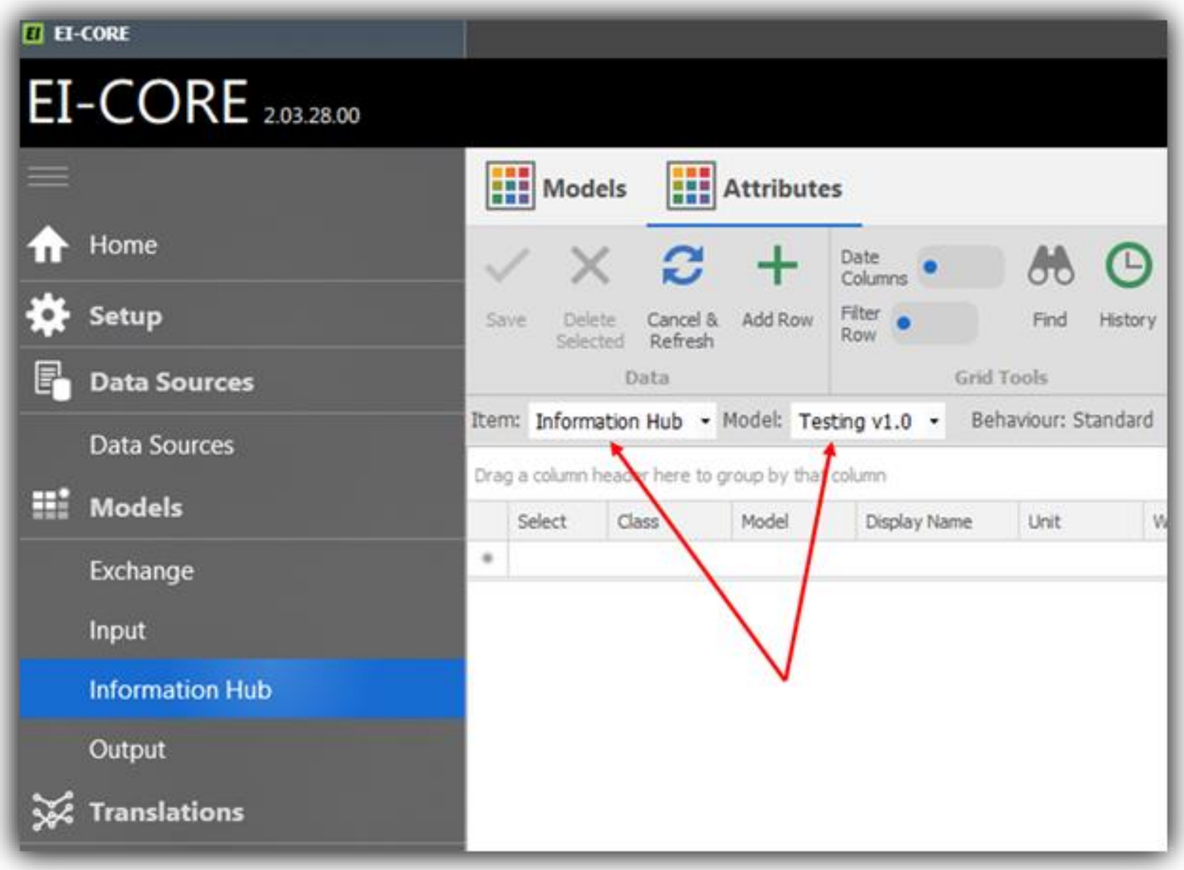
✓ Locate to the **Models** menu from the start up screen, and select the **Information Hub** sub-menu:



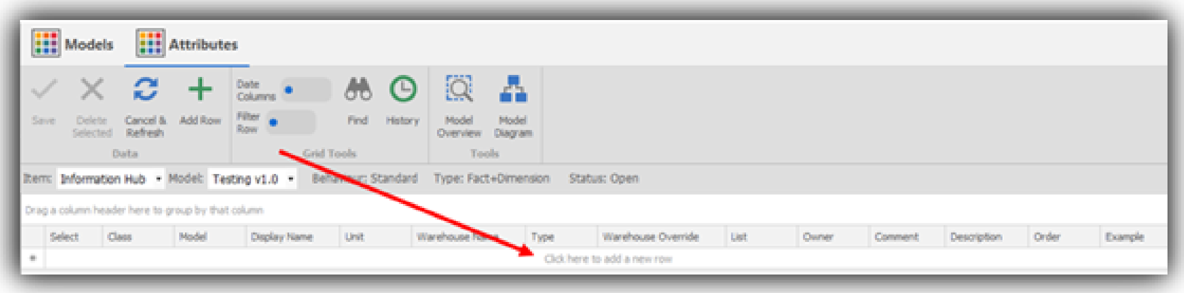
✓ Highlight the model you want to edit, and klick the **Attributes** icon:



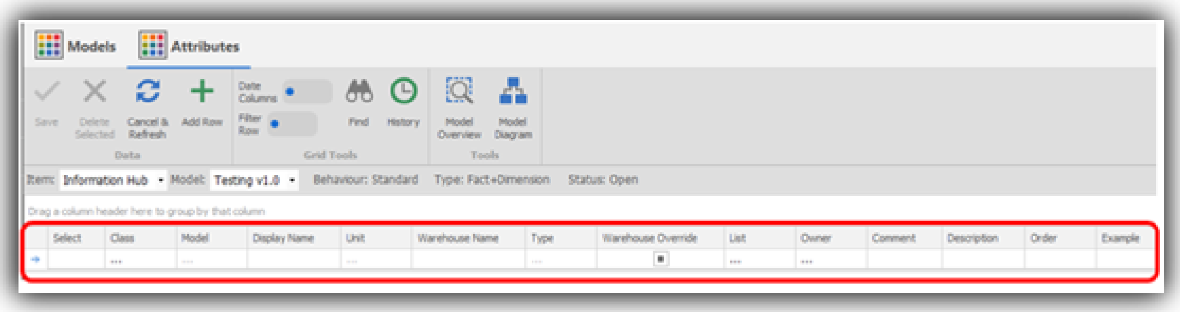
✓ Wait for the **Attributes**-view to load, and verify that the correct **Item** and **Model** is selected:



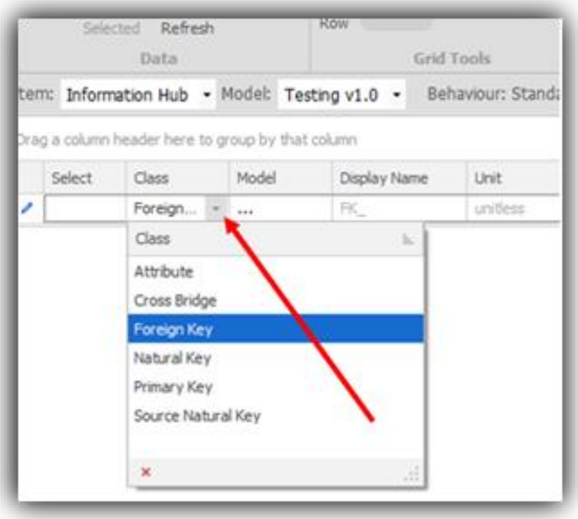
✓ Locate the empty line at the top of the and click it once:



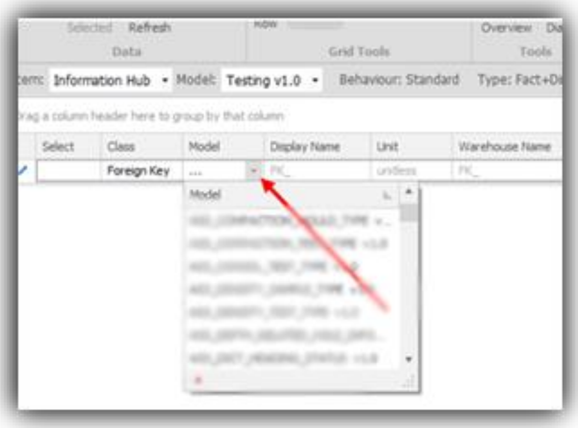
✓ The line now looks like this:



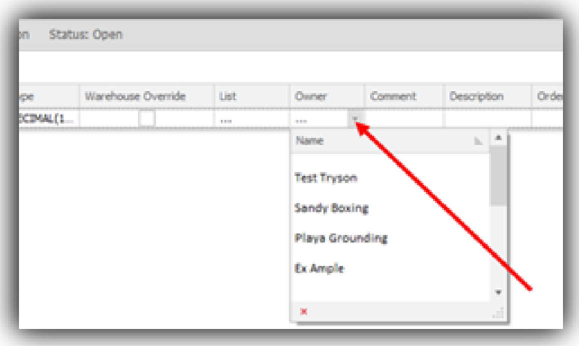
✓ Select **Foreign Key** or **Cross Bridge** as desired from the **Class drop-down menu**:



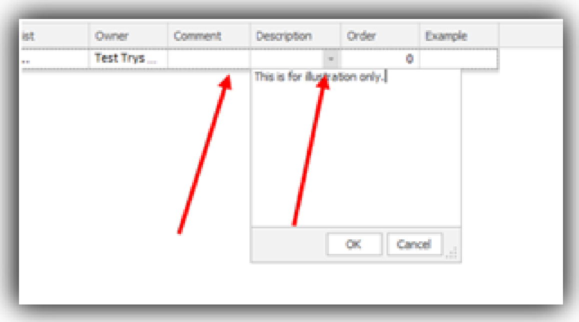
✓ Select desired model from the **Model-drop-down-menu:**



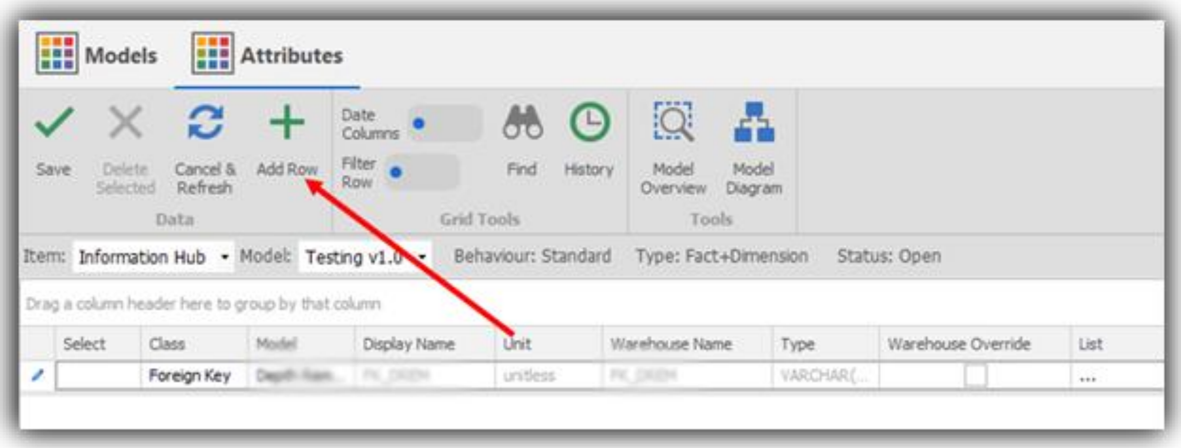
✓ Assign owner from the **Owner drop-down menu**:



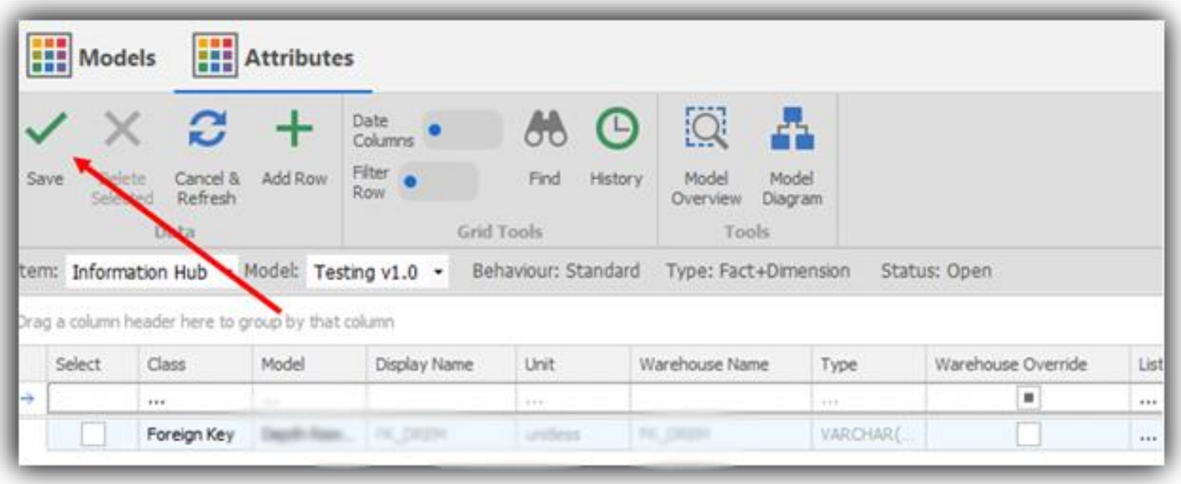
✓ Enter **Comment** and **Description** in the optional drop-down menus:



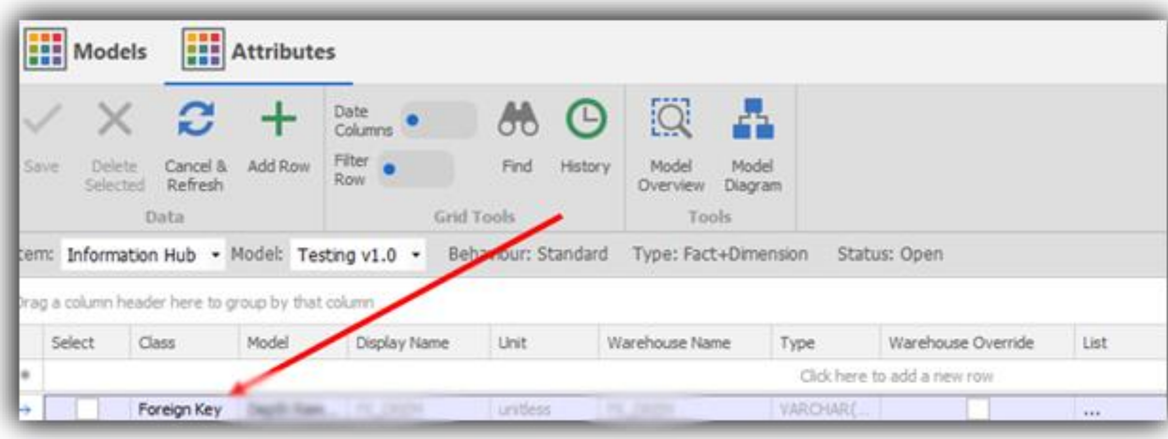
✓ Click the **Add Row icon** to add the row to the model (clicking anywhere inside the grid will accomplish the same):



✓ Click the **Save** icon to save the model with the new relation:



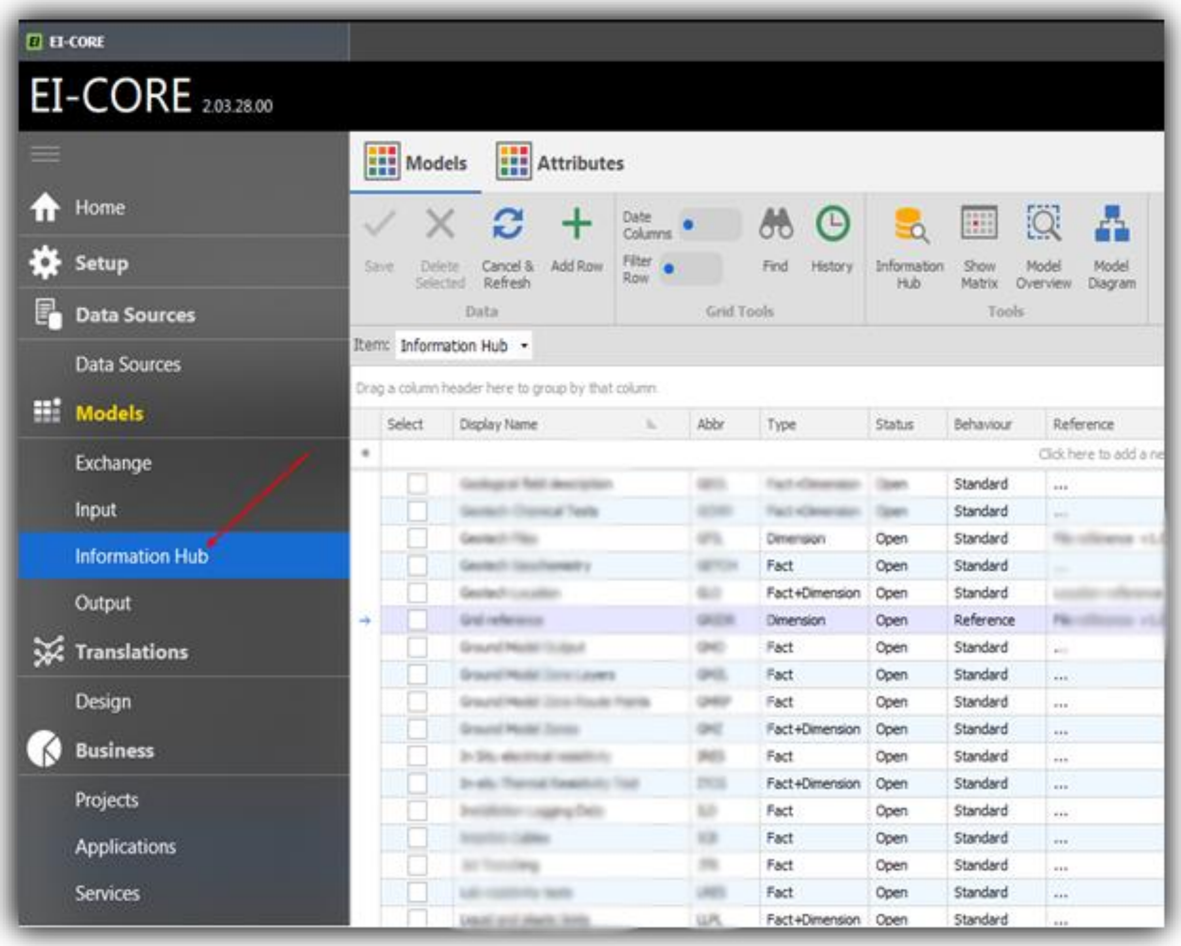
❖ Done, the model is saved with the new relation:



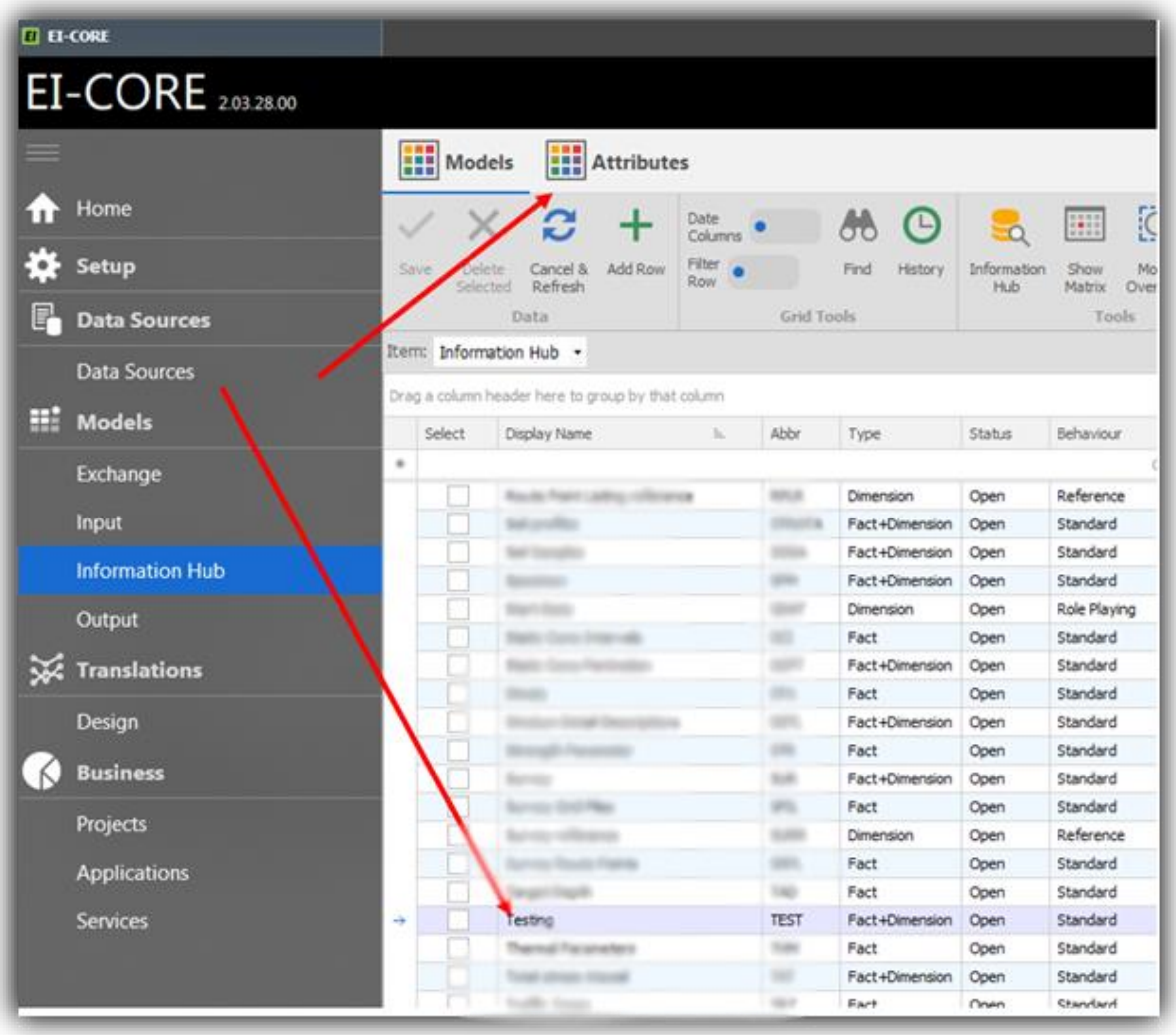
Assigning attributes to Subject Models

v. 2.03.28.00 05-08-2019

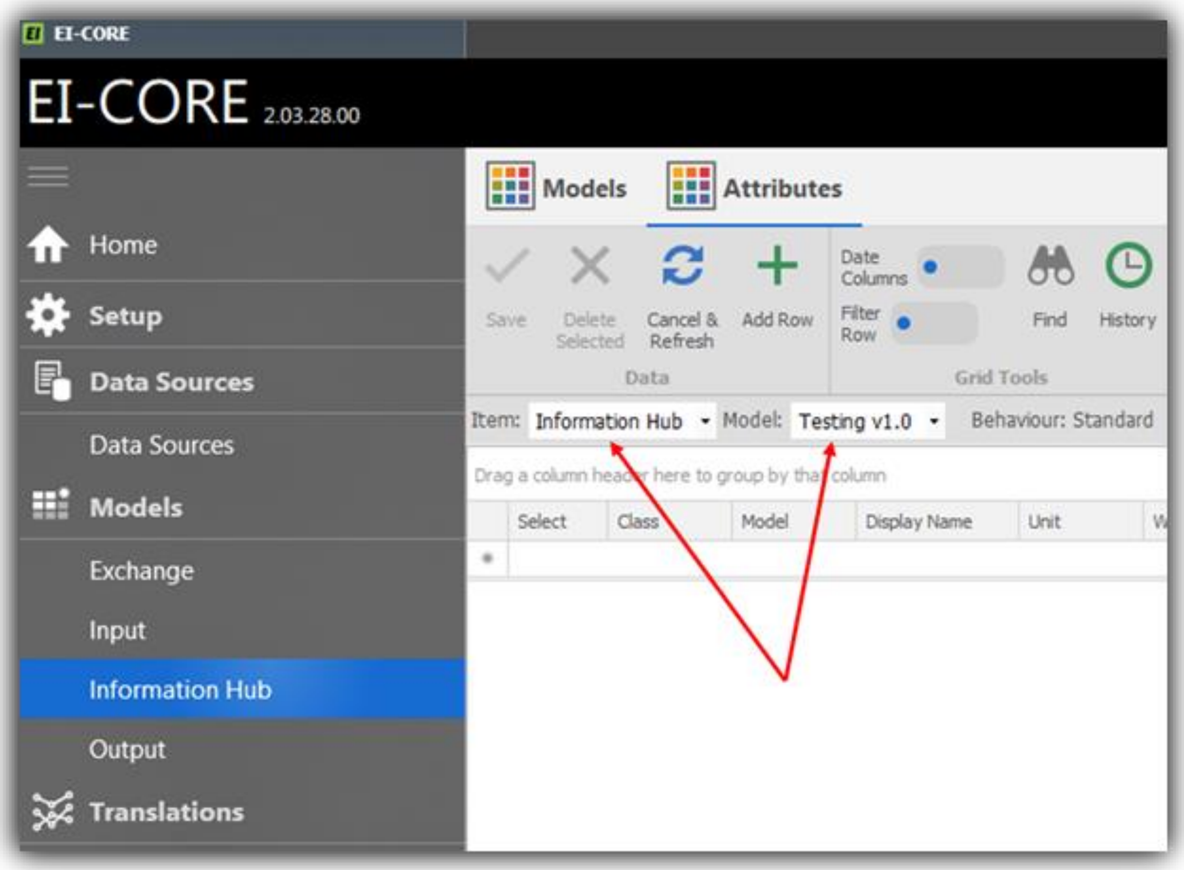
✓ Locate to the **Models** menu from the start up screen, and select the **Information Hub** sub-menu:



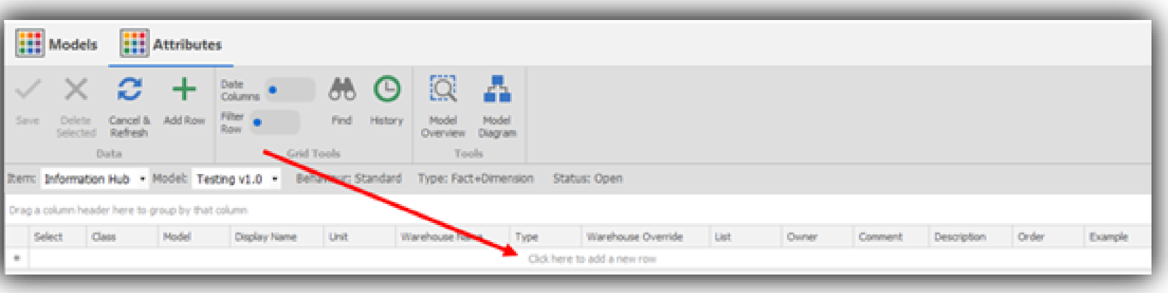
✓ Highlight the model you want to edit, and klick the **Attributes** icon:



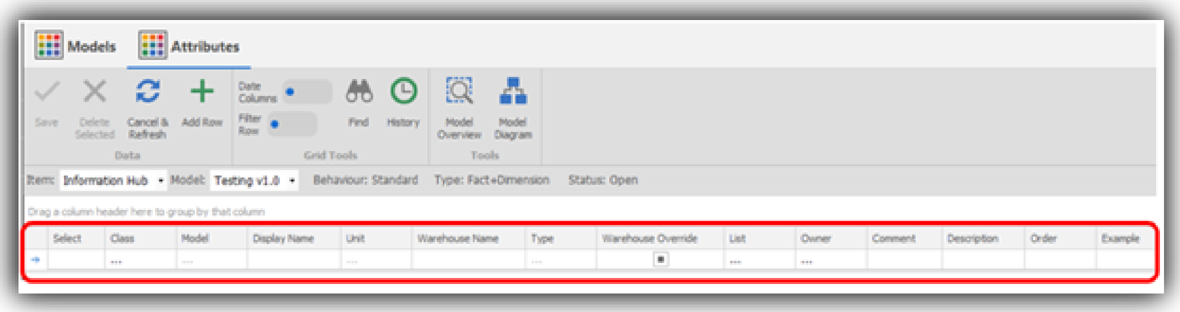
✓ Wait for the **Attributes**-view to load, and verify that the correct **Item** and **Model** is selected:



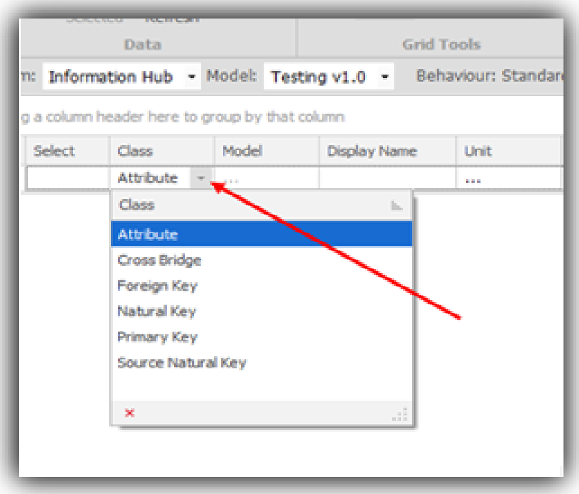
✓ Locate the empty line at the top of the and click it once:



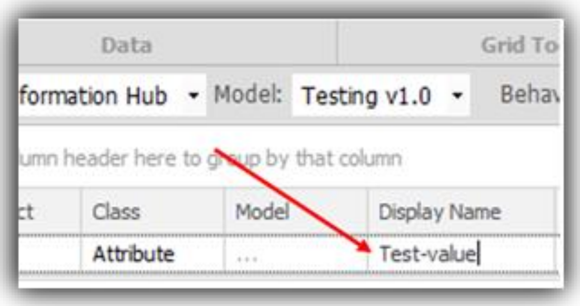
✓ The line now looks like this:



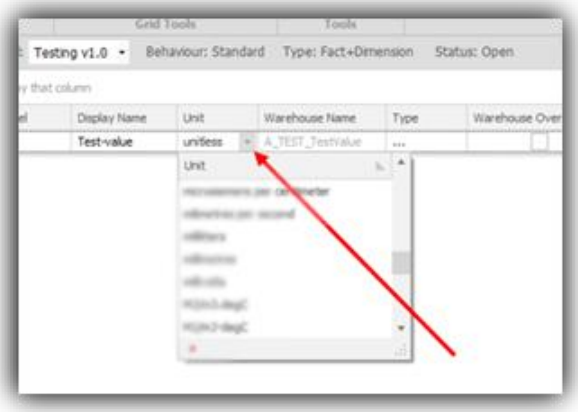
✓ Select **Attribute** from the **Class drop-down menu**:



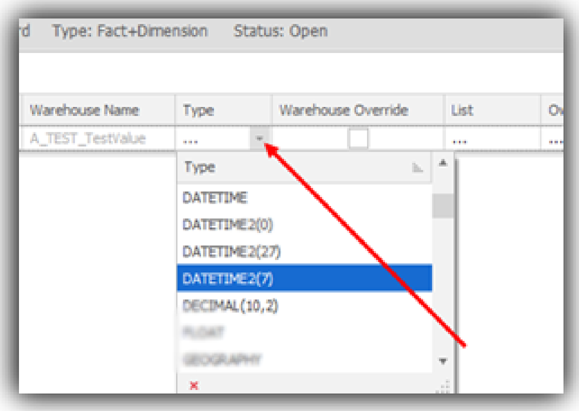
✓ Enter display-name in the **Display Name field:**



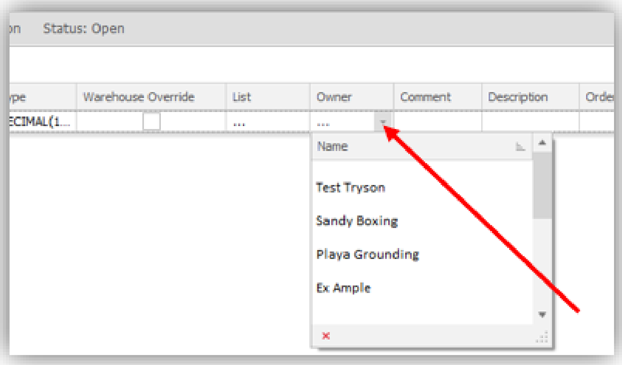
- ✓ Select unit from the **Unit drop-down menu** (to create a new unit, see "Creating new Units"-manual):



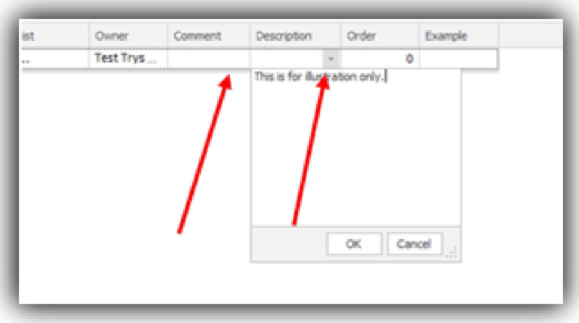
- ✓ Select database field type from the **Type drop-down menu**:



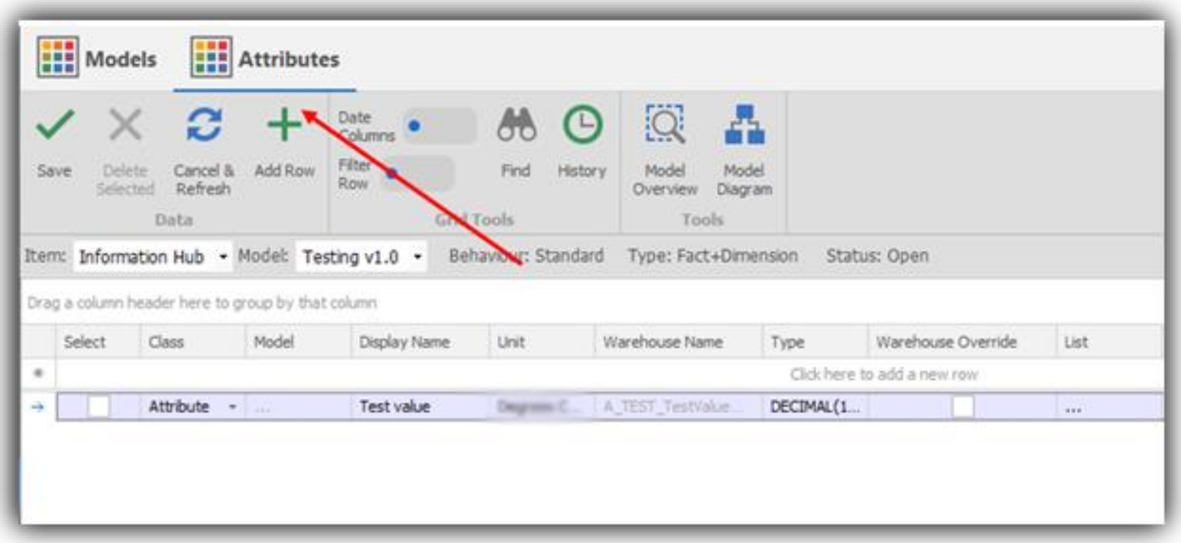
✓ Assign owner from the **Owner drop-down menu**:



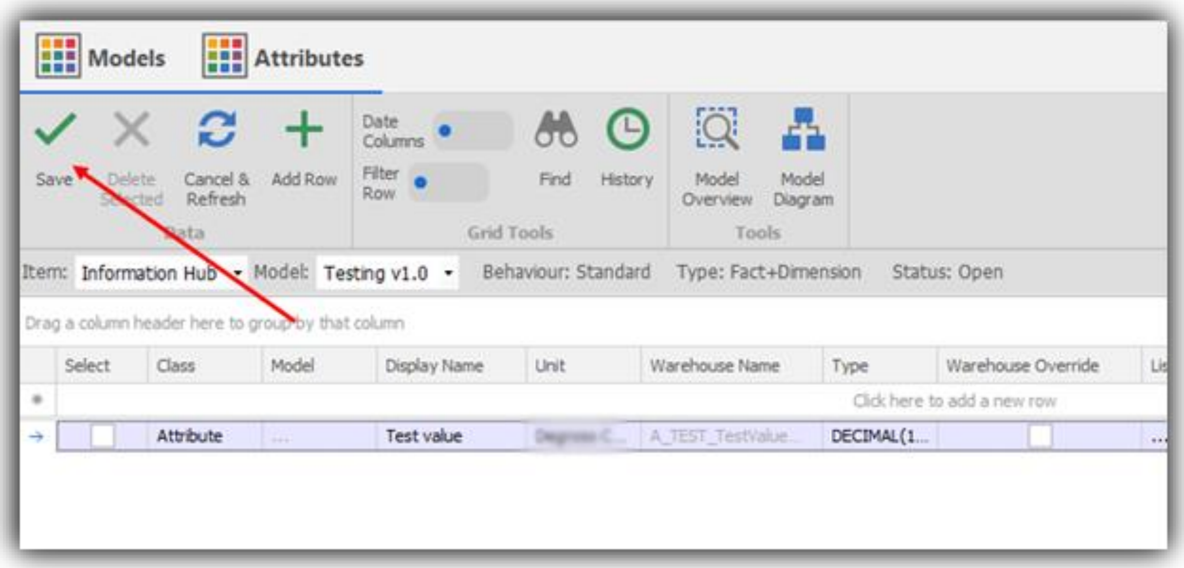
✓ Enter **Comment** and **Description** in the optional drop-down menus:



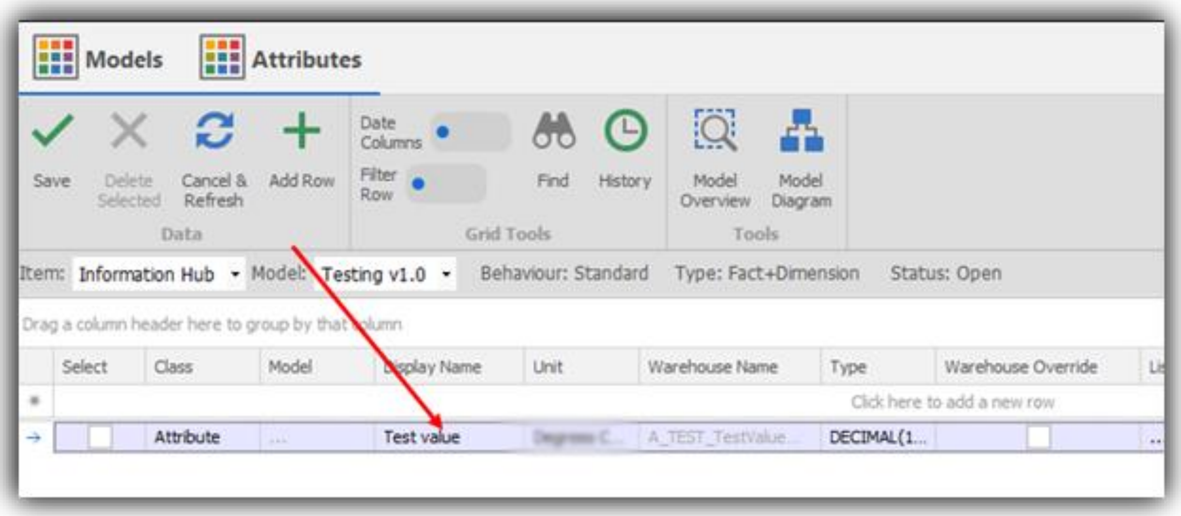
✓ Click the **Add Row icon** to add the row to the model (clicking anywhere inside the grid will accomplish the same):



✓ Click the **Save** icon to save the model with the new attribute:



❖ Done, the model is saved with the new attribute:

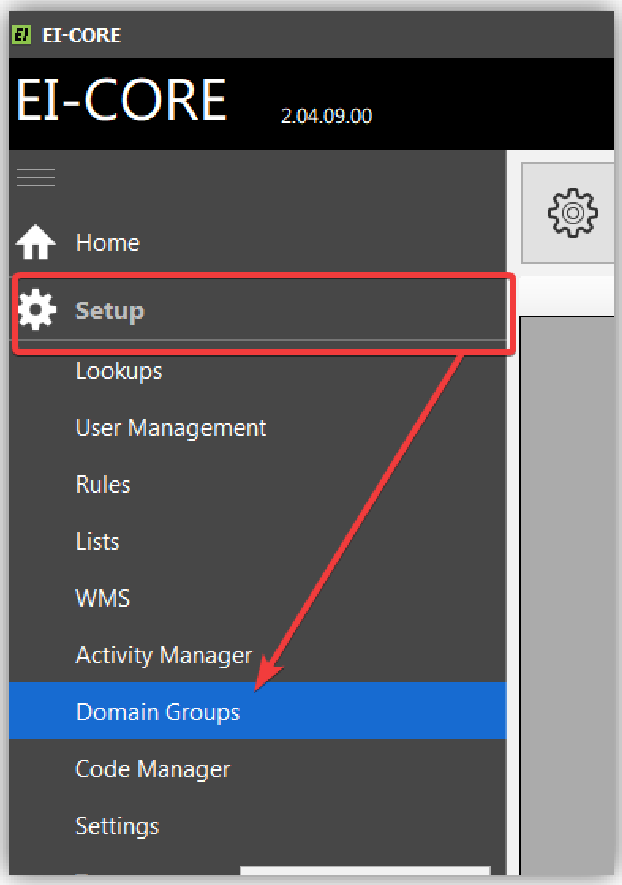


Assigning Members to Domain Groups

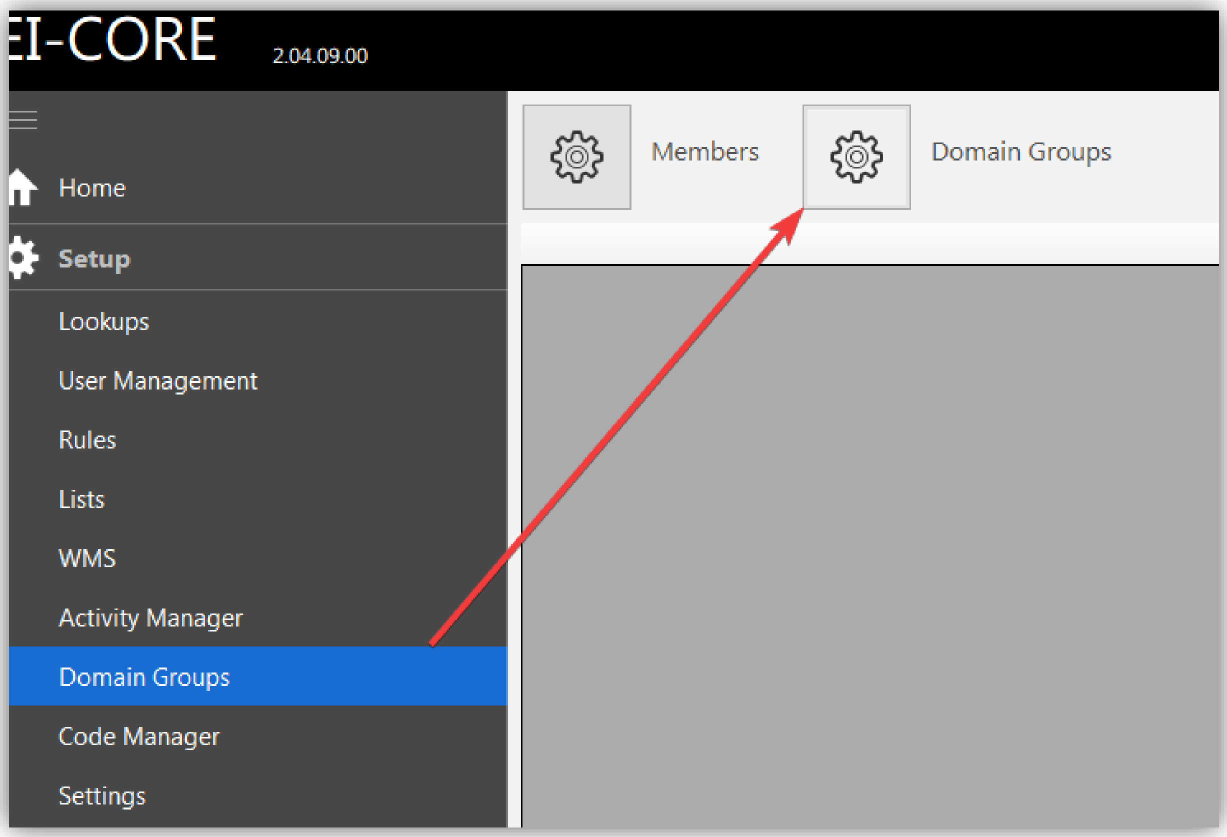
EI-CORE version number: 2.04.09.00

Document revision date: 2020-05-11

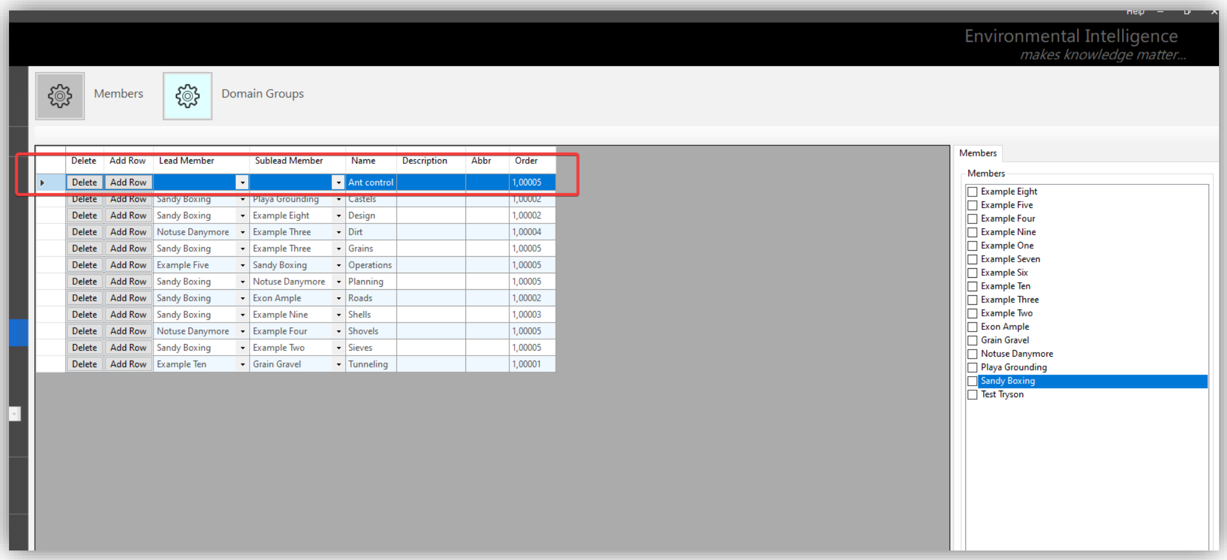
- ✓ Locate to the **Setup** menu from the start up screen, and select the **Domain Groups** sub-menu:



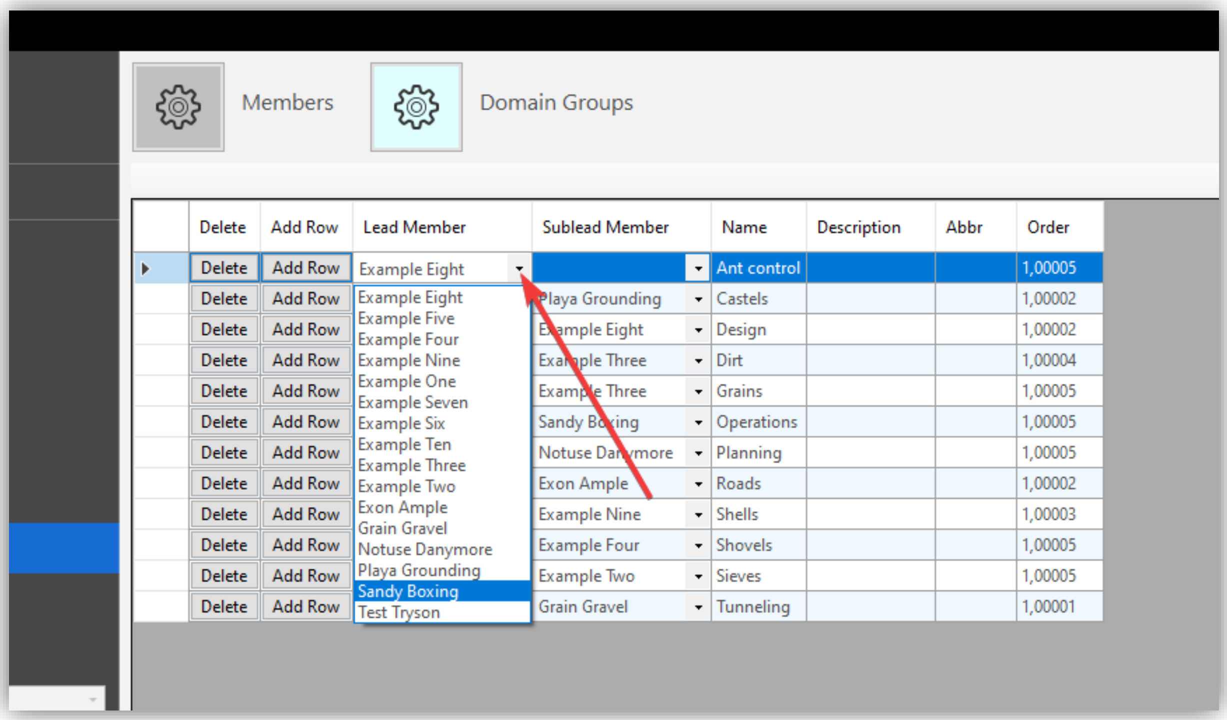
✓ From the **Domain Groups** window, click the **Domain Group** button:



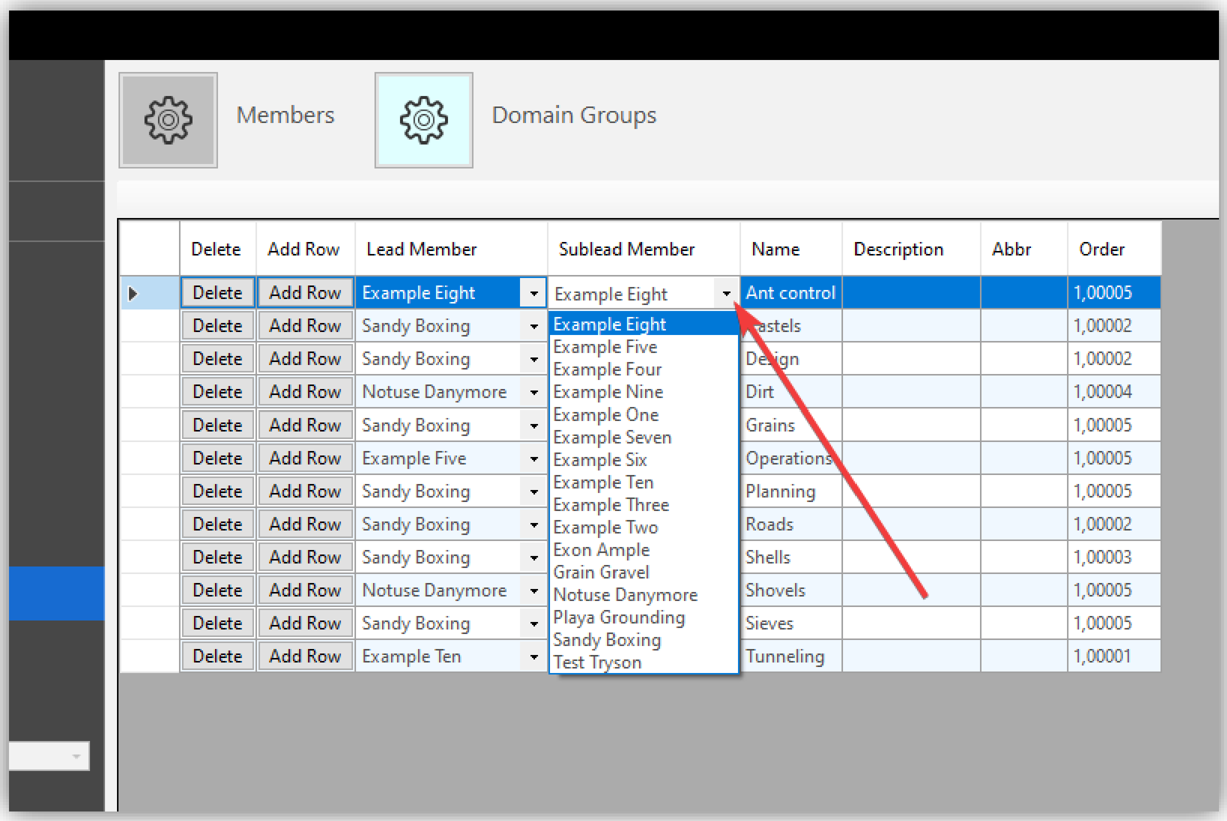
✓ Select desired **Domain Group**:



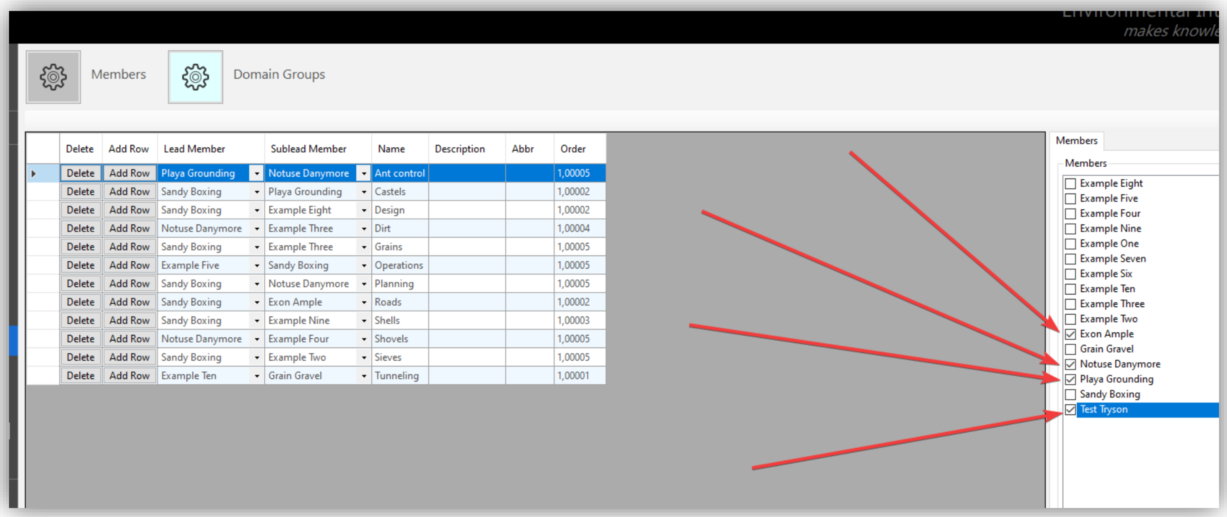
✓ Select **Lead Member** from the drop-down menu:



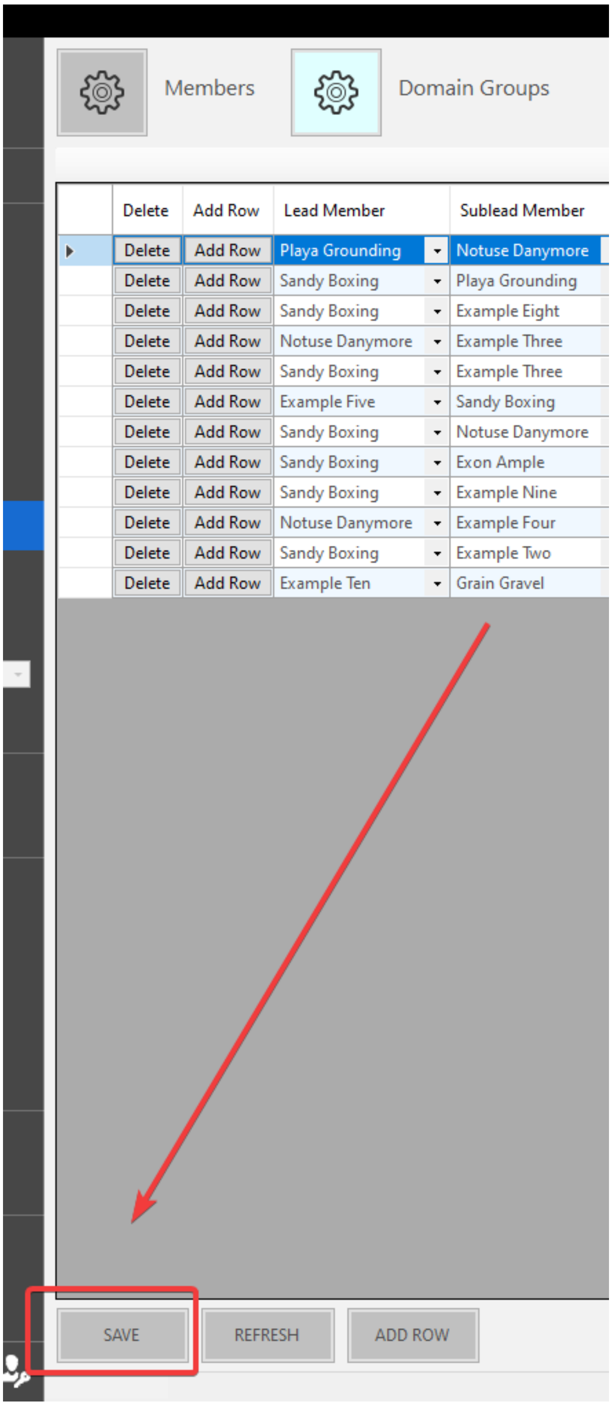
✓ Select **Sublead Member** from the drop-down menu:



✓ Assign members to the group by checking the boxes at the appropriate name in the **Members panel** to the right:



✓ Click **SAVE** button in the bottom of the screen:



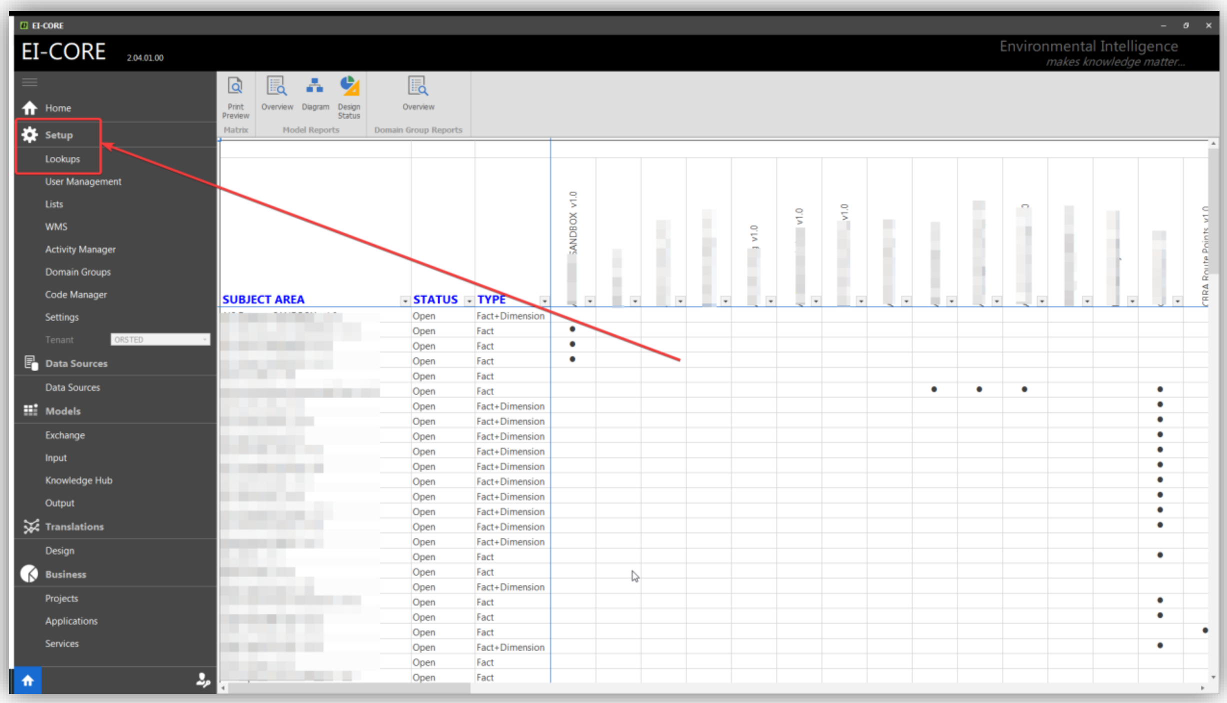
- Done!
  The group is now saved with its new members in EI-CORE.

Creating Units

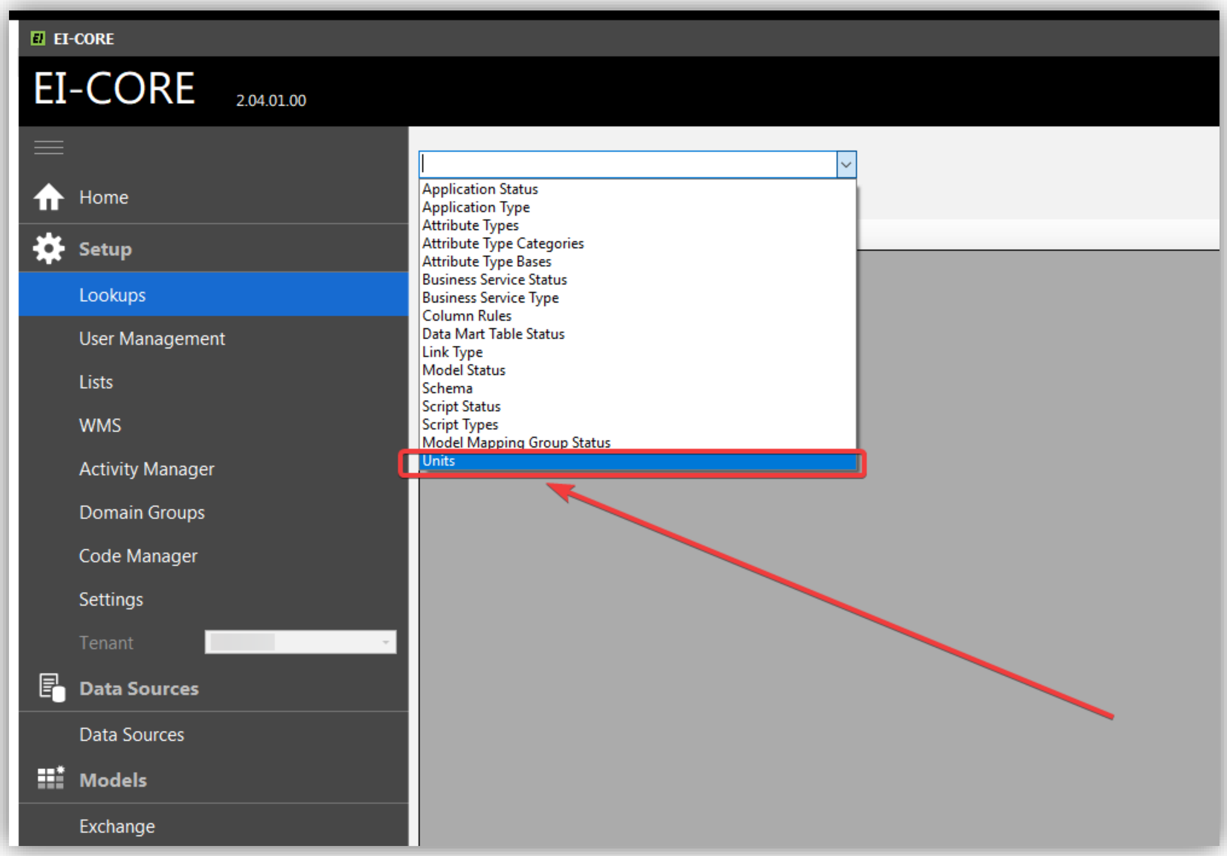
EI-CORE version number: 2.04.01.00

Document revision date: 2020-05-11

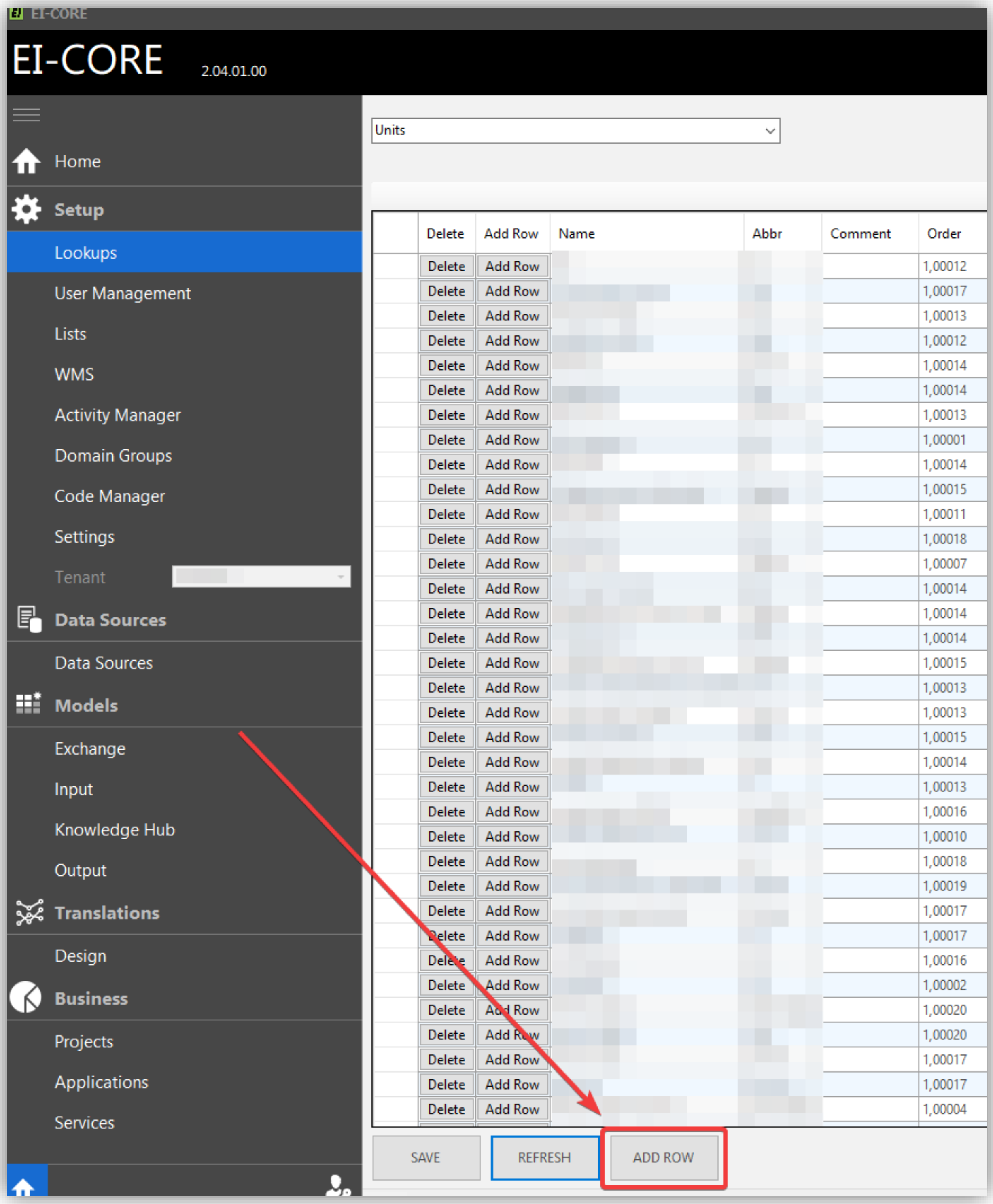
✓ Locate to the **Setup** menu from the start up screen, and select the **Lookups** sub-menu:



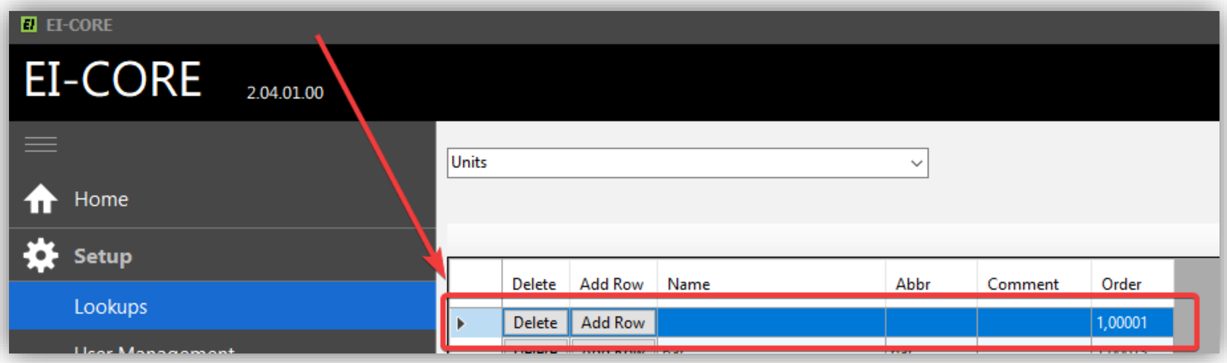
✓ From the **Lookups** menu, unfold the **drop-down menu** and select **Units:**



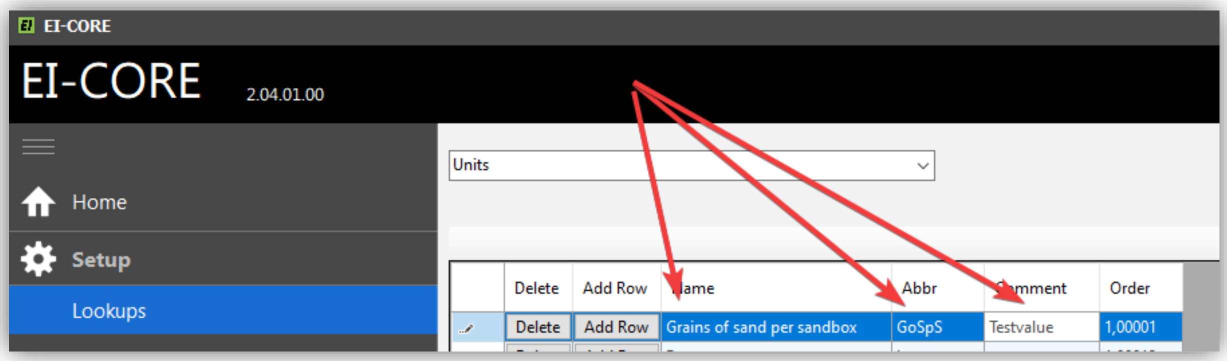
- ✓ Click the **ADD ROW** button in the bottom of the screen:


EI-CORE
EI-CORE 2.04.01.00
Home
Setup
Lookups
User Management
Lists
WMS
Activity Manager
Domain Groups
Code Manager
Settings
Tenant
Data Sources
Data Sources
Models
Exchange
Input
Knowledge Hub
Output
Translations
Design
Business
Projects
Applications
Services
Units
Delete
Add Row
Name
Abbr
Comment
Order
SAVE
REFRESH
ADD ROW

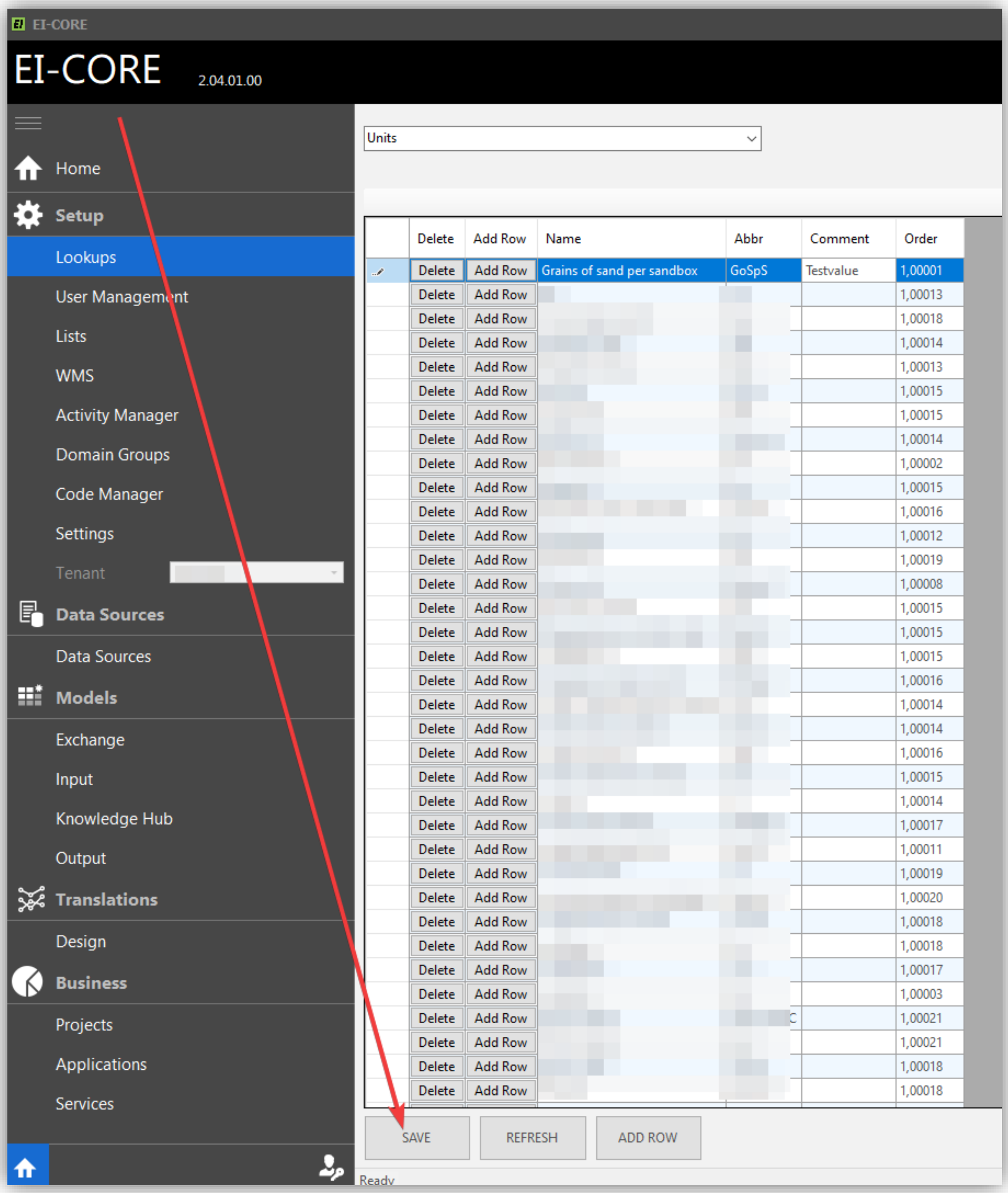
- ✓ An empty line has now appeared in the top of the grid:



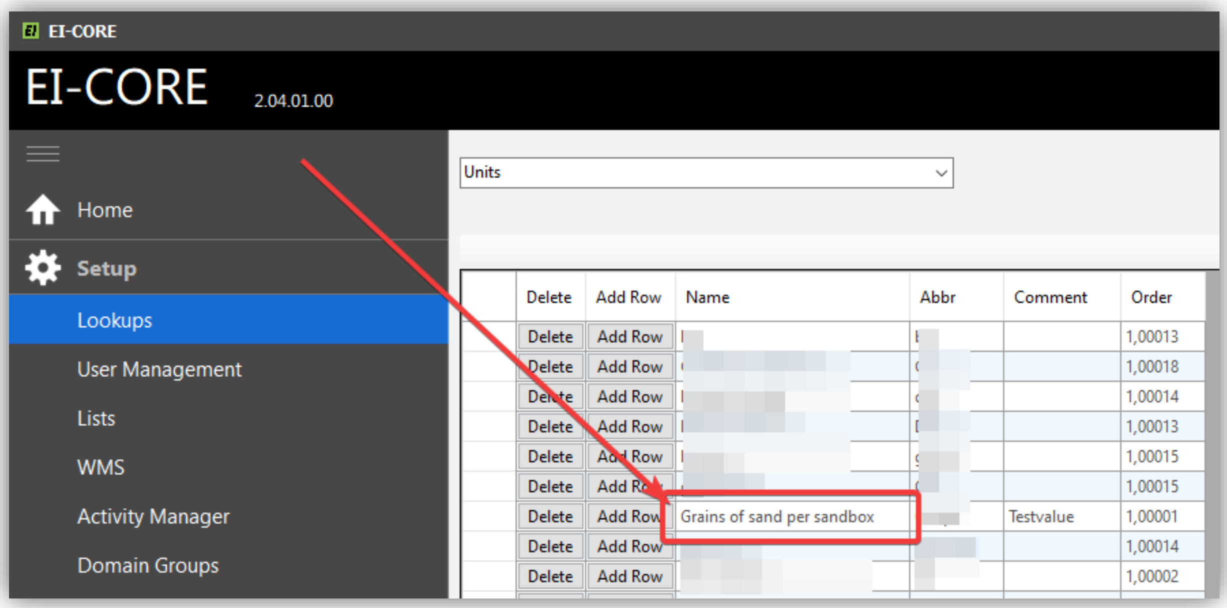
- ✓ Enter values for the **Name** and **Abbreviation** for the new unit and provide an optional **Comment** if desired:



- ✓ Click **SAVE** button in the bottom of the screen:


EI-CORE
EI-CORE
2.04.01.00
Home
Setup
Lookups
User Management
Lists
WMS
Activity Manager
Domain Groups
Code Manager
Settings
Tenant
Data Sources
Data Sources
Models
Exchange
Input
Knowledge Hub
Output
Translations
Design
Business
Projects
Applications
Services
Units
Delete
Add Row
Name
Abbr
Comment
Order
Grains of sand per sandbox
GoSpS
Testvalue
1,00001
SAVE
REFRESH
ADD ROW
Ready

- Done!
  The new unit is now saved in EI-CORE:

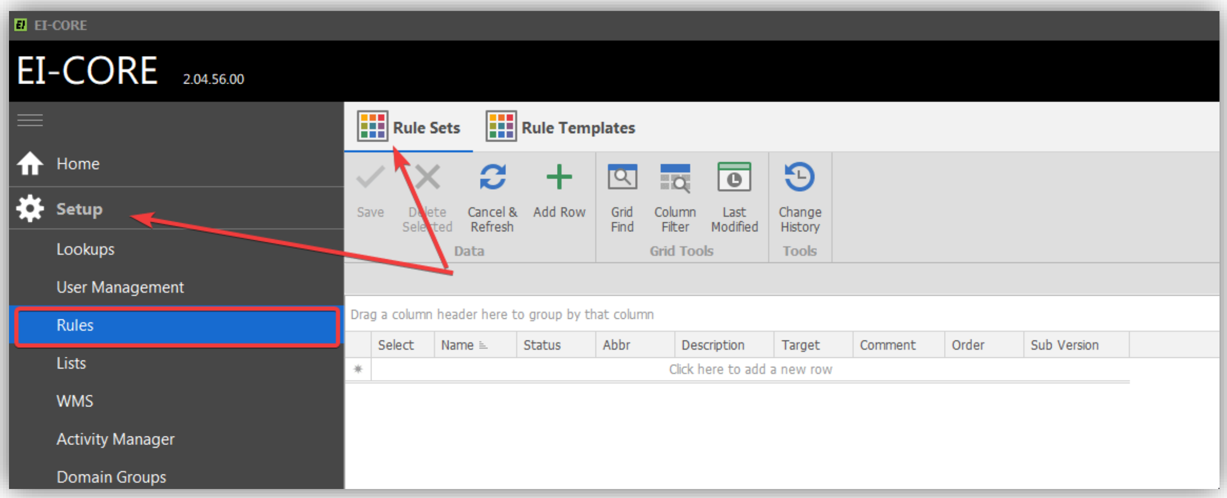


Creating New Rule Sets

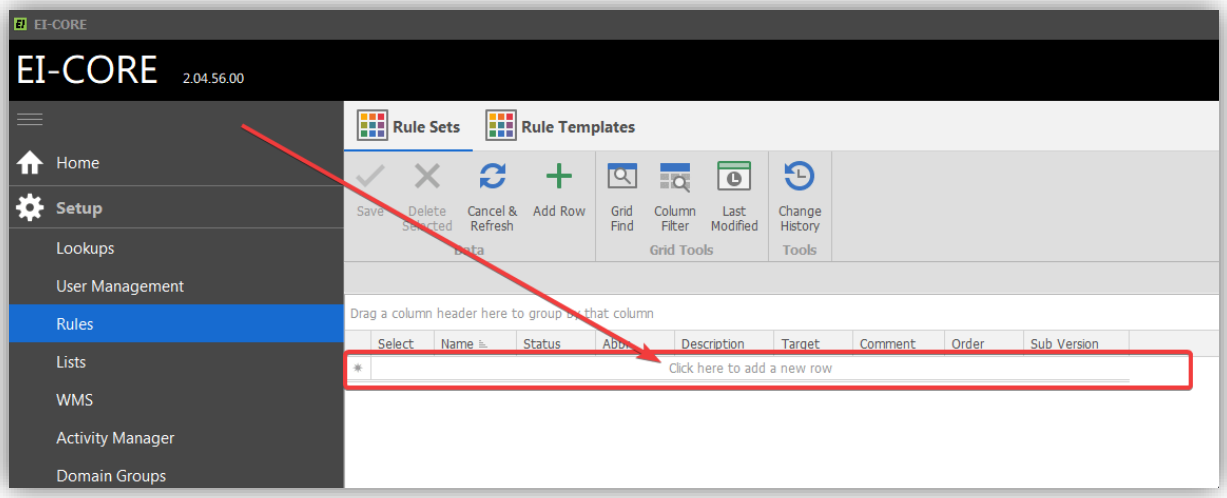
EI-CORE version number: 2.04.56.00

Document revision date: 2020-05-11

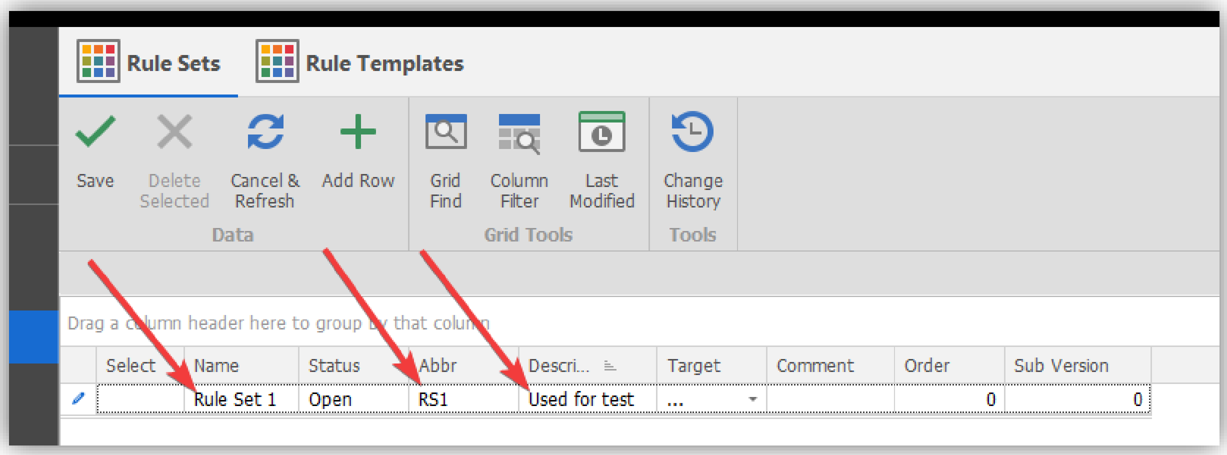
✓ Locate to the **Rules** sub-menu from the **Setup** menu, and select the **Rules Sets** icon:



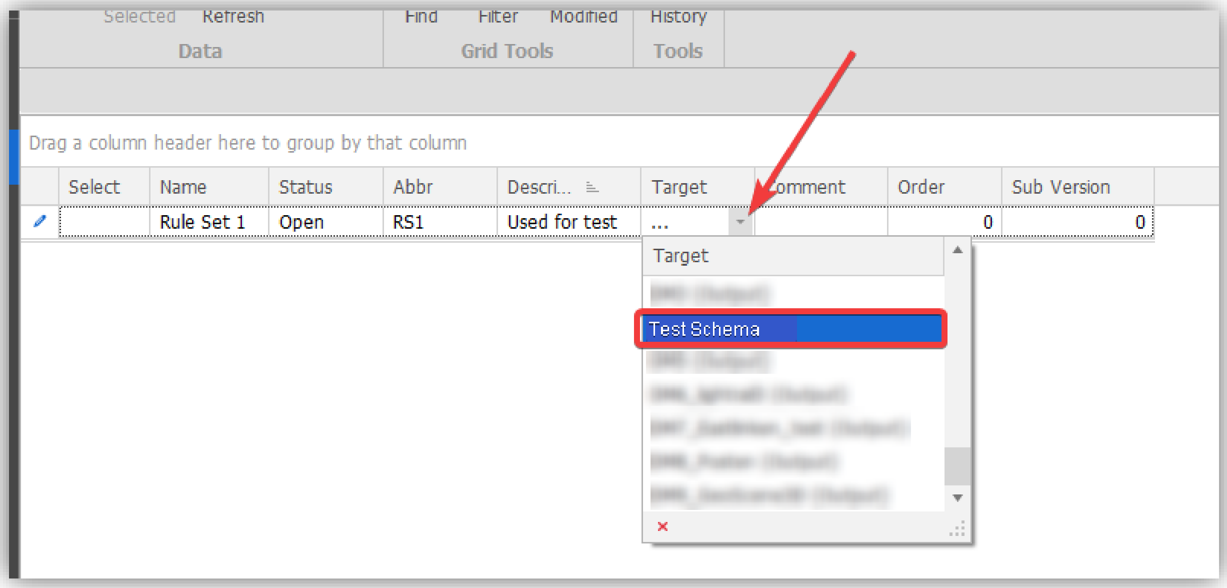
✓ Click the blanc row at the top of the grid:



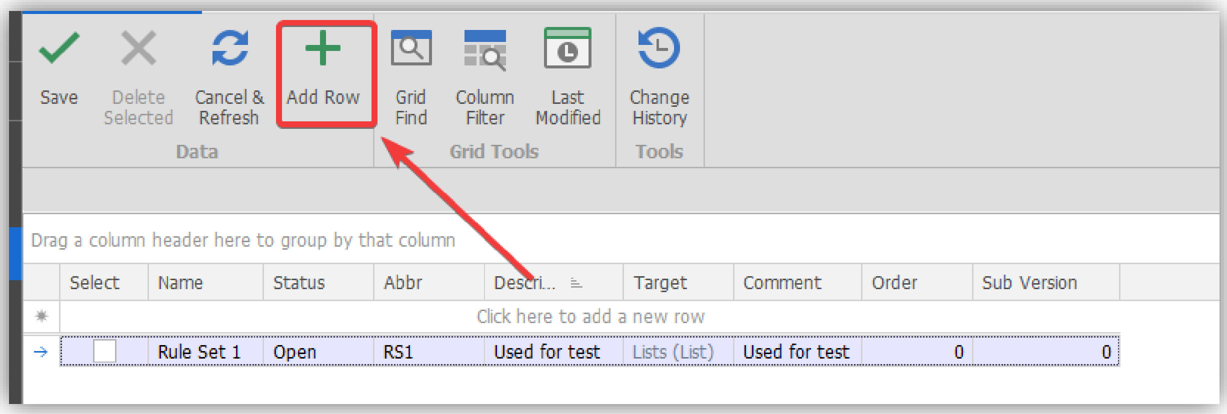
✓ In the new row, fill in values for **Name**, **Abbr**eviation, and **Description**:



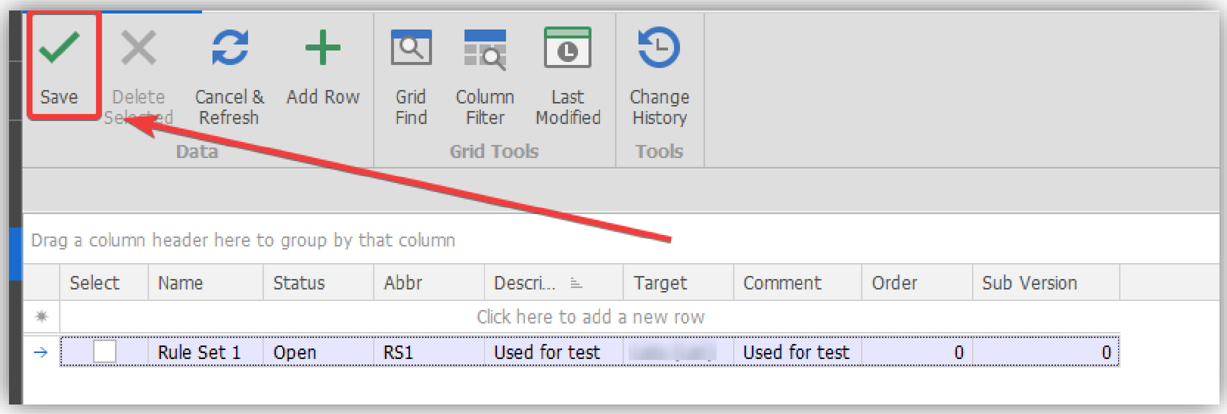
- ✓ Select the desired Target from the **Target** drop-down menu:



- ✓ Click **Add Row-**button in the top of the screen:



✓ Click **Save button** in the top of the screen:



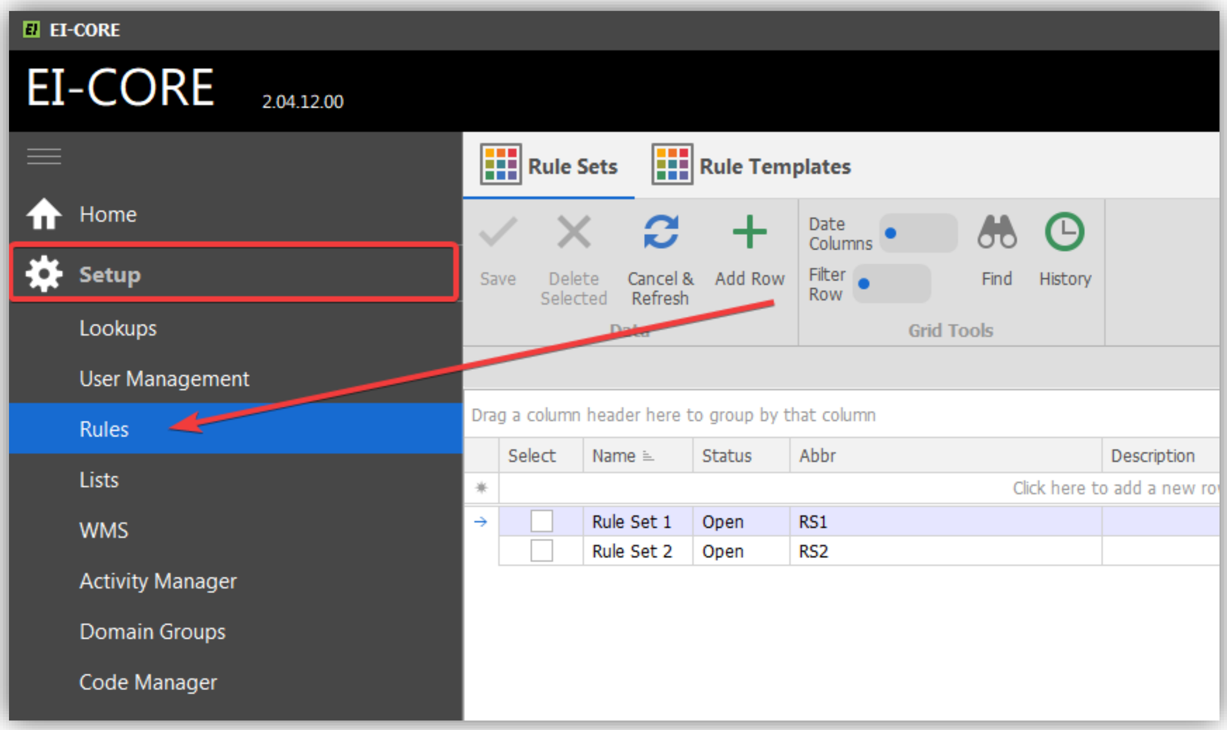
❖ Done!
The new Rule Set is now saved in EI-CORE

Creating Rule templates

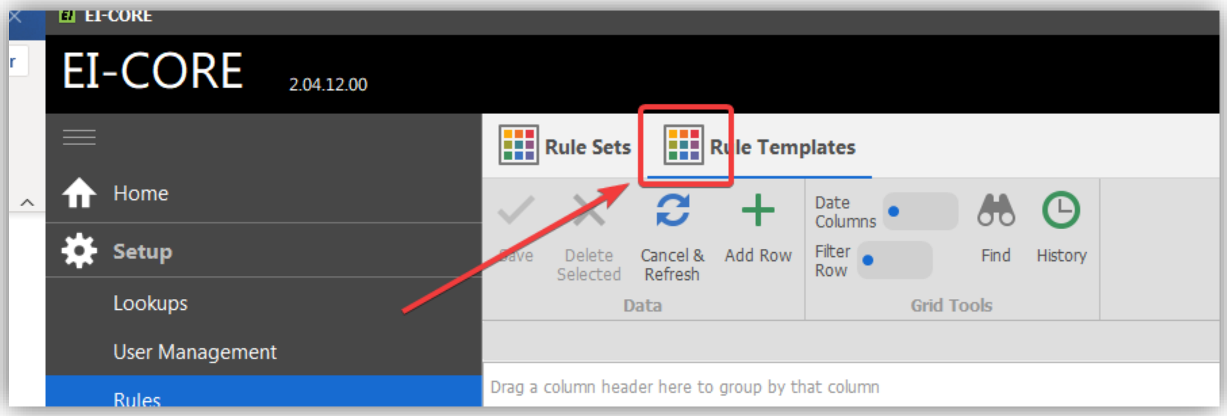
EI-CORE version number: 2.04.12.00

Document revision date: 2020-05-11

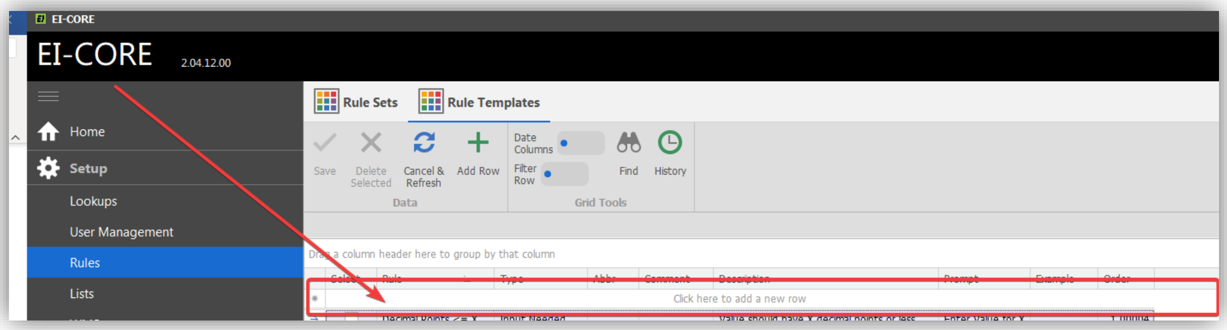
✓ Locate to the **Setup** menu from the start up screen, and select the **Rules** sub-menu:



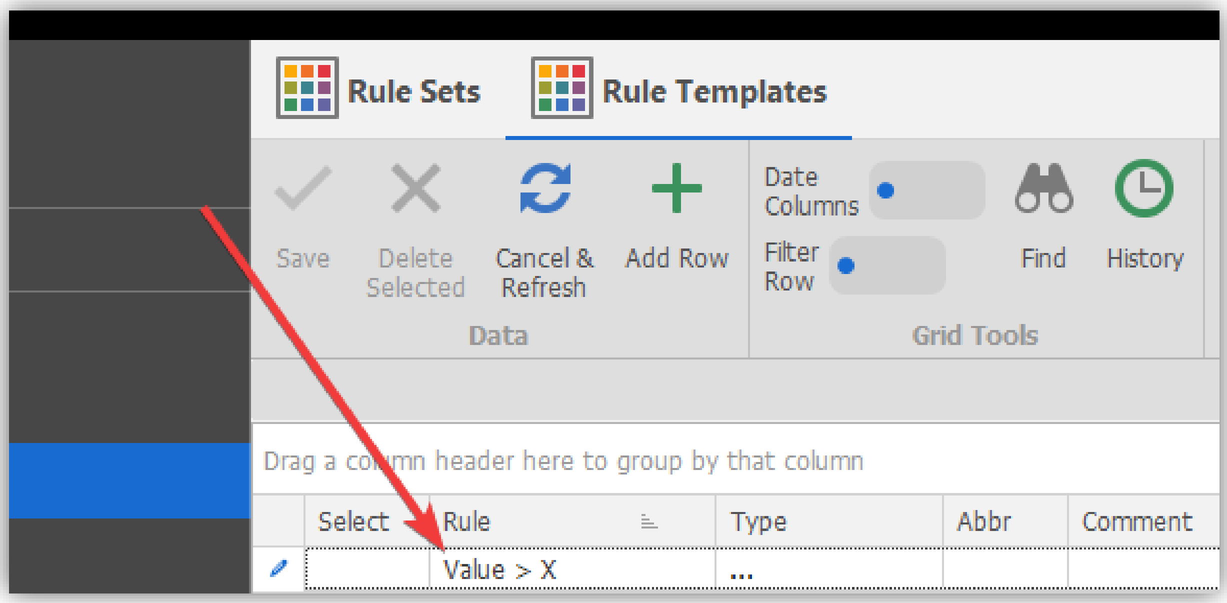
✓ Click the **Rule Templates icon:**



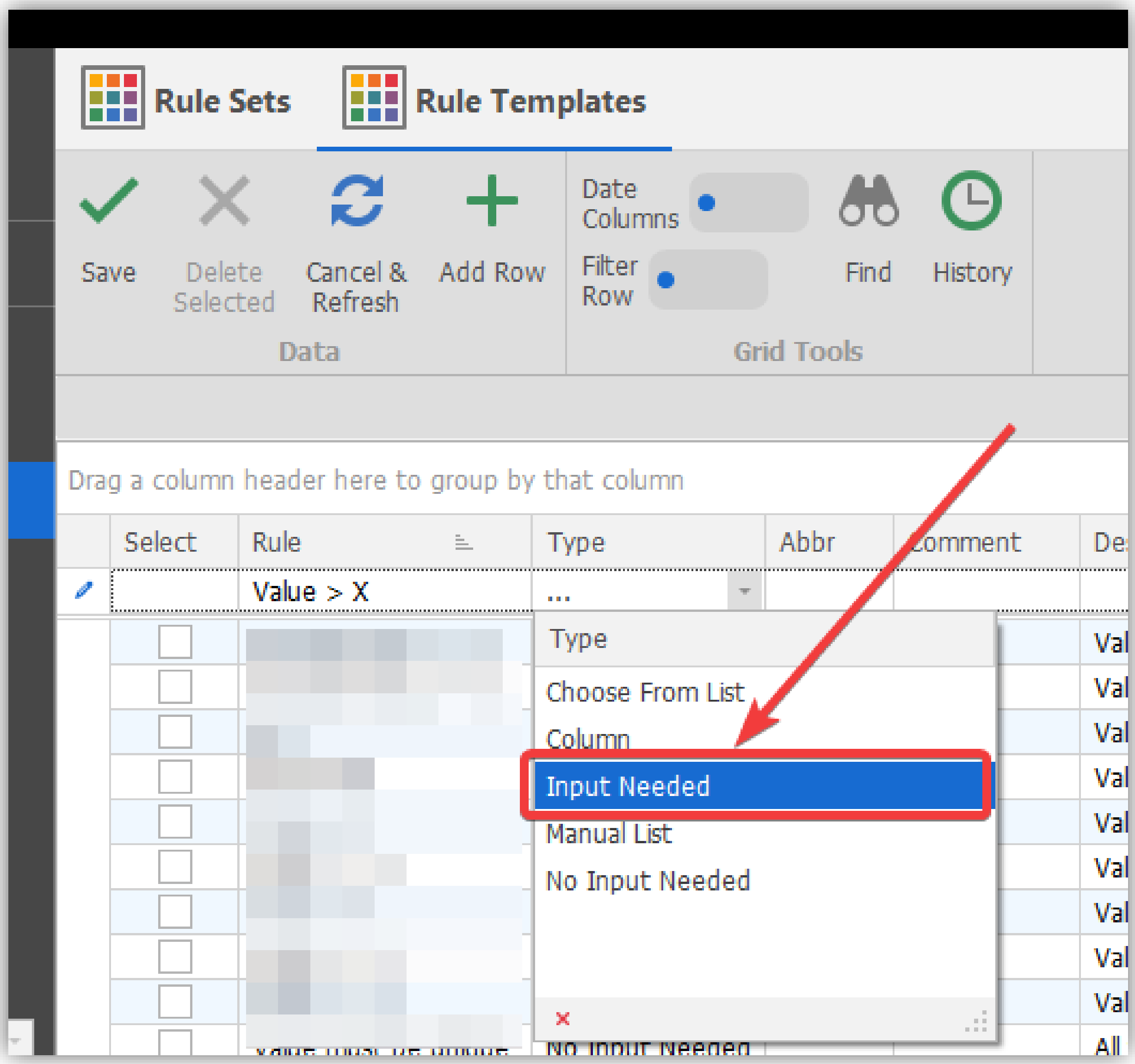
✓ Click the blanc line at the top of the grid:



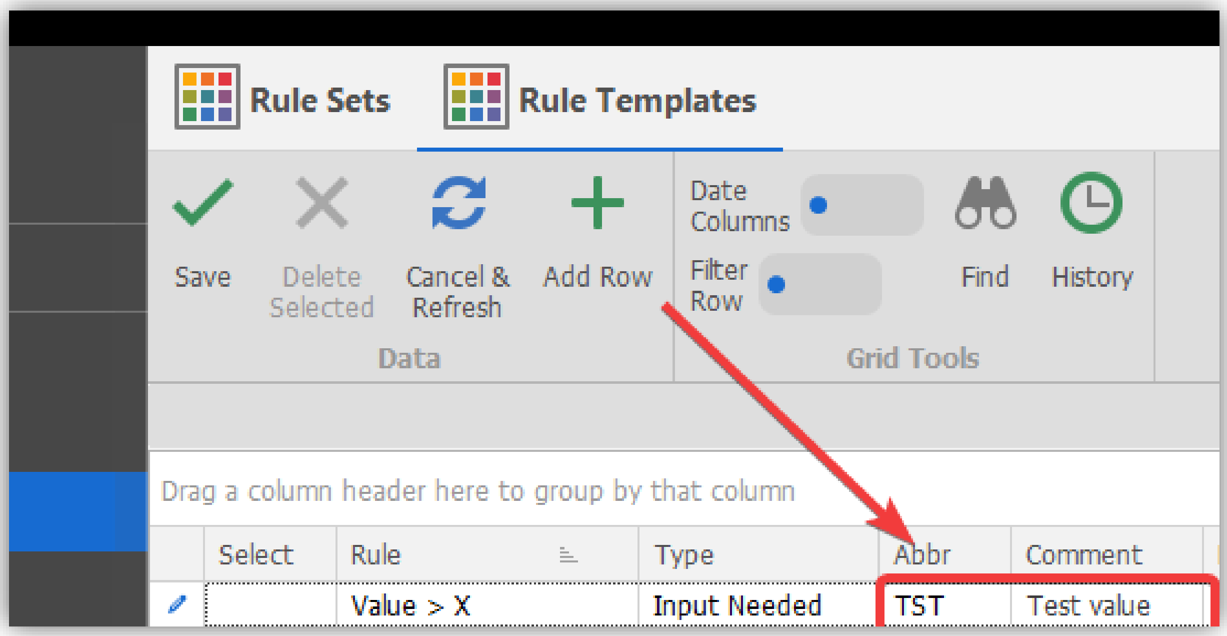
✓ In the **Rule** field, enter an unambiguous rule:



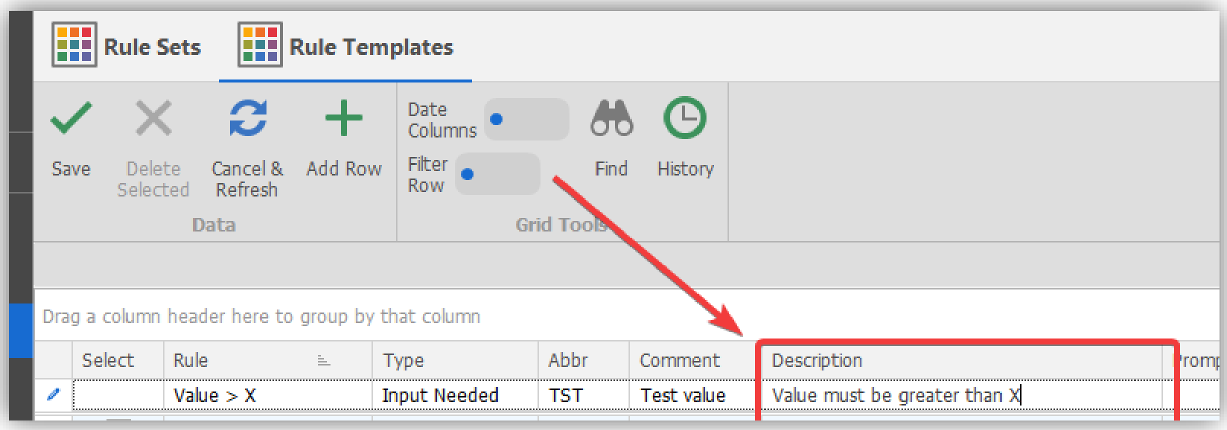
✓ Select the desired type from the **Type drop-down menu**:



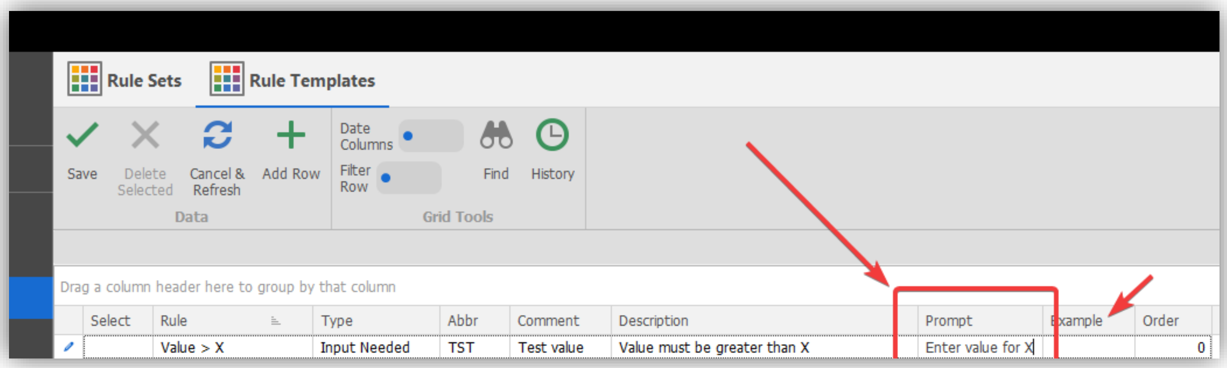
✓ Enter **Abbriviation** and **Comment** if desired



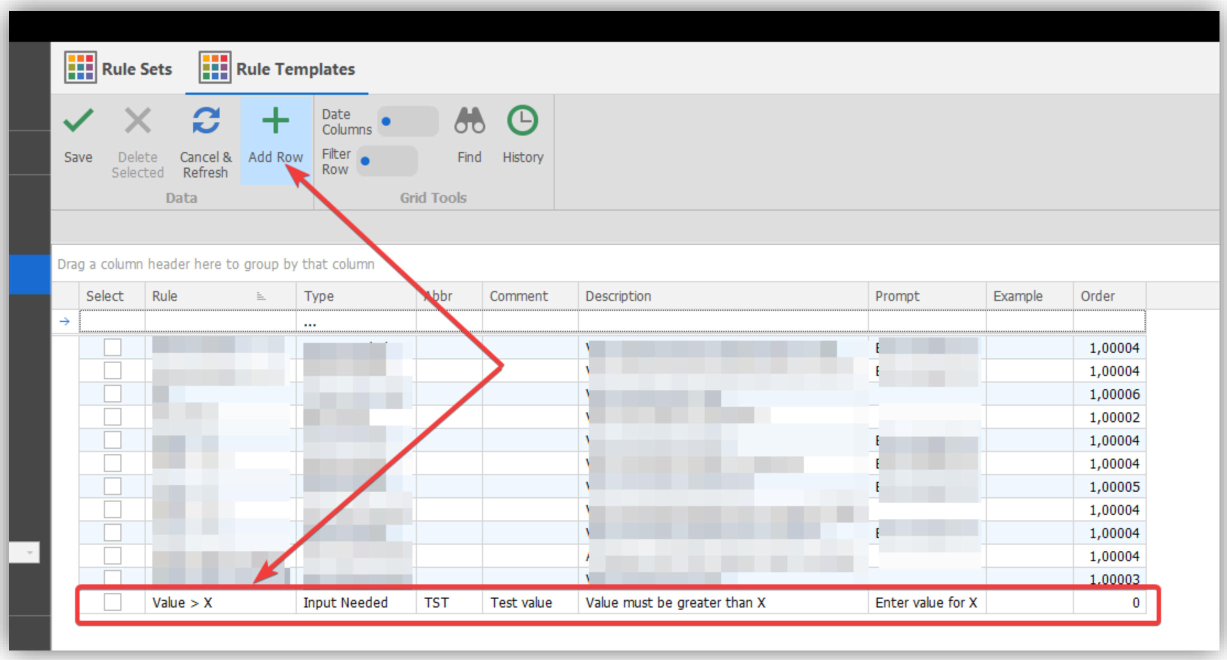
✓ Enter a **Description** of the value:



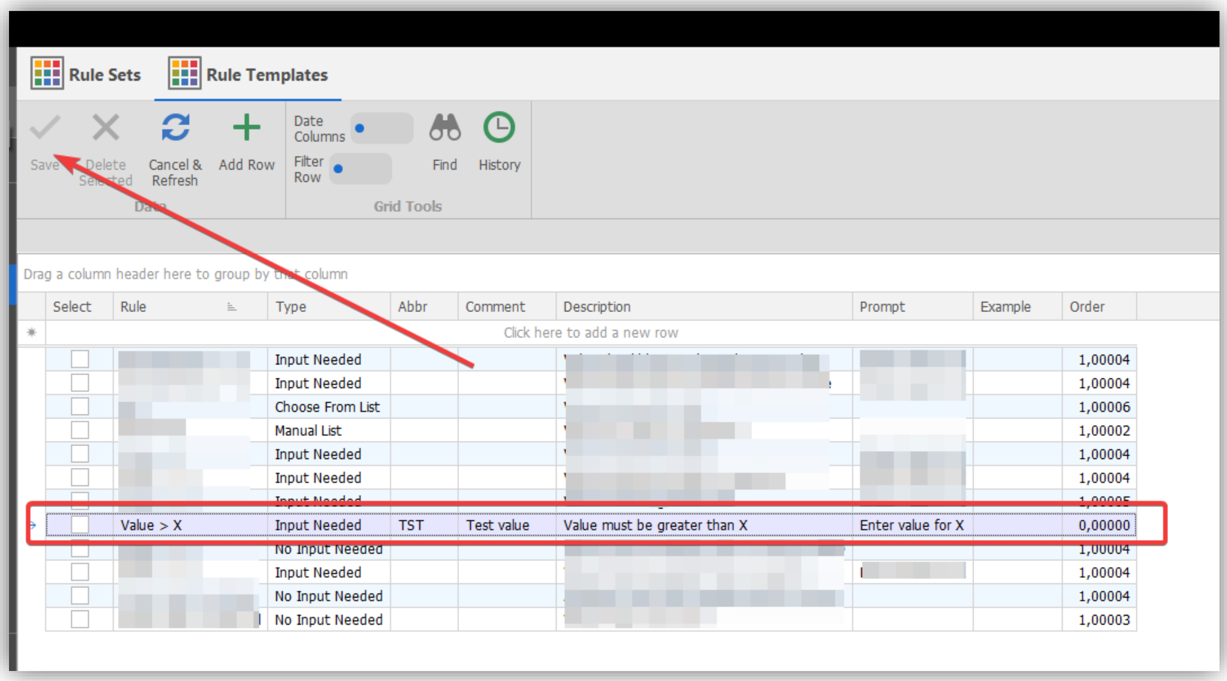
- ✓ If rule type requires input, enter Prompt text in the **Prompt field**. Grant an **Exampl**e where applicable or leave Example field blank :



- ✓ Click **Add Row-**button in the top of the screen. The rule will appear in the bottom of the screen:



✓ Click **Save button** in the top of the screen. The new value will be placed in alphabetical in the grid:



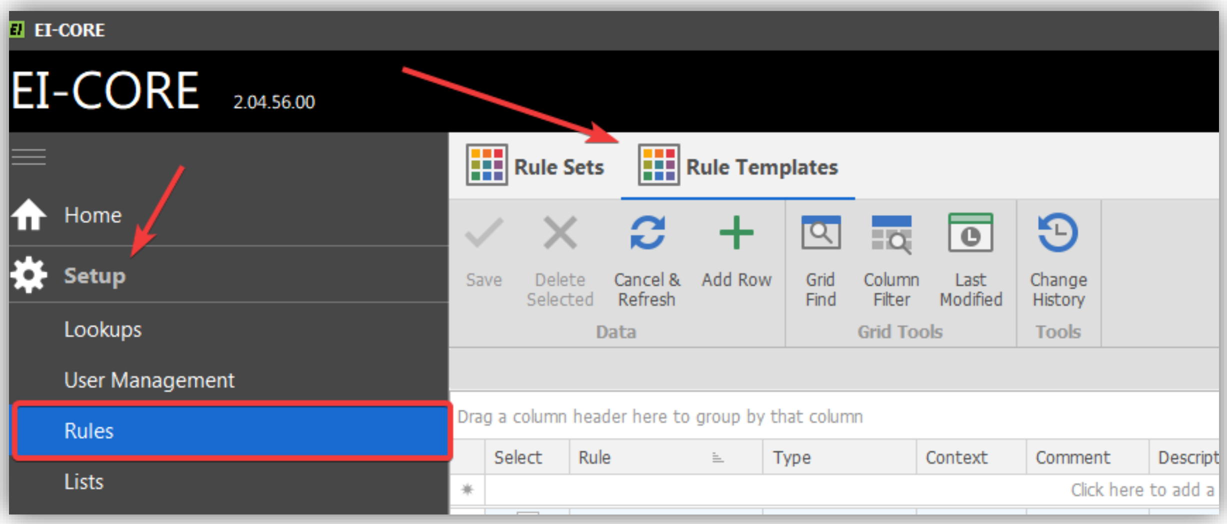
❖ Done!
The new rule is now saved in EI-CORE

Creating Parent Rule

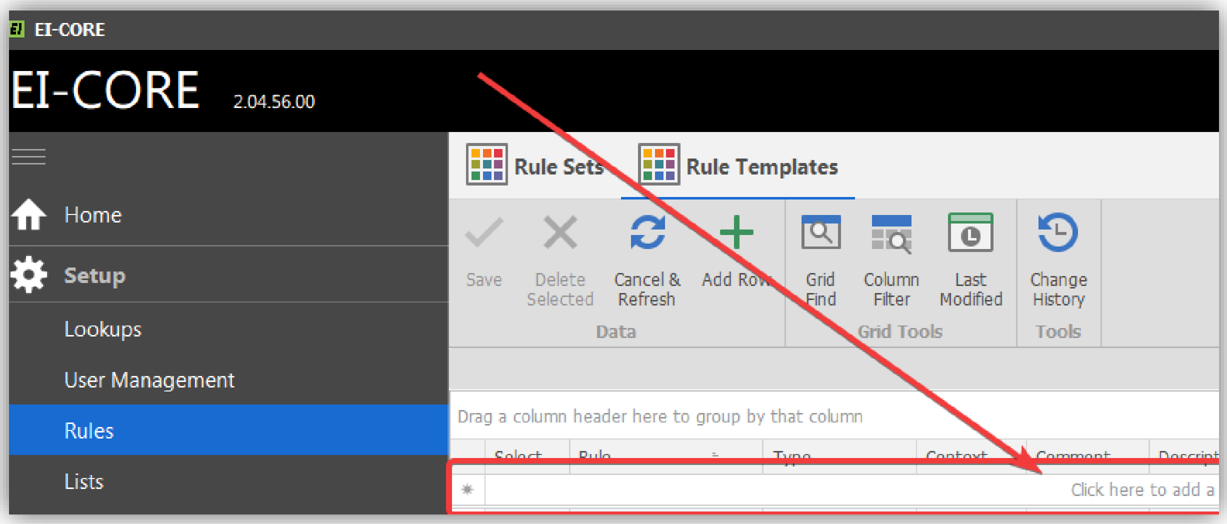
EI-CORE version number: 2.04.56.00

Document revision date: 2020-05-11

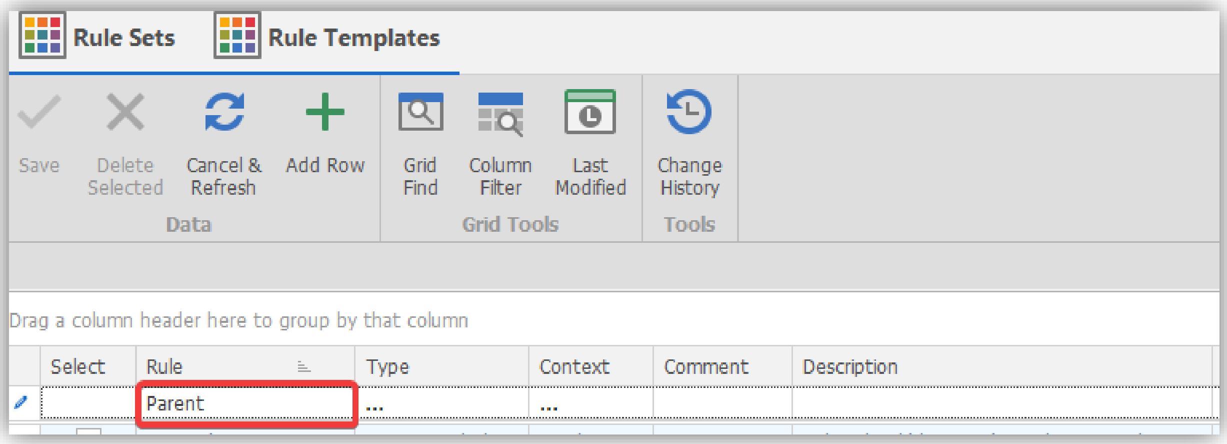
✓ Locate to the **Rules** sub-menu from the **Setup** menu, and select the **Rules Templates** icon:



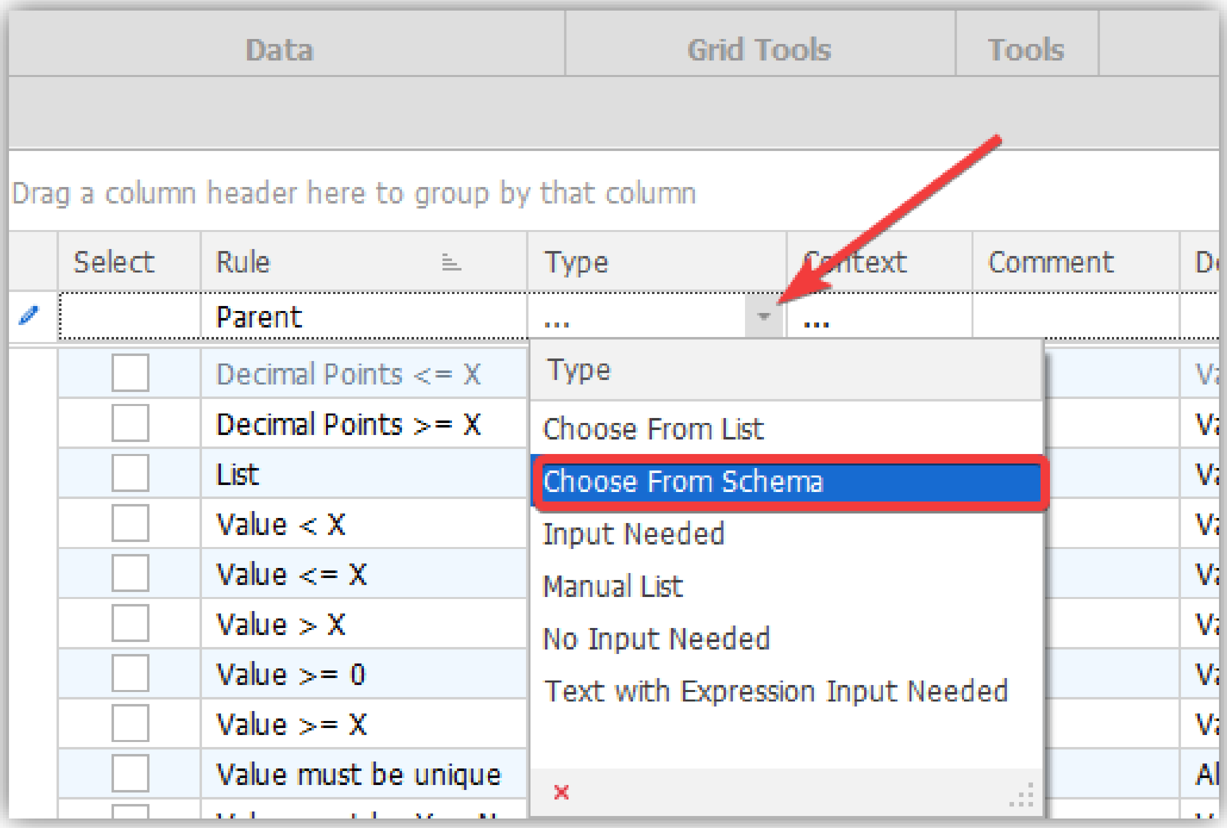
✓ Click the blanc row at the top of the grid:



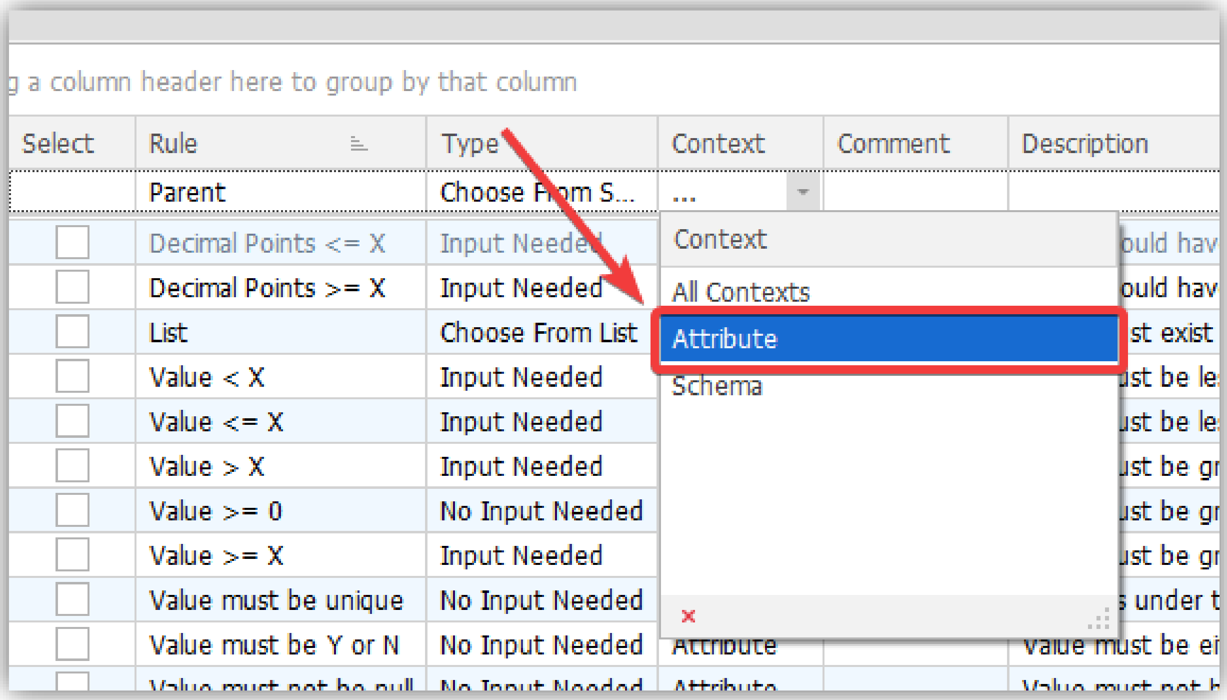
✓ In the new row, name the rule “Parent” or similar description in the **Rule** field:



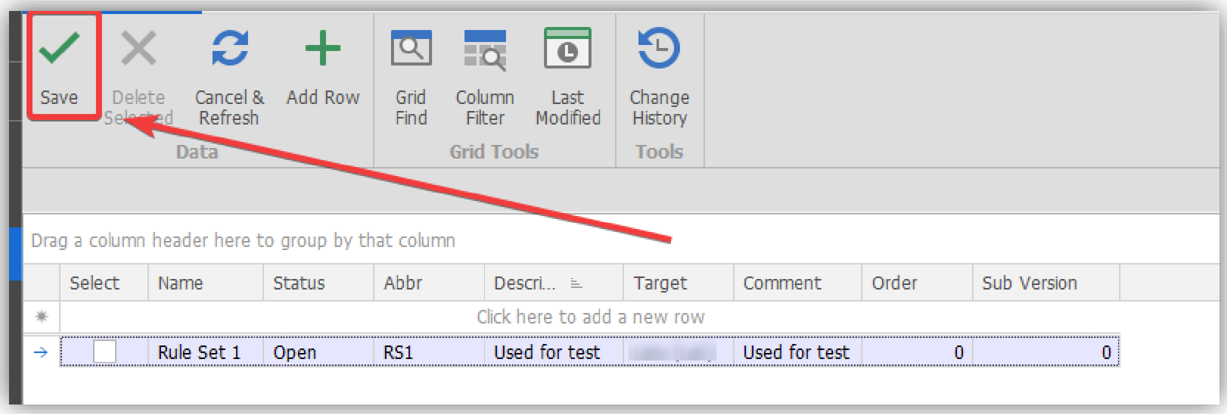
✓ From the **Type** drop-down menu, select "**Choose From Schema**":



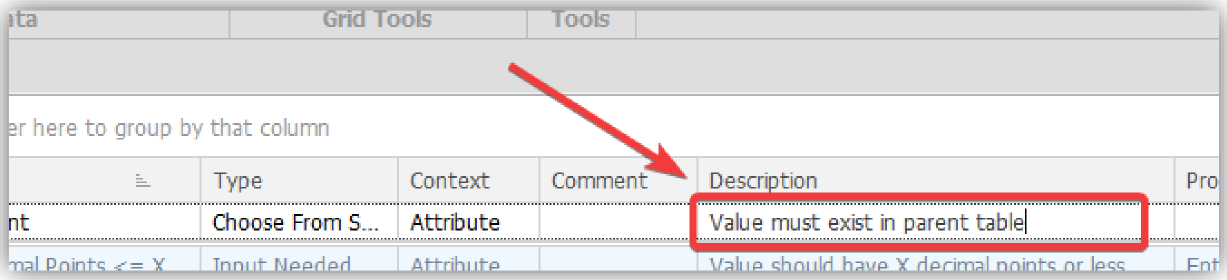
✓ Select "**Attribute**" from the **Context** drop-down menu:



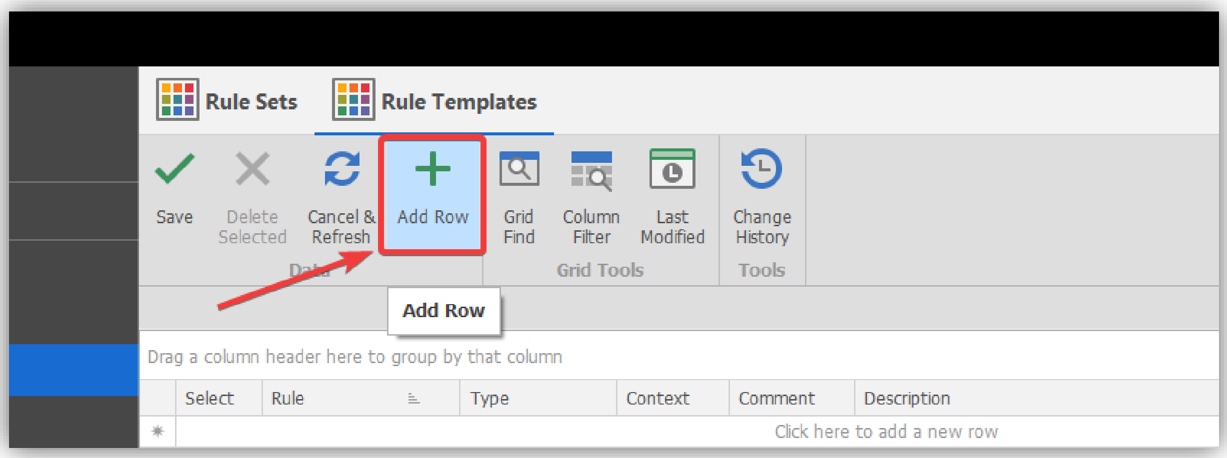
✓ Click **Save button** in the top of the screen:



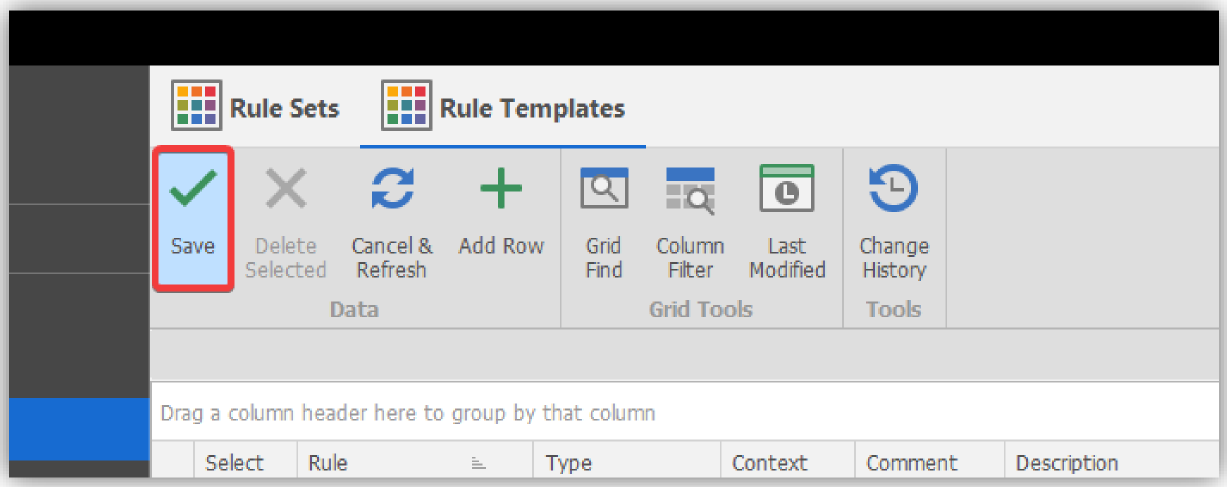
✓ Enter **Description** in **Description** field:



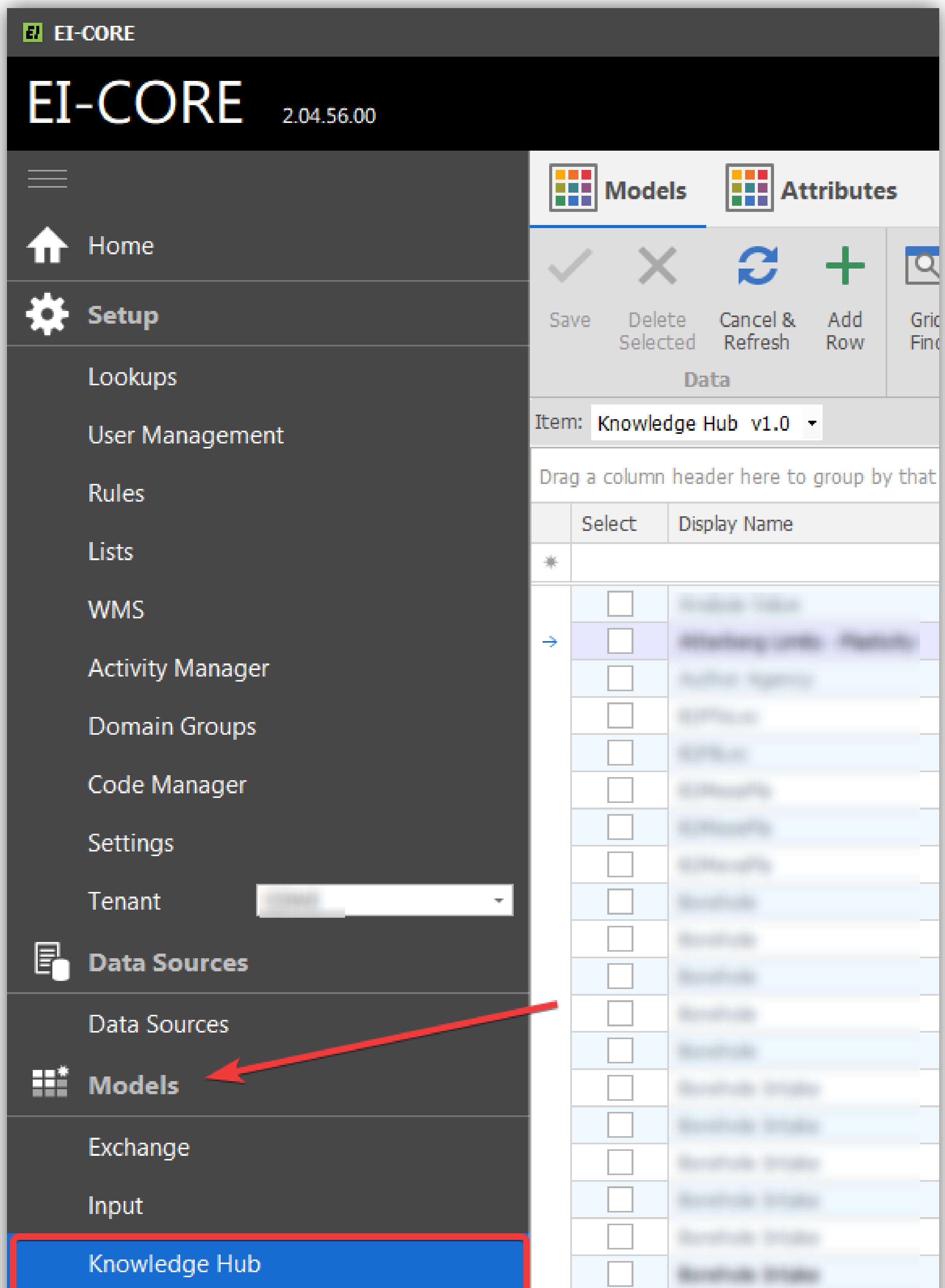
✓ Click **Add Row** button above the grid:



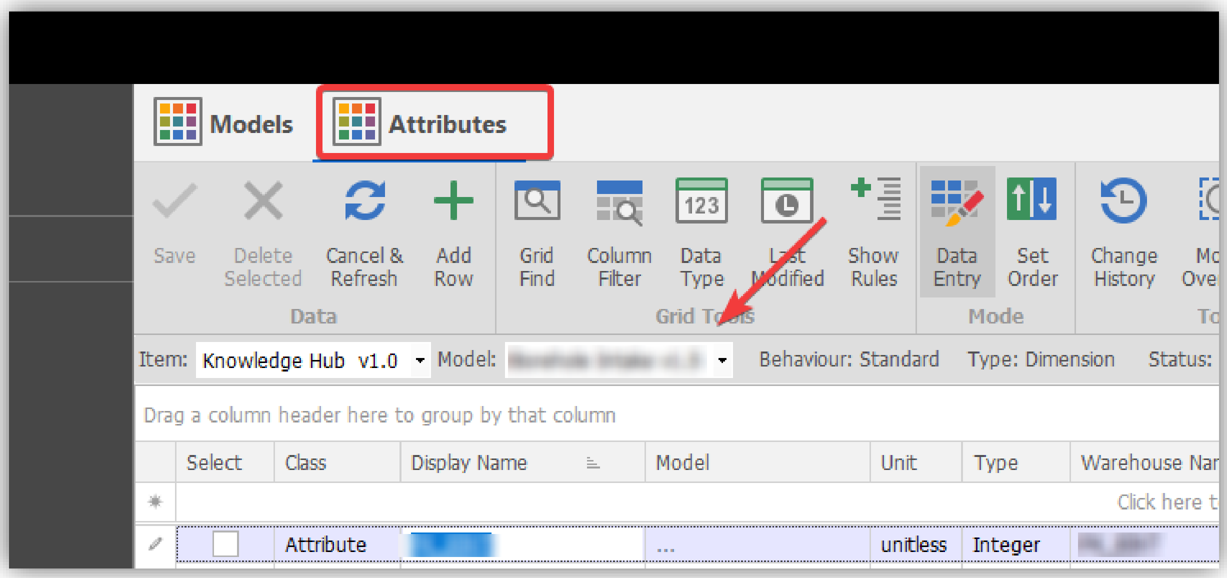
✓ Click **Save** button:



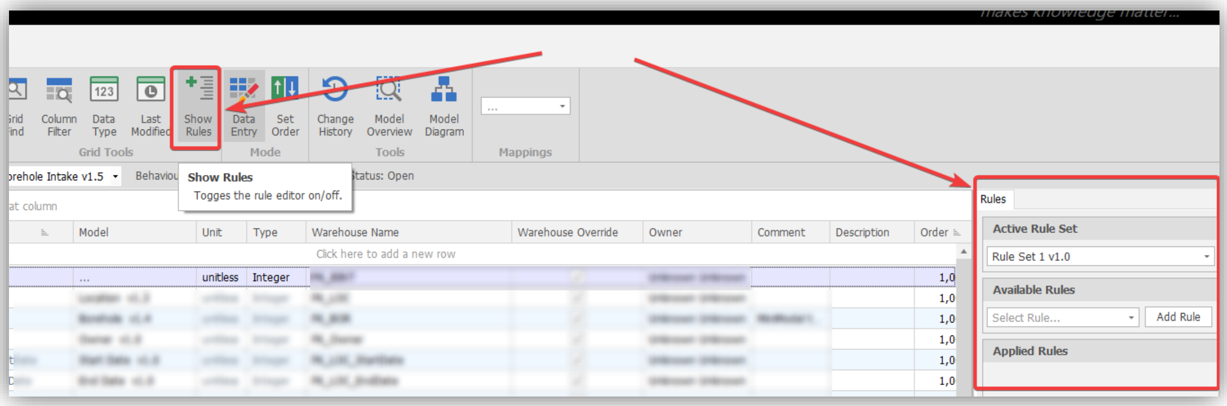
- ✓ Select relevant **Model:**


EI-CORE
EI-CORE 2.04.56.00
Home
Setup
Lookups
User Management
Rules
Lists
WMS
Activity Manager
Domain Groups
Code Manager
Settings
Tenant
Data Sources
Data Sources
Models
Exchange
Input
Knowledge Hub
Models
Attributes
Save
Delete Selected
Cancel & Refresh
Add Row
Data
Item: Knowledge Hub v1.0
Drag a column header here to group by that
Select
Display Name

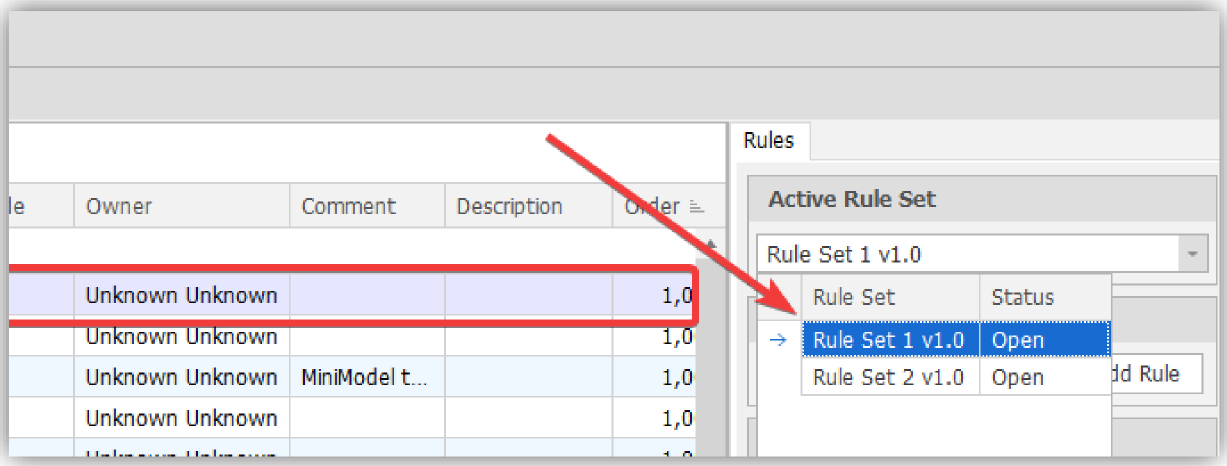
✓ Click **Attributes** button (make sure the correct model is displayed in the **Models** drop-down menu:



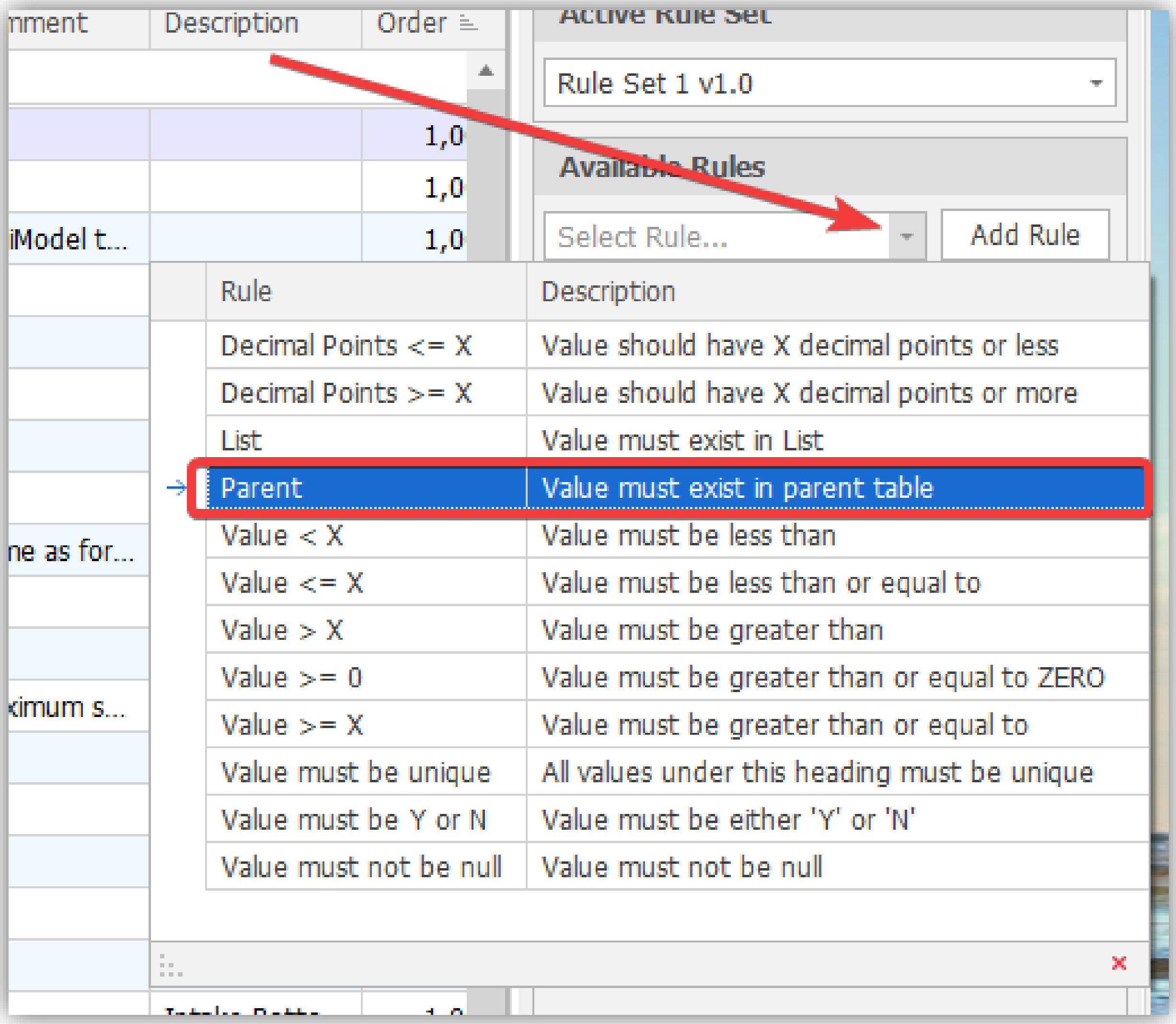
✓ Click the **Show Rules** button. Notice the **Rules** tab to the right:



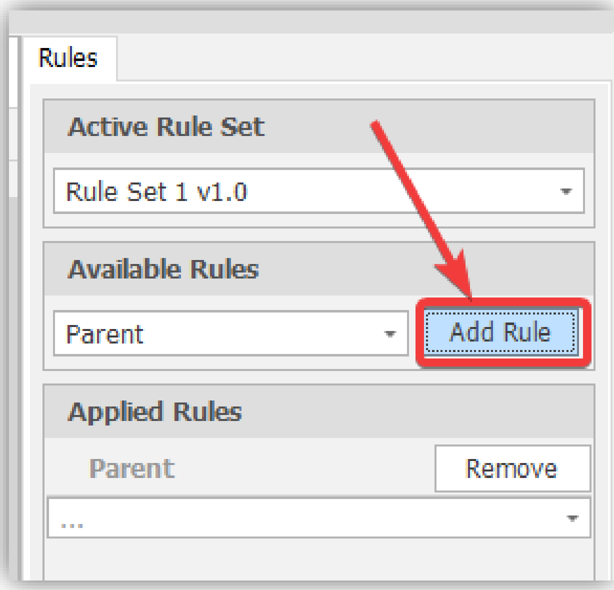
✓ Make sure to highlight the relevant attribute in the grid and select desired **Rule Set** from the drop-down menu:



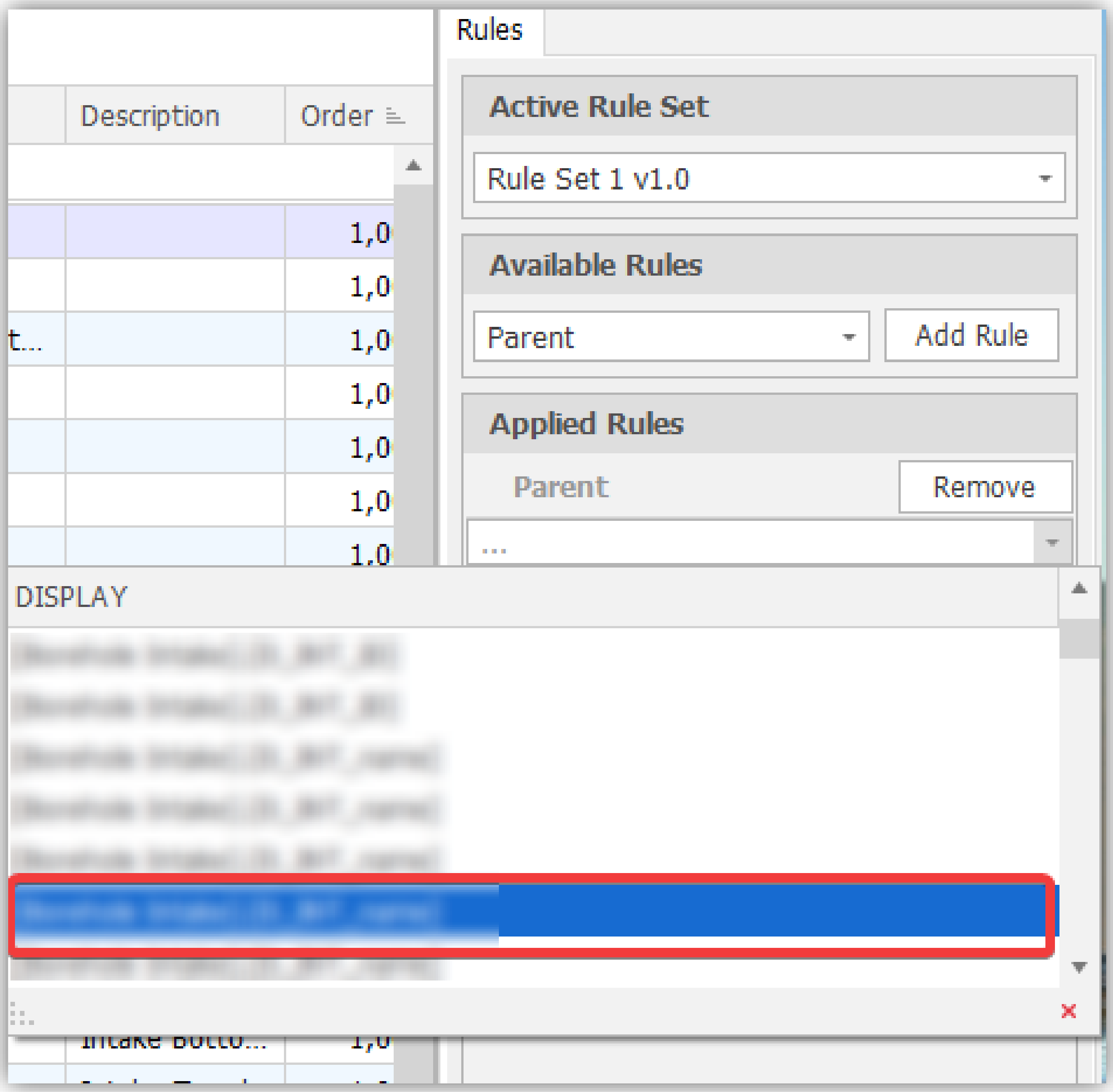
✓ Select the rule created in the earlier in this guide:



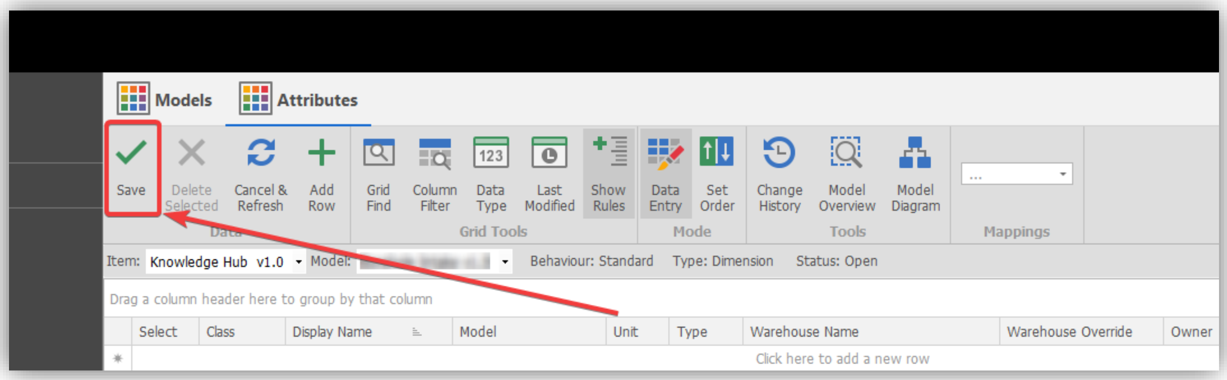
✓ Click **Add Rule** button



- ✓ Select desired Attribute from Parent table:



✓ Click **Save** button:



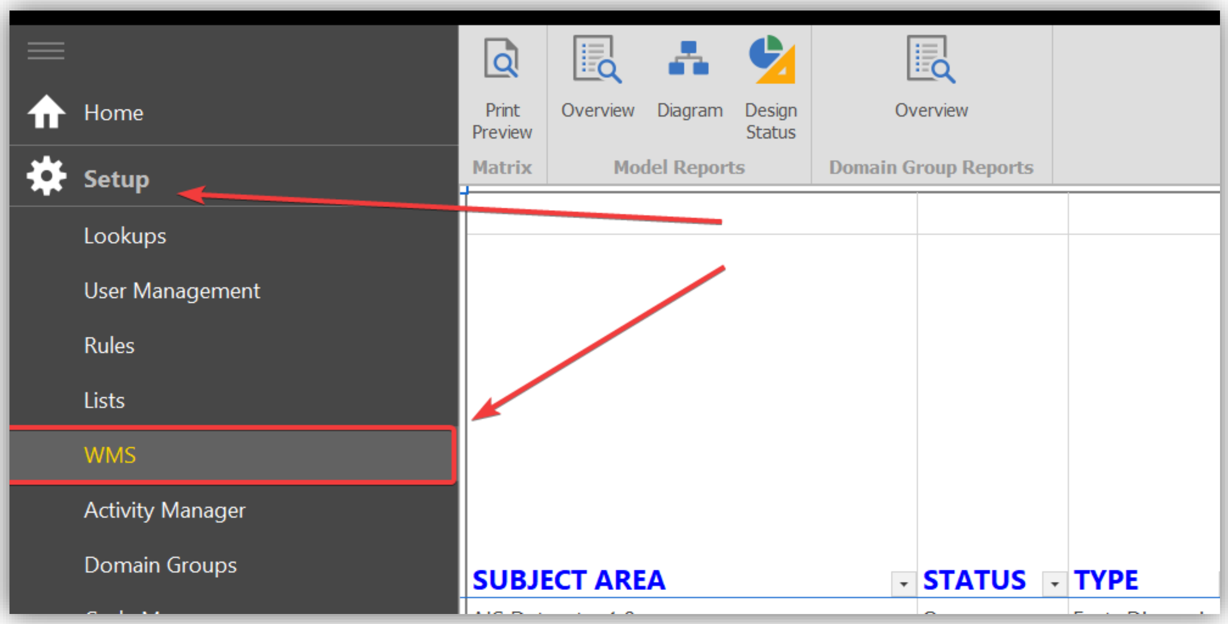
❖ Done!
The Parent Rule is now saved in EI-CORE

Adding WMS Layers

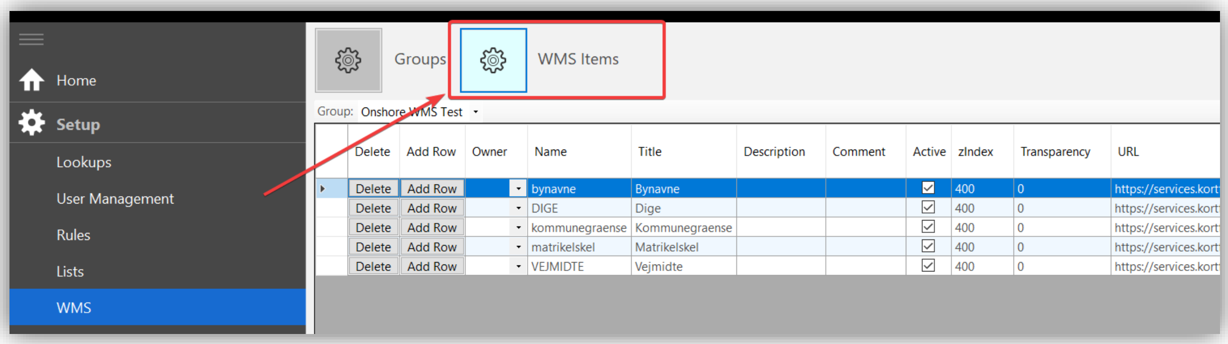
EI-CORE version number: 2.04.25.00

Document revision date: 2020-05-11

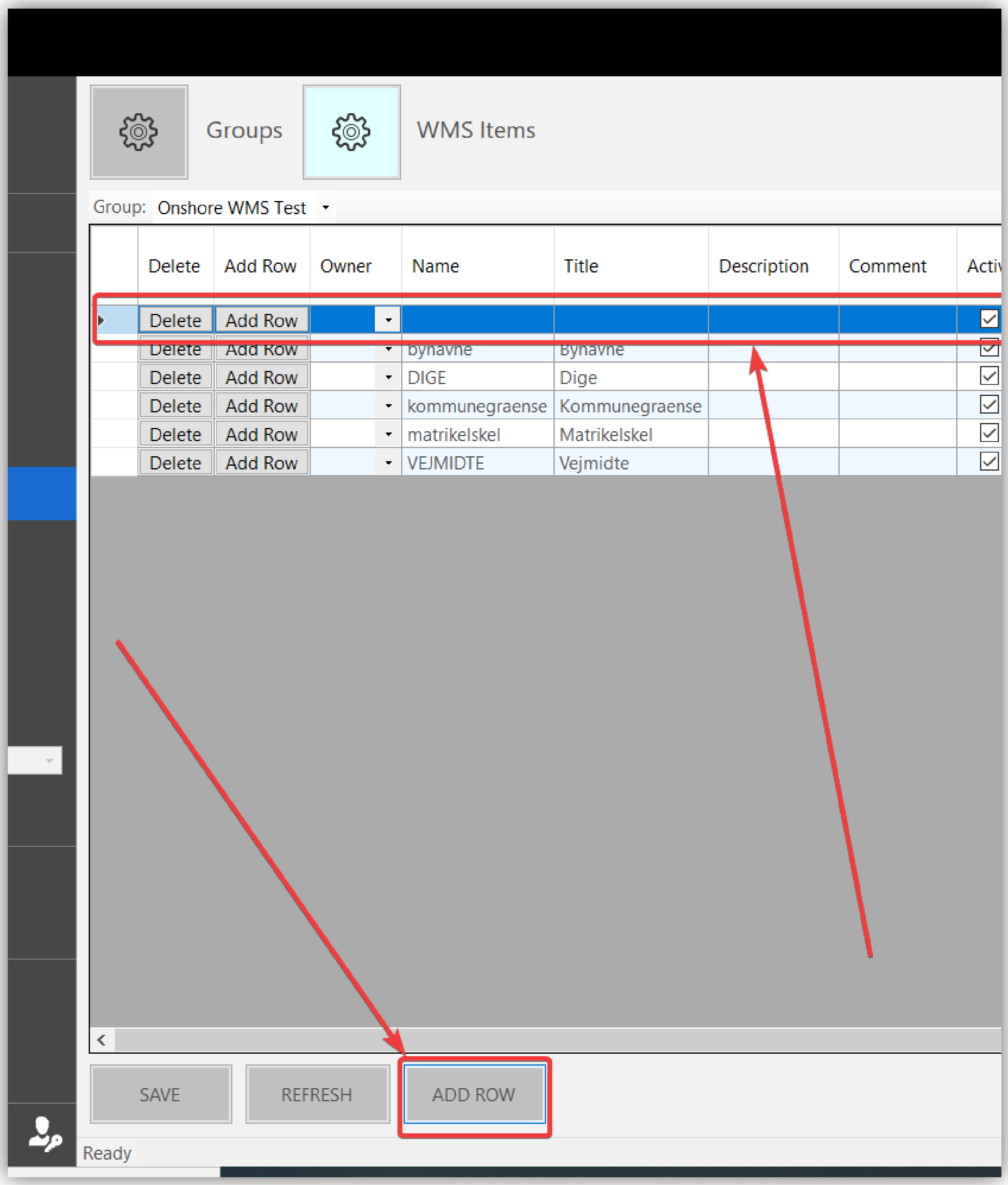
✓ Select **WMS** sub menu from the **Setup** menu:



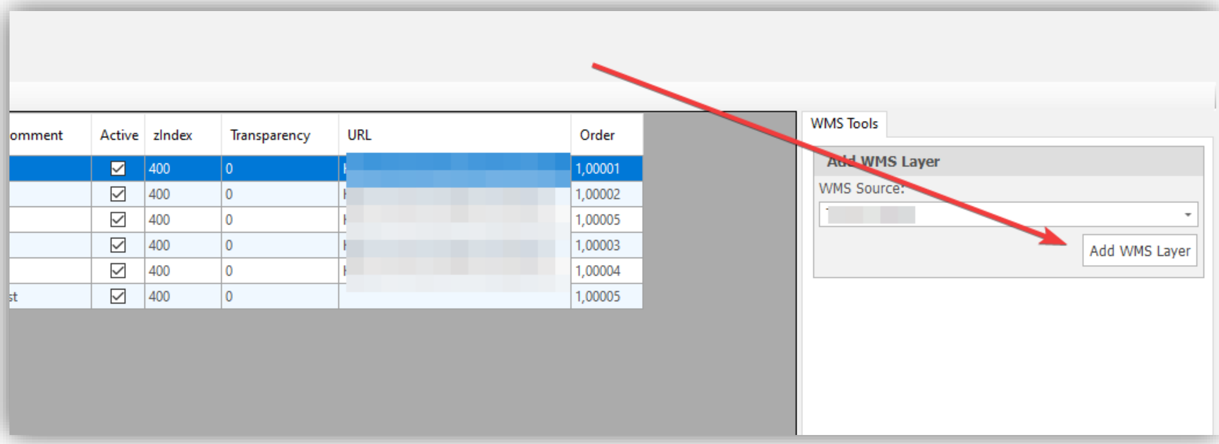
✓ Click the **WMS items** button in the top menu:



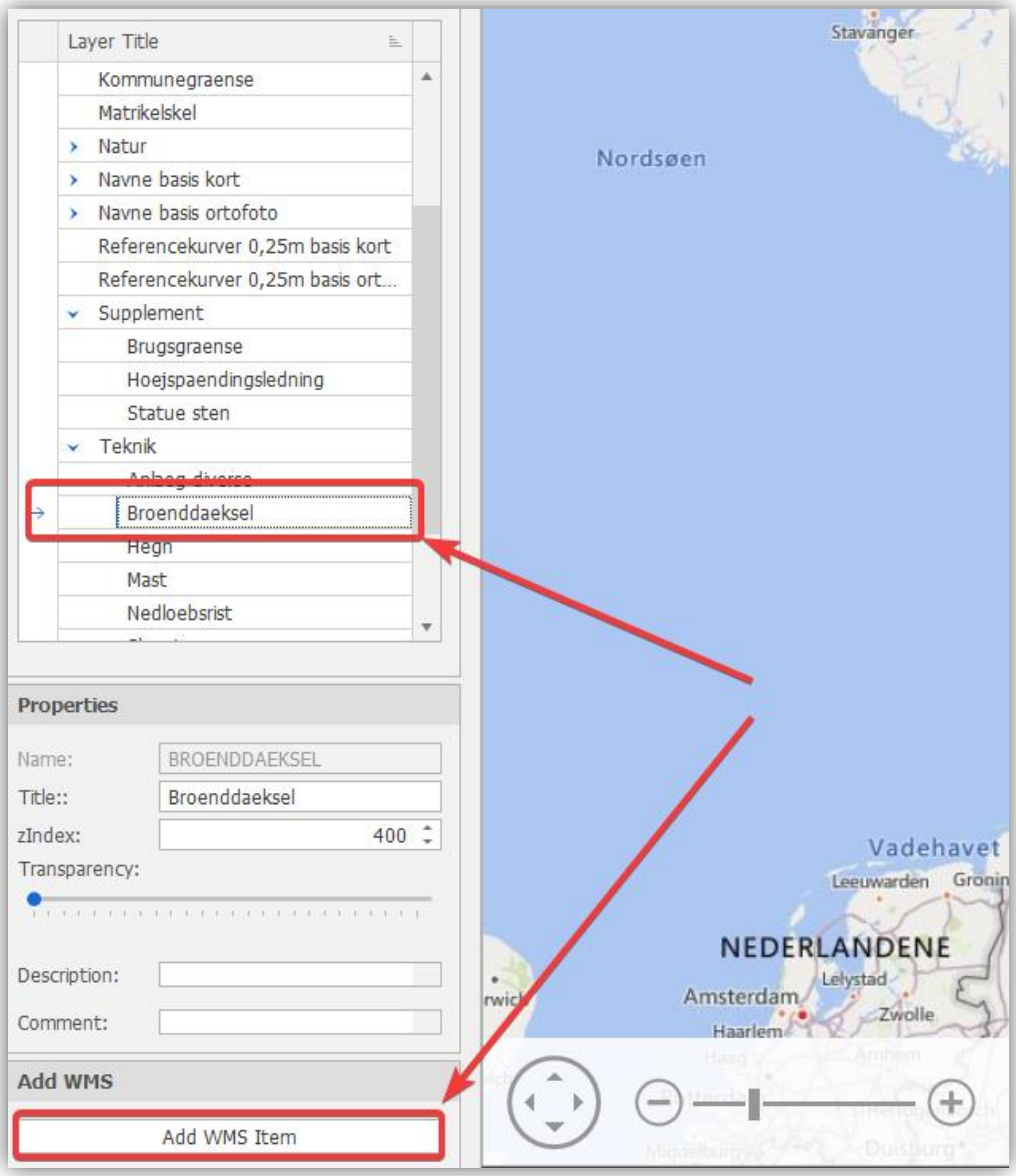
- ✓ Click **ADD ROW** button in the bottom of the screen, a new editable row will appear in the top of the grid:


Groups
WMS Items
Group: Onshore WMS Test
Delete
Add Row
Owner
Name
Title
Description
Comment
Acti
Delete
Add Row
bynavne
Bynavne
DIGE
Dige
kommunegraense
Kommunegraense
matrikelskel
Matrikelskel
VEJMIDTE
Vejmidte
SAVE
REFRESH
ADD ROW
Ready

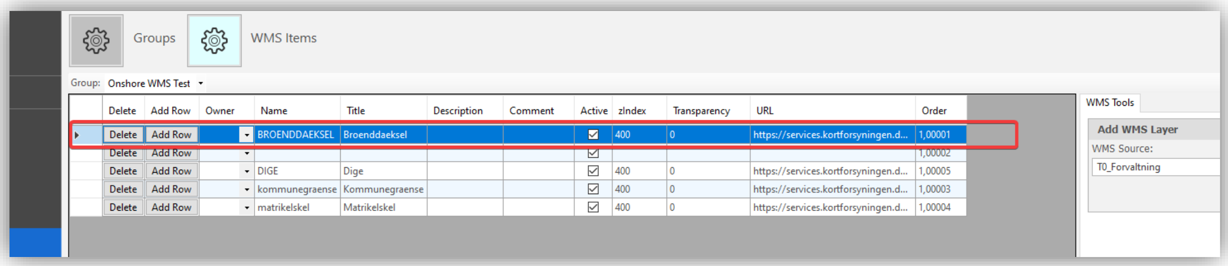
✓ Select desired **WMS Source** from the **WMS Tools** menu and click **Add WMS Layer**:



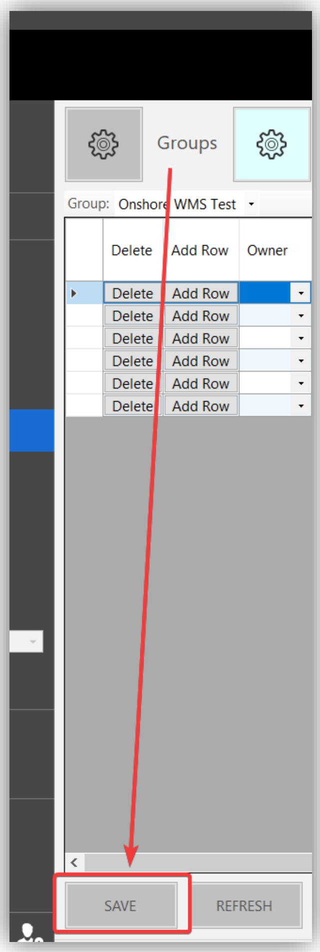
- ✓ Select desired layer and click **Add WMS Item** button:


Layer Title
Kommunegraense
Matrikelskel
Natur
Navne basis kort
Navne basis ortofoto
Referencekurver 0,25m basis kort
Referencekurver 0,25m basis ort...
Supplement
Brugsgraense
Hoejspaendingsledning
Statue sten
Teknik
Broenddaeksel
Hegn
Mast
Nedloebsrist
Properties
Name:
BROENDDAEKSEL
Title::
Broenddaeksel
zIndex:
400
Transparency:
Description:
Comment:
Add WMS
Add WMS Item
Stavanger
Nordsøen
Vadehavet
Leeuwarden
NEDERLANDENE
Lelystad
Amsterdam
Zwolle
Haarlem

✓ The new layer now appears in the WMS grid:



✓ Click **SAVE** button in the bottom of the screen:



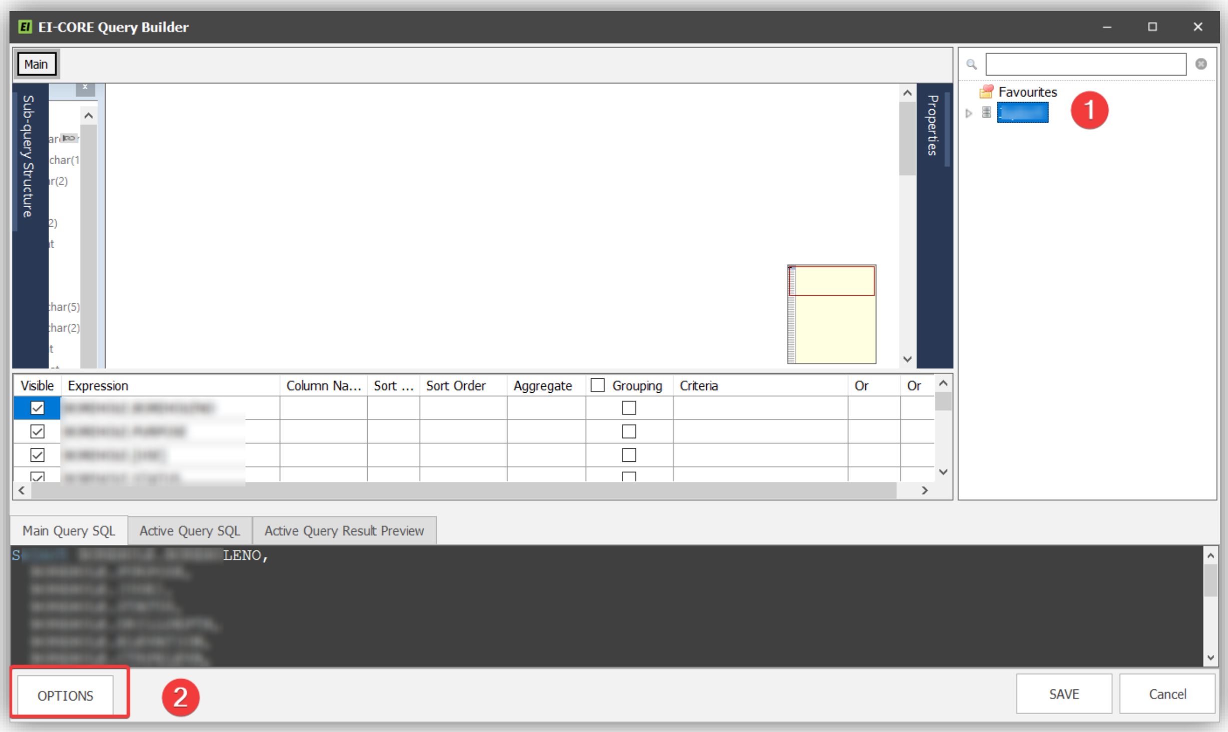
❖ The new WMS layer is now saved in EI-CORE

Adding additional Databases from Query Builder

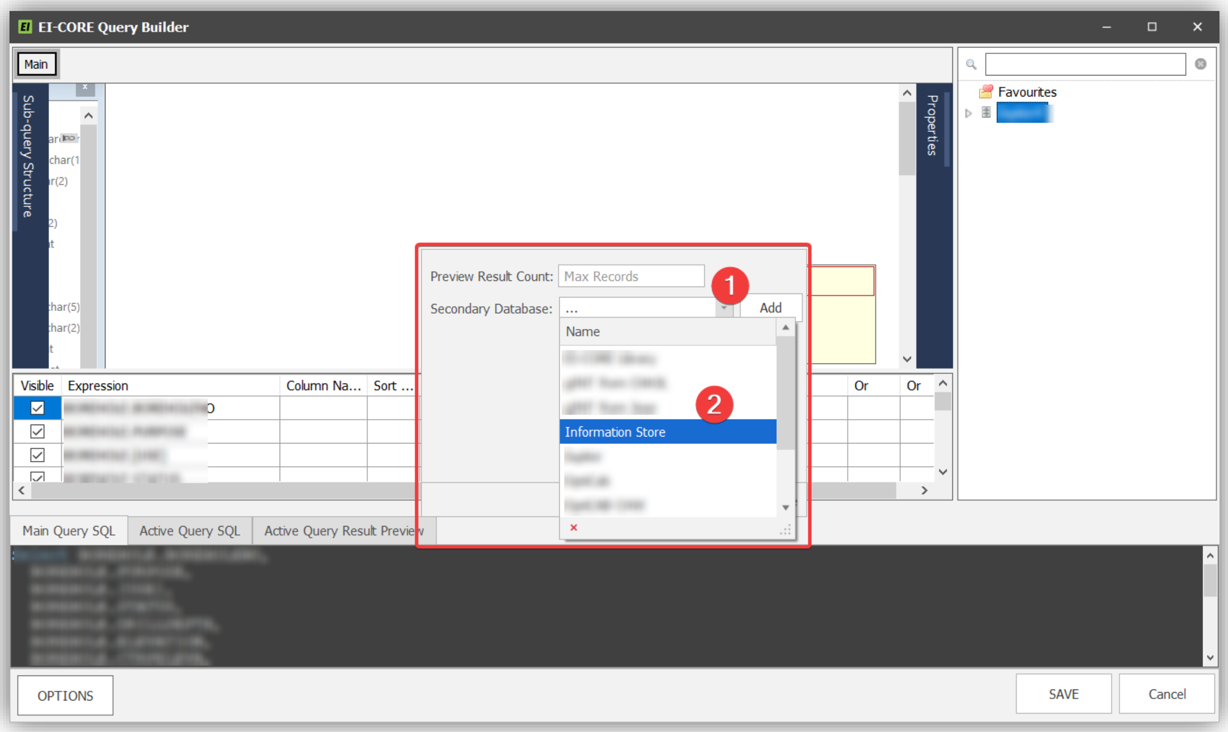
EI-CORE version number: 2.05.00.00

Document revision date: 2020-02-07

The Query Builder Window shows only one source database(1) by default, but additional sources can be added by selecting the **Options Button**(2):

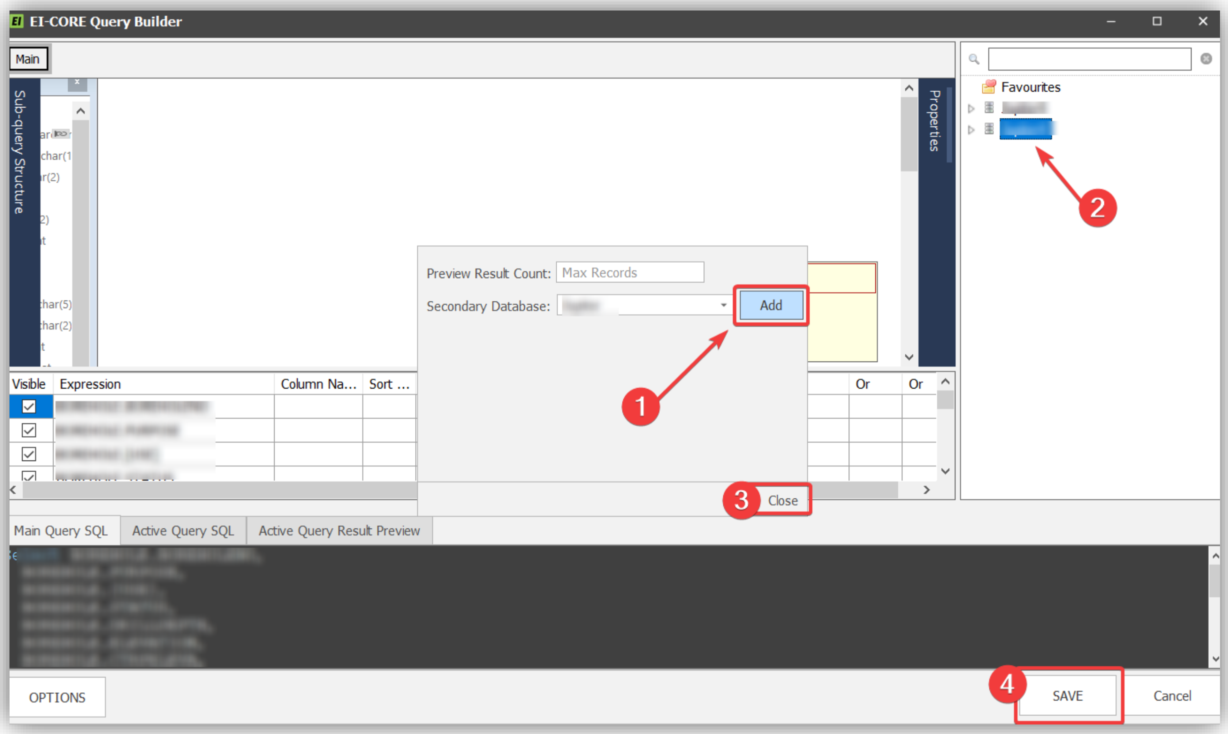


This opens a new windows with a drop down menu(1) displaying available data sources(2):



Highlight the desired Source and select **Add**(1). The additional Data source now appears I the right pane(2).

Continue until all required sources are added The close(3) the options-window and Save(4) the query.


EI-CORE Query Builder
Main
Sub-query Structure
Properties
Favourites
Preview Result Count:
Max Records
Secondary Database:
Add
Close
Visible
Expression
Column Na...
Sort ...
Or
Or
Main Query SQL
Active Query SQL
Active Query Result Preview
OPTIONS
SAVE
Cancel
1
2
3
4

Building file validation activity

EI-CORE version number: 2.04.81.00
Document revision date: 2020-01-16

As **Activity manager** is a highly generic tool, there is no *one* way to use it. This instruction uses a File-validation need as a case scenario, but the method will be similar in many other cases.

Assignment:

A company has the need to control in which format files are uploaded to a server when working in campaign environments. The company has its own validation engine but needs a place where employees can manage which requirements and restrictions the validation engine should apply for validation.

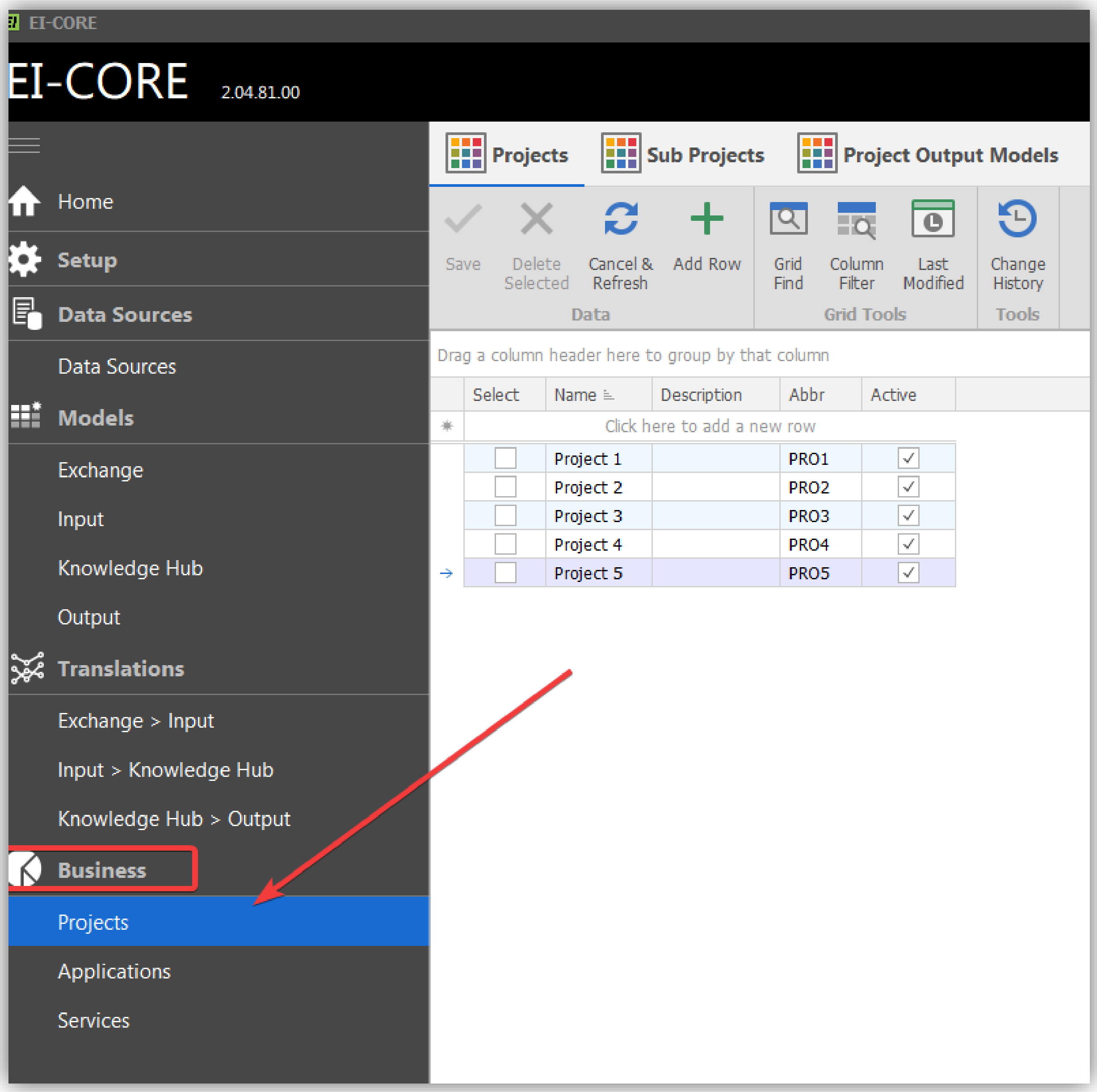
The requirements to the file formats have already been entered in EI-CORE as **Rule Sets**.

The whole drill is broken down to the following tasks:

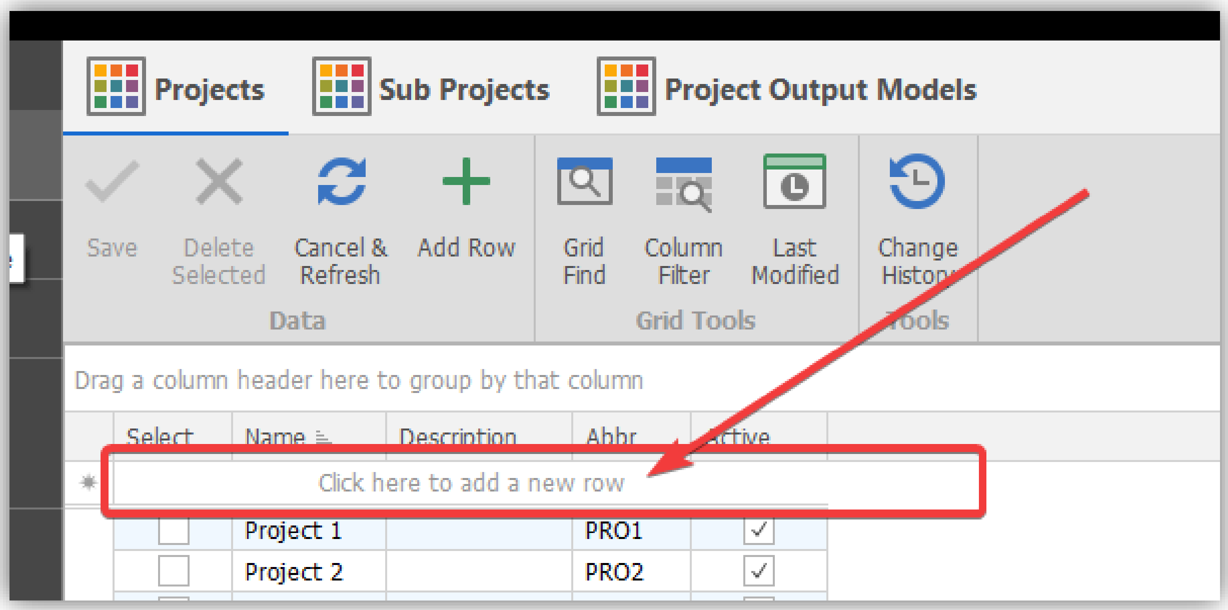
1. Create Project
   The company in this example has it Campaigns bundled in overall projects
2. Create Sub Project
   The company's "campaign" in this case equivalents the EI-CORE **sub-project** module
3. Build Activity
   The **Activity** is where Task Groups are applied to a module
4. Build Task Group
   Task Groups holds a collection of tasks
5. Build File format Task
   T**asks** are the content of task groups. They are the specific constraints, requirements or parameters that is to be evaluated within a module
6. Assign Tasks Group to Activity
7. Assign Activity to Module
   A **module** can be any EI-CORE module. In this case it will be a sub project.
8. Enter meta data
   Once the module is set up for file validation, it is necessary to

Create Project

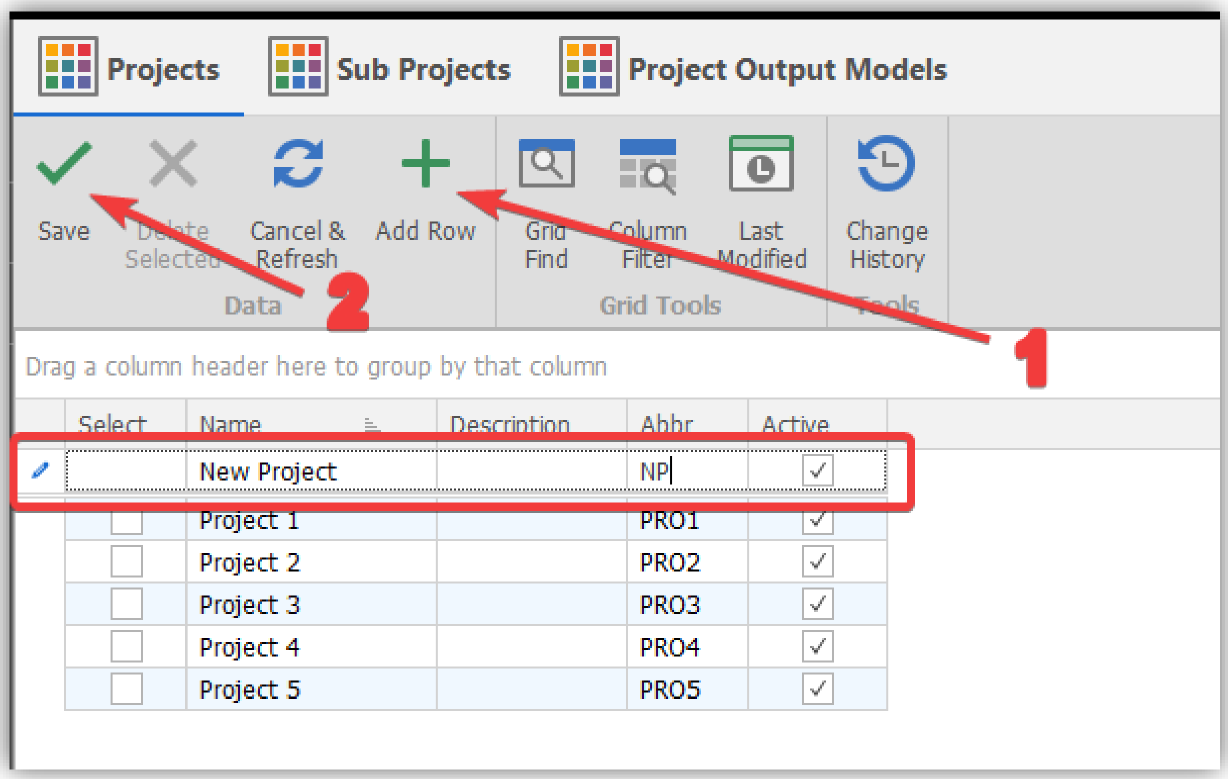
- Go to the **Projects module** in the **Business** menu:



➢ Click the blank row in the top of the grid:

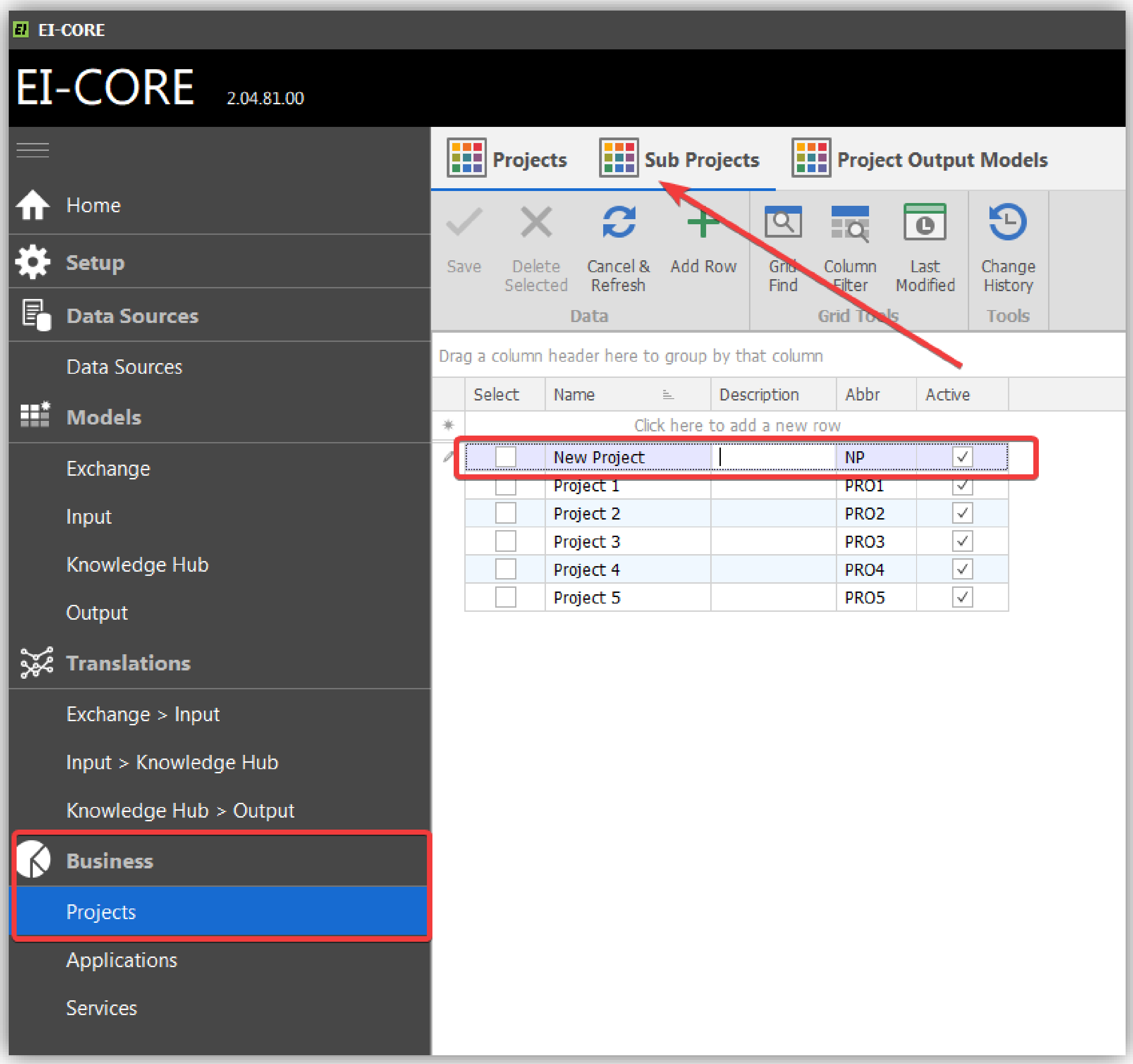


➢ Enter project name, abbreviation. Consider adding an optional description.
Click **Add Row** (1) to add the project and **Save** (2) to save the changes:

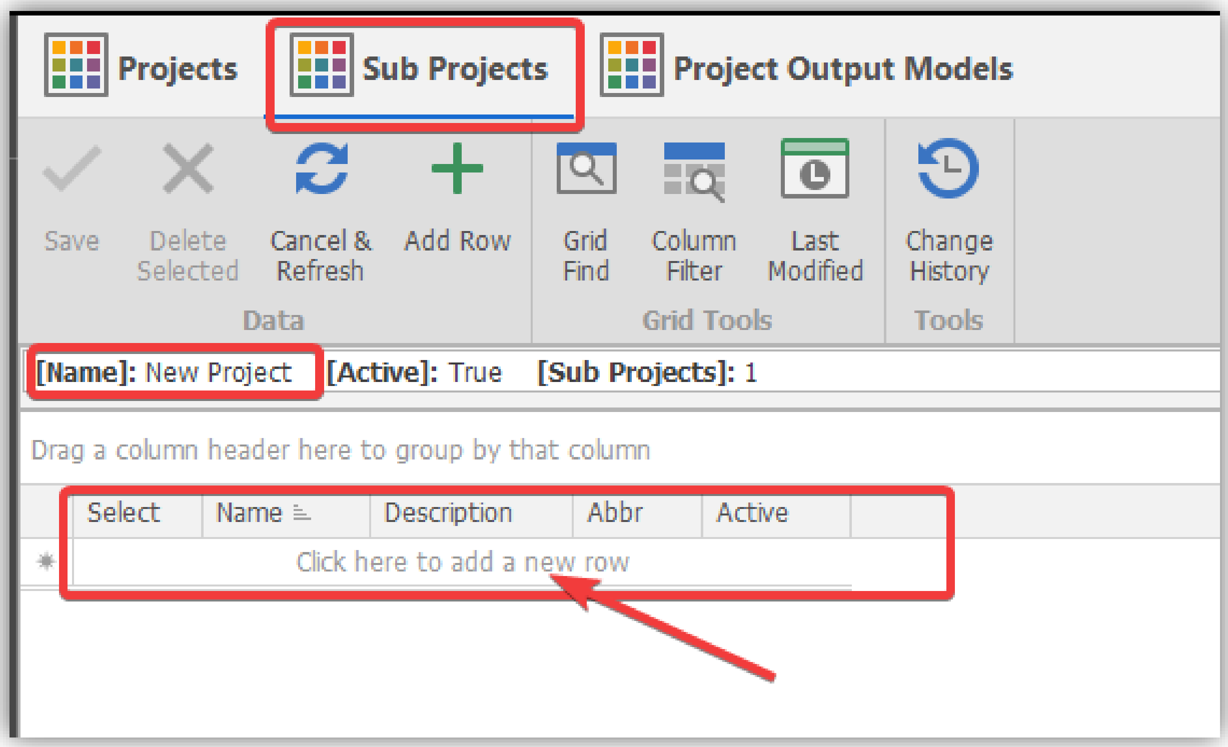


Create Sub Project

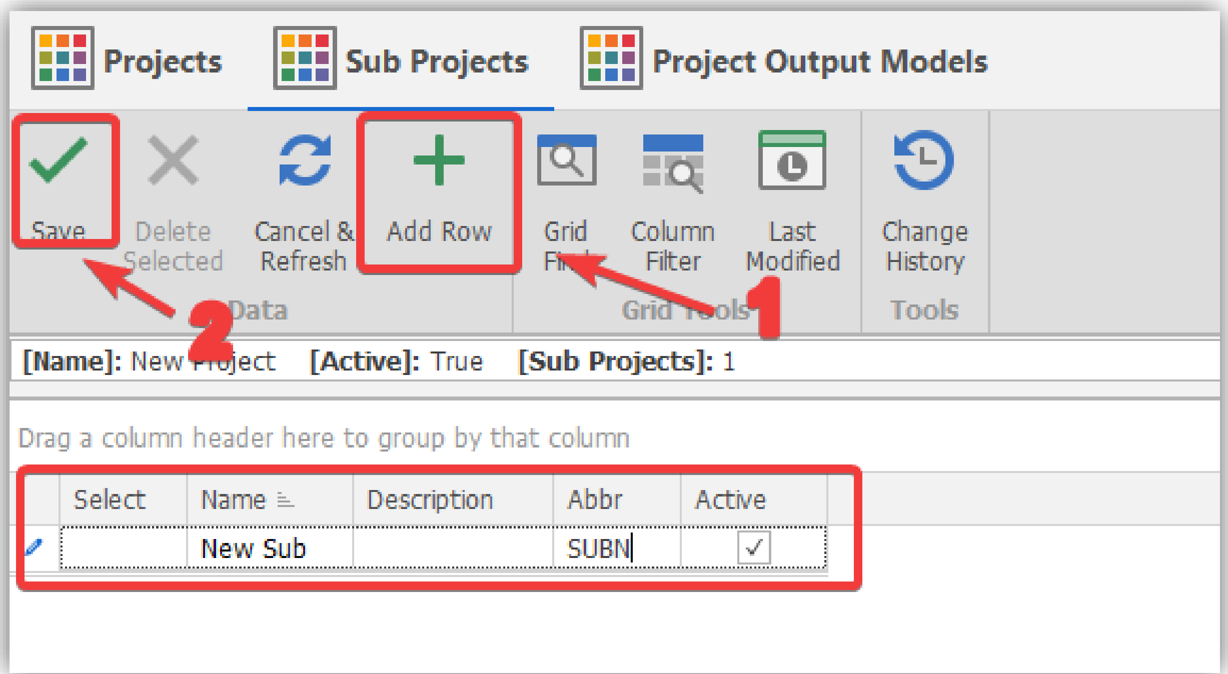
➢ Navigate to the **Projects** module in the **Business** menu, highlight the desired project and click the **Sub Projects** button:



➢ Verify that it is the correct project name, and click the empty line to add a new **Sub Project**:

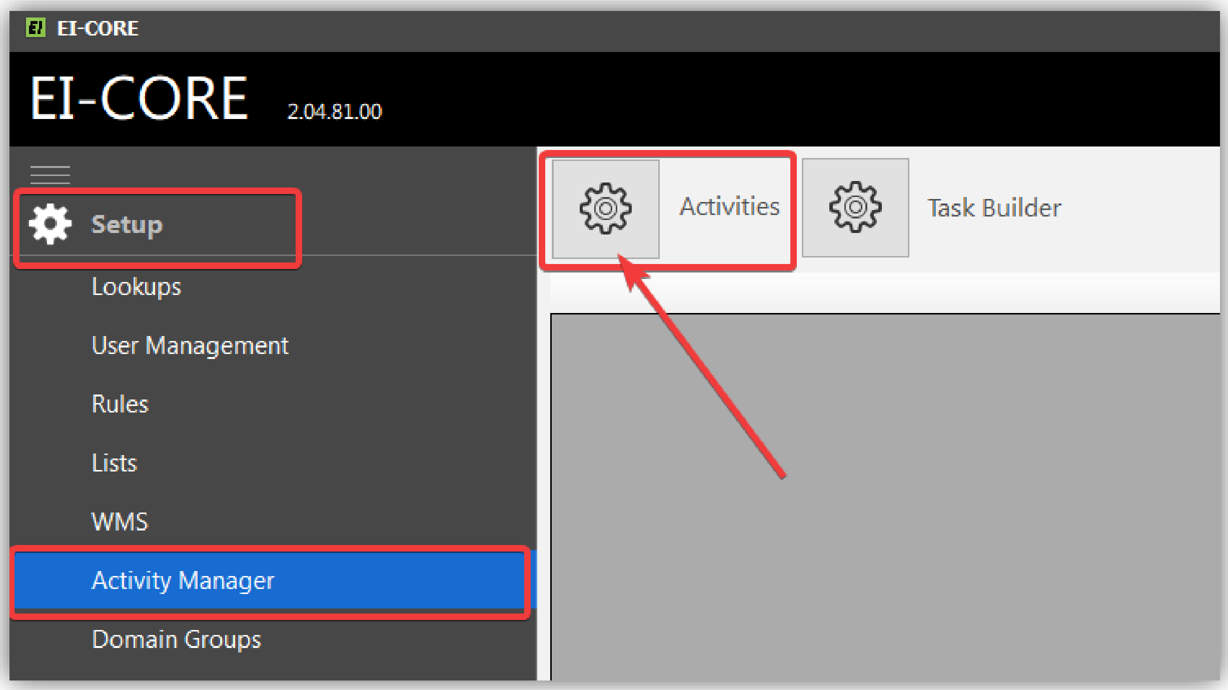


➢ Enter Name, description (optional) and Abbreviation. Click **Add Row** (1) and **Save** (2):

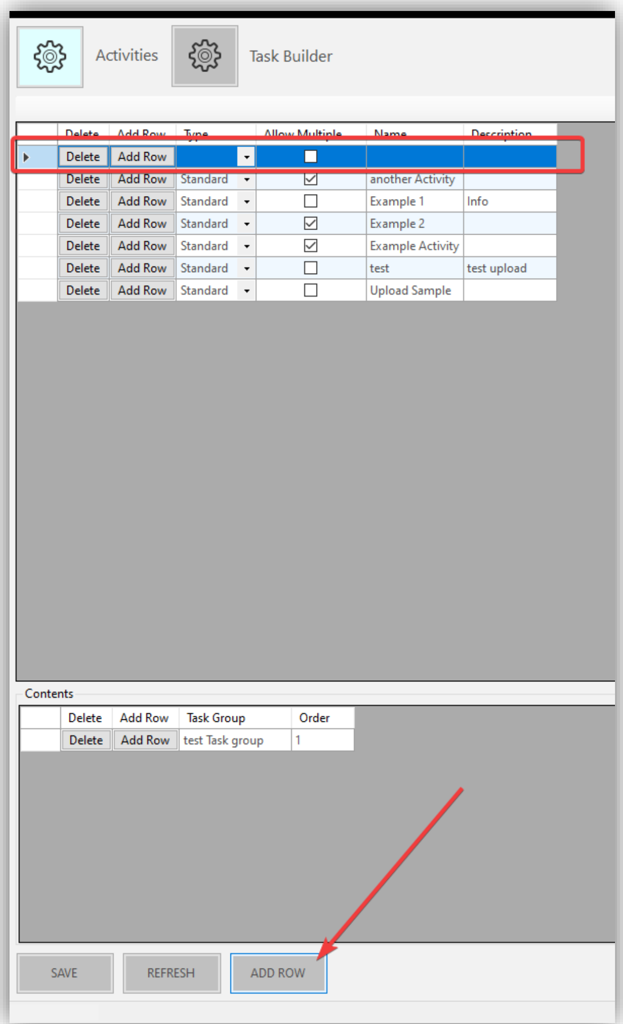


Build Activity

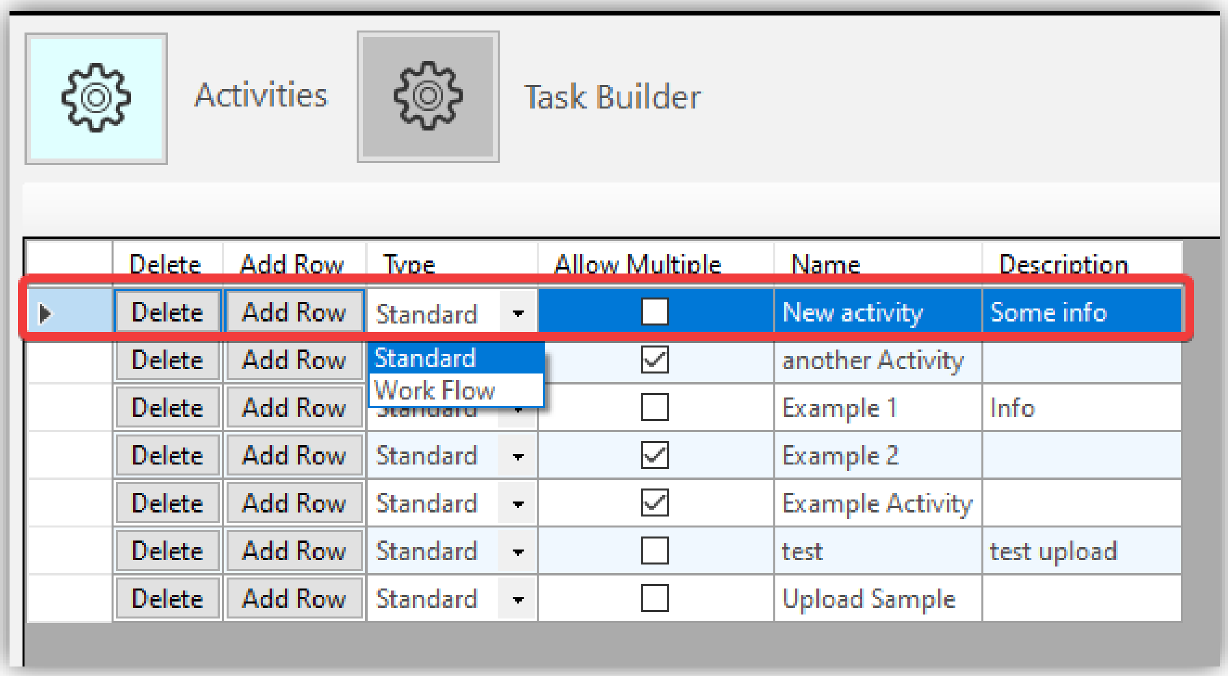
- Locate the **Activity Manager** in the **Setup menu** and select the **Activities Button**:



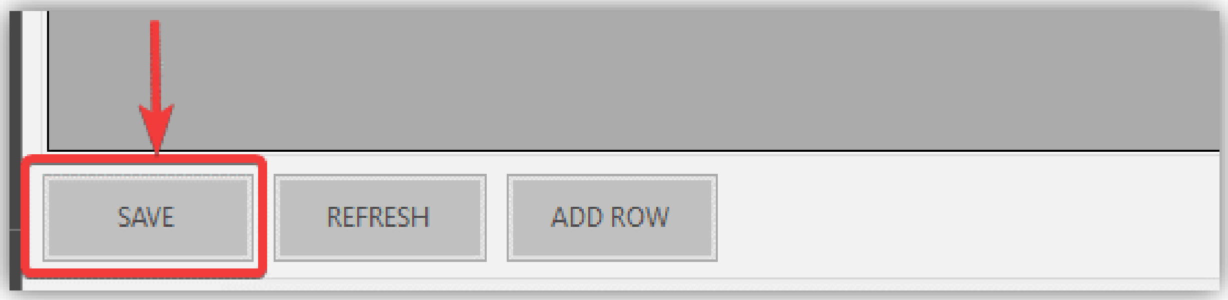
➢ Click the **Add Row button** in bottom of the screen to add a new activity:



- Select **Standard Type** and enter Name and description. **Do not** tick of "allow multiple" in this case.

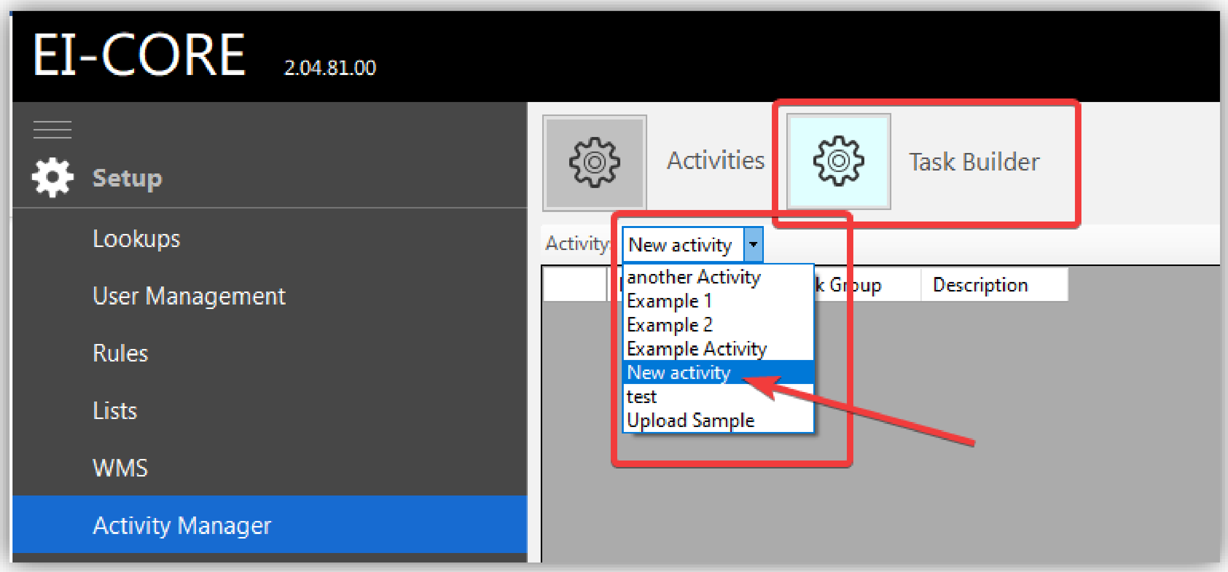


- Click **Save button** in the bottom of the screen:

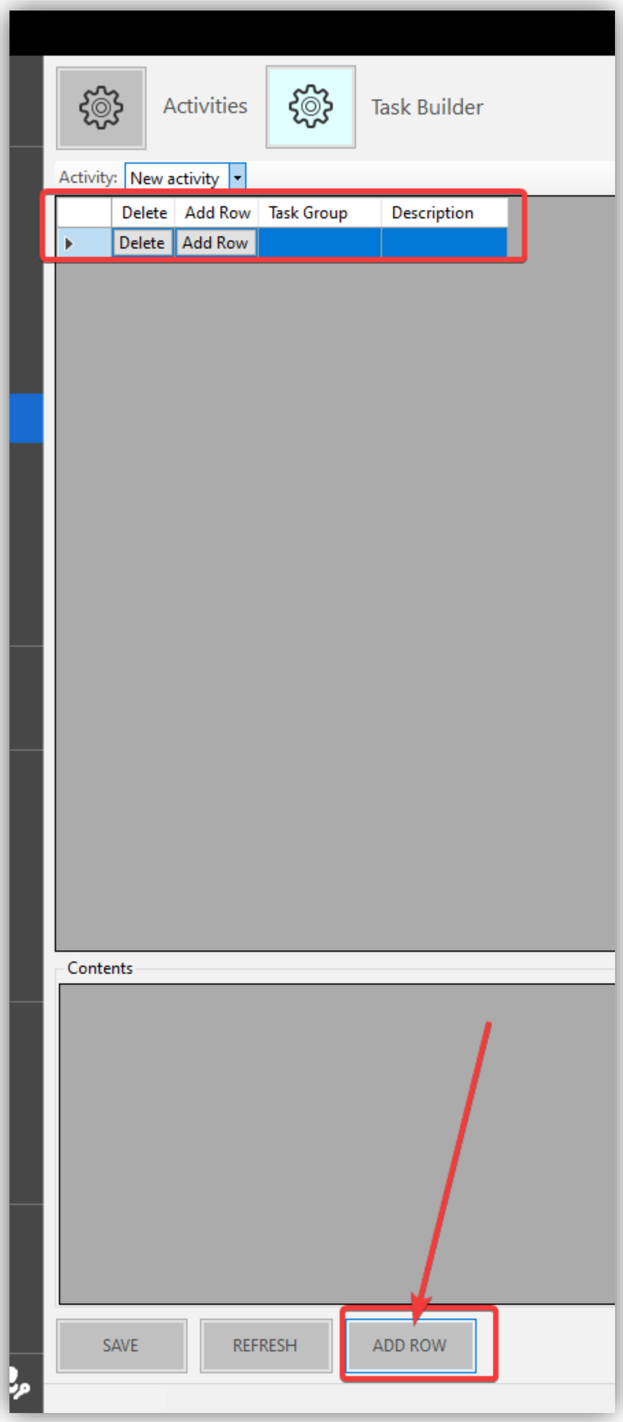


Build Task Group

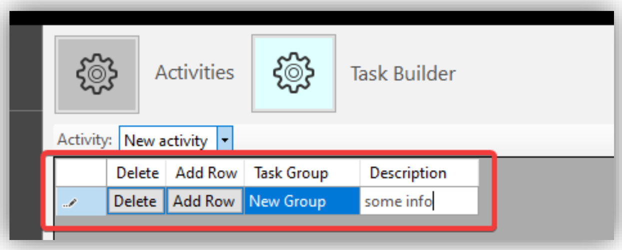
- Within the **Activity Manager**, click the **Task Builder button** and select the desired activity from the drop-down menu:



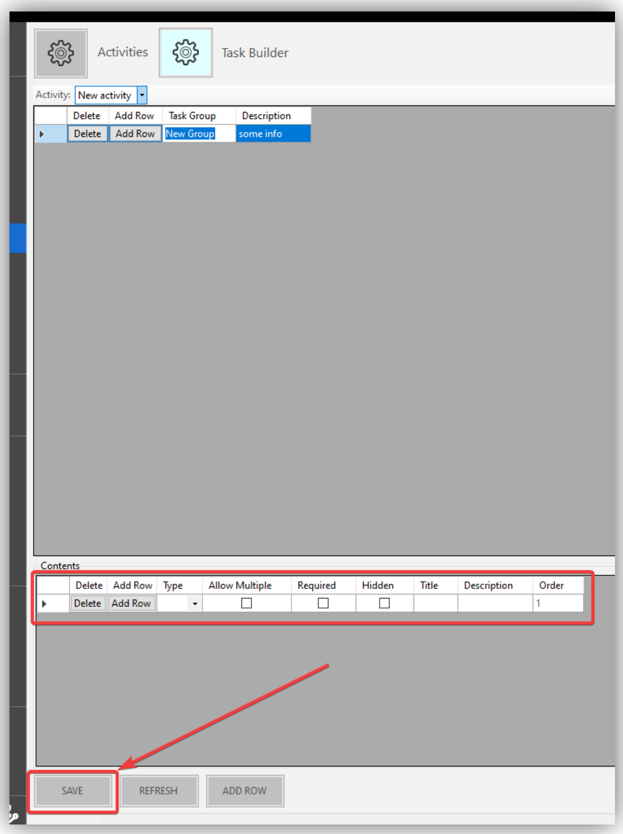
- Click the **Add Row button** in the bottom of the screen. A new row will appear in the upper field:


Activities
Task Builder
Activity: New activity
Delete
Add Row
Task Group
Description
Delete
Add Row
Contents
SAVE
REFRESH
ADD ROW

➢ Enter Task Group Name and description:

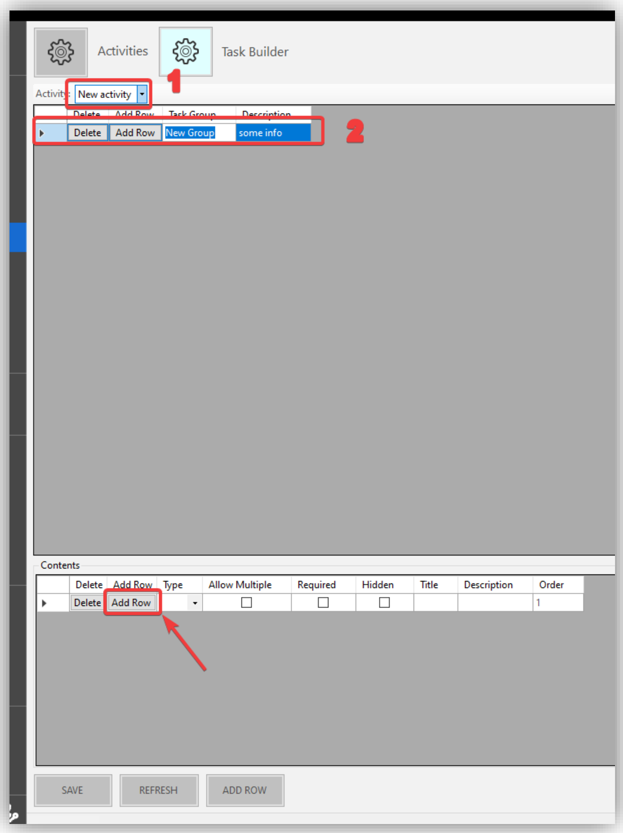


➢ Click the **Save Button** in the bottom of the screen. Content can now be added in the **Content Window:**

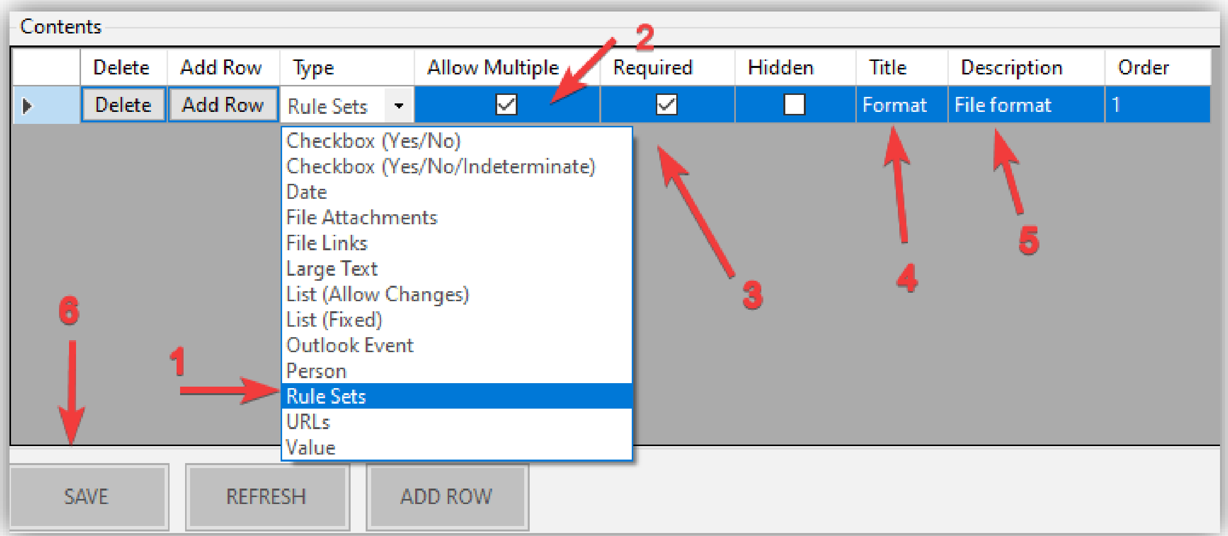


Build File format Task

- Go to the **Task Builder** in the **Activity Manager** and select desired **activity** (1) and **Task Group** (2). Click the **Add Row button** within the **Contents Window** (if no content has been entered yet, edit the existing row instead of adding a new):

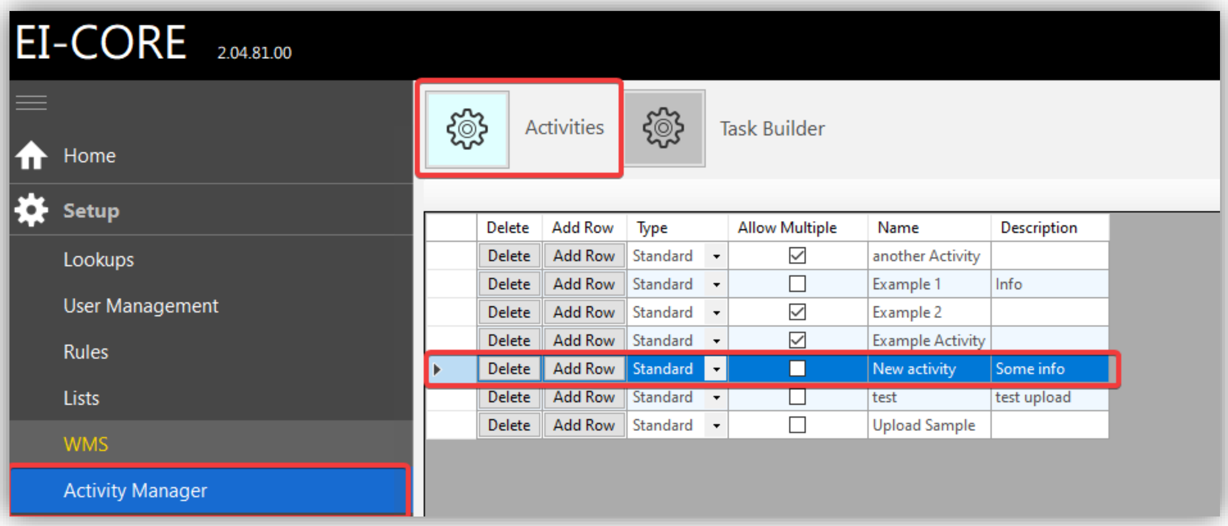


➢ Select **Rule Sets** from **Type Drop-down menu** (1), **Allow Multiple** (2), **Required** (3). Enter **Title** (4) and **Description** (5). Then click **Save Button:**

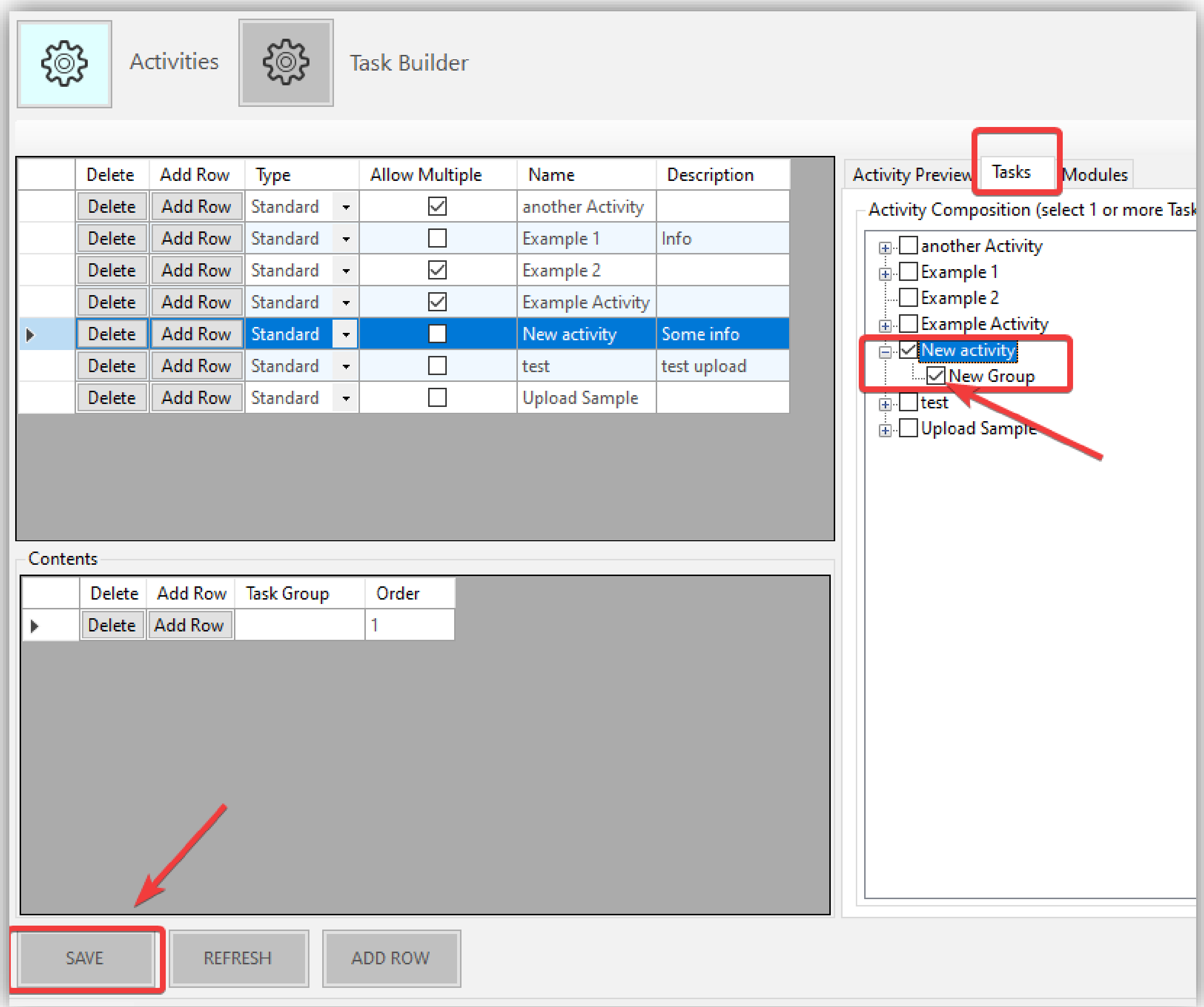


Assign Tasks Group to Activity

➢ Navigate to the **Activities** view in **Activity Manager** and highlight desired Activity:

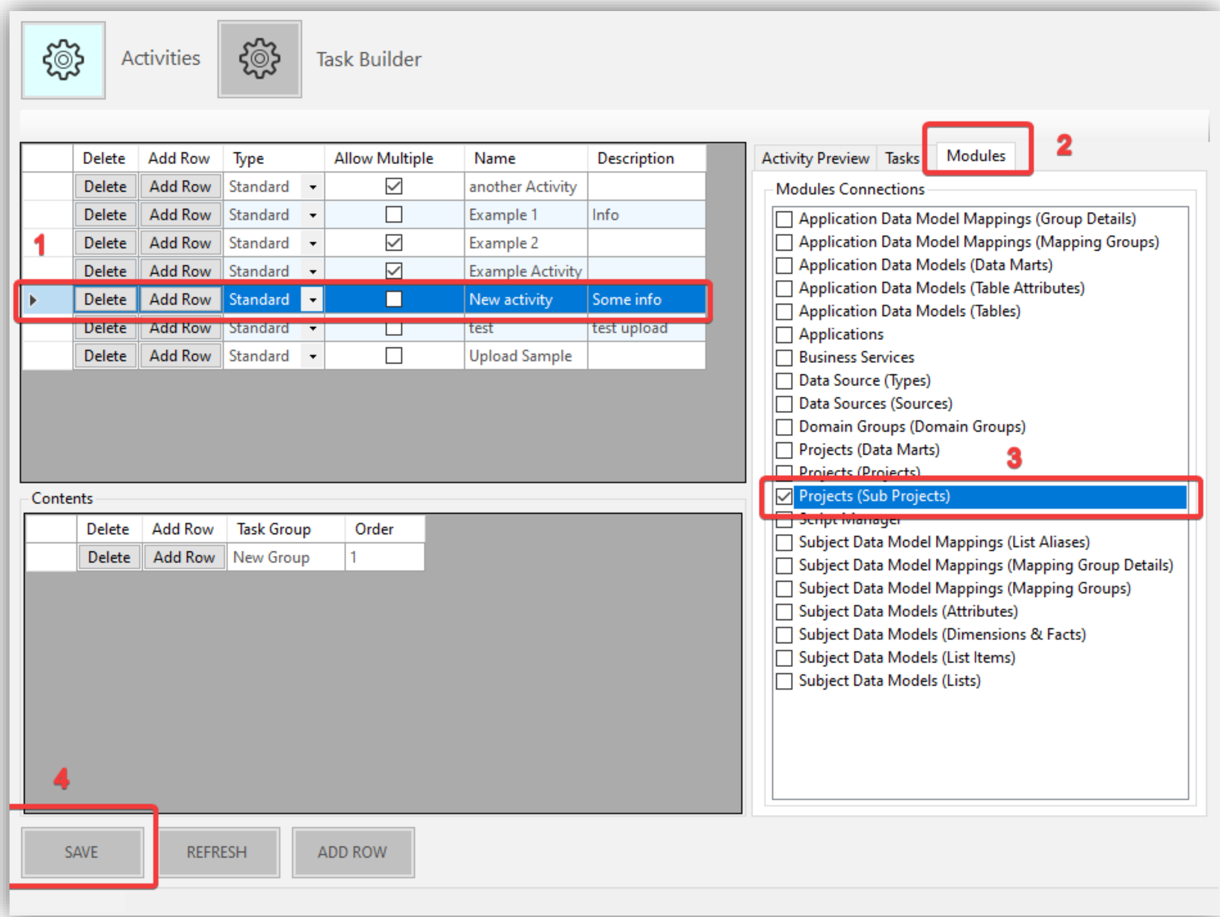


➢ Select the **Tasks tab** in the panel to the right, and tick of desired task groups. Finish by clicking **Save button:**



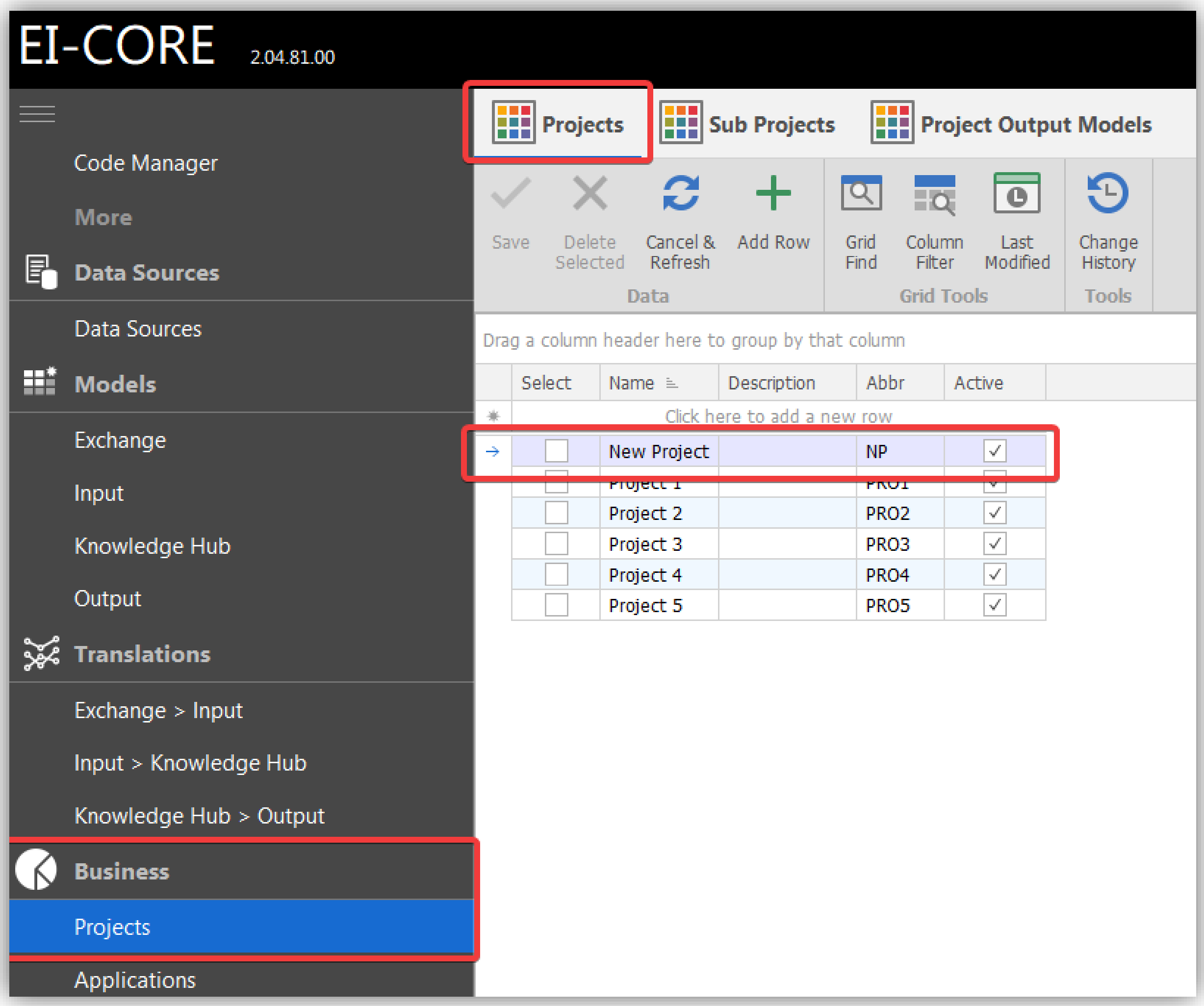
Assign Activity to Module

- Navigate to the **Activities** view in **Activity Manager** and highlight desired **Activity** (1), Select the **Modules Tab** (2) and tick of the **Sub Projects box** (3). Click **Save** (4) when finished:

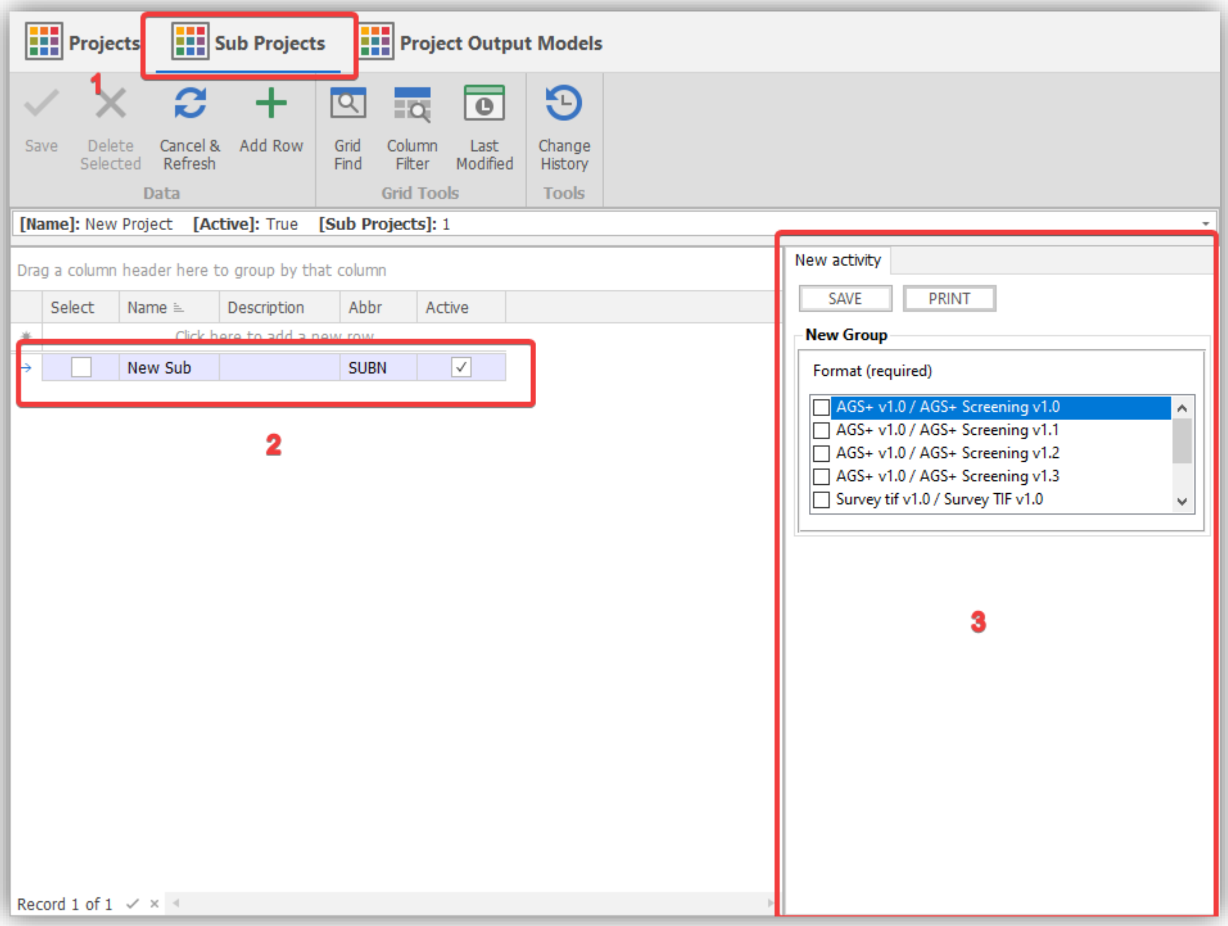


Enter meta data

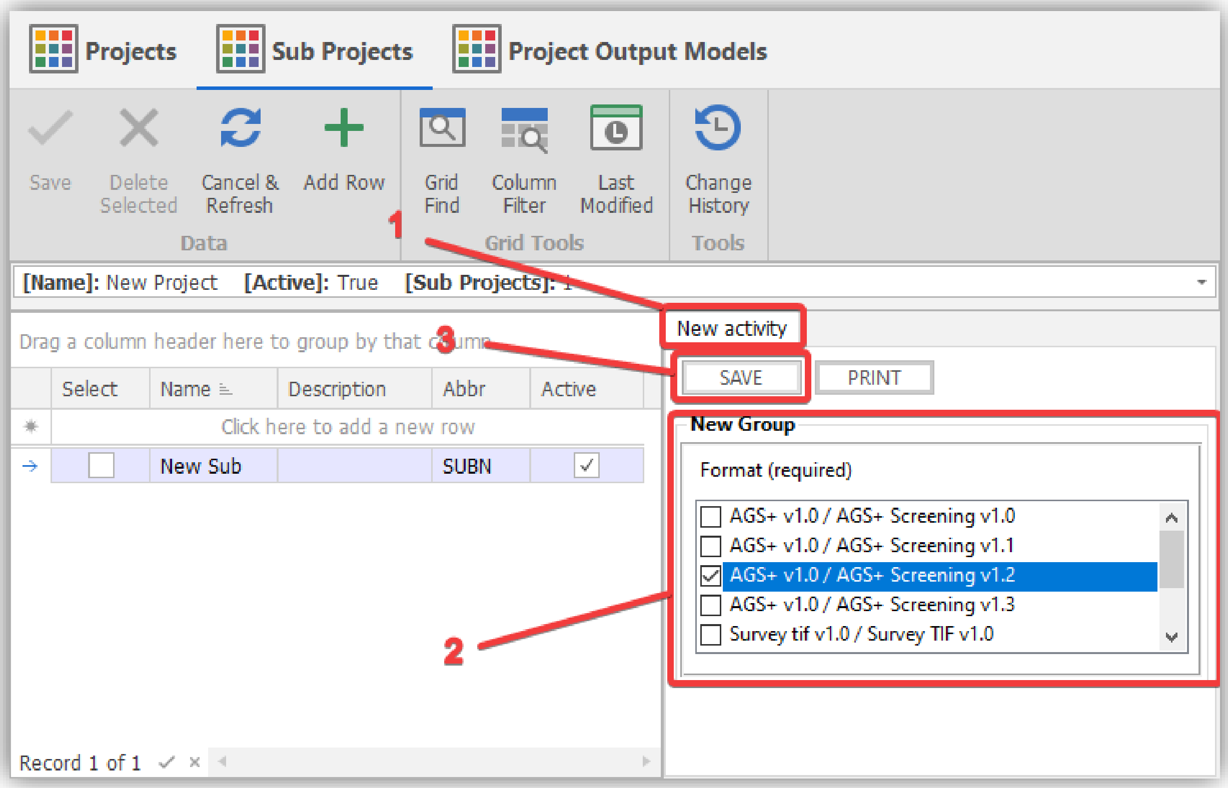
- Navigate to the P**rojects module** and highlight desired **Sub Project:**



- Click **Sub Projects button**(1) and highlight a **Sub Project**(2). Activities assigned to the sub project module will appear in separate tabs in the **Activities window**(3) to the right:



- Select desired activity from the activities tabs(1) (only one present in this demonstration) and fill in required and desired **tasks**(2) (also only one present in this demo). Click **save button**(3) when finished:

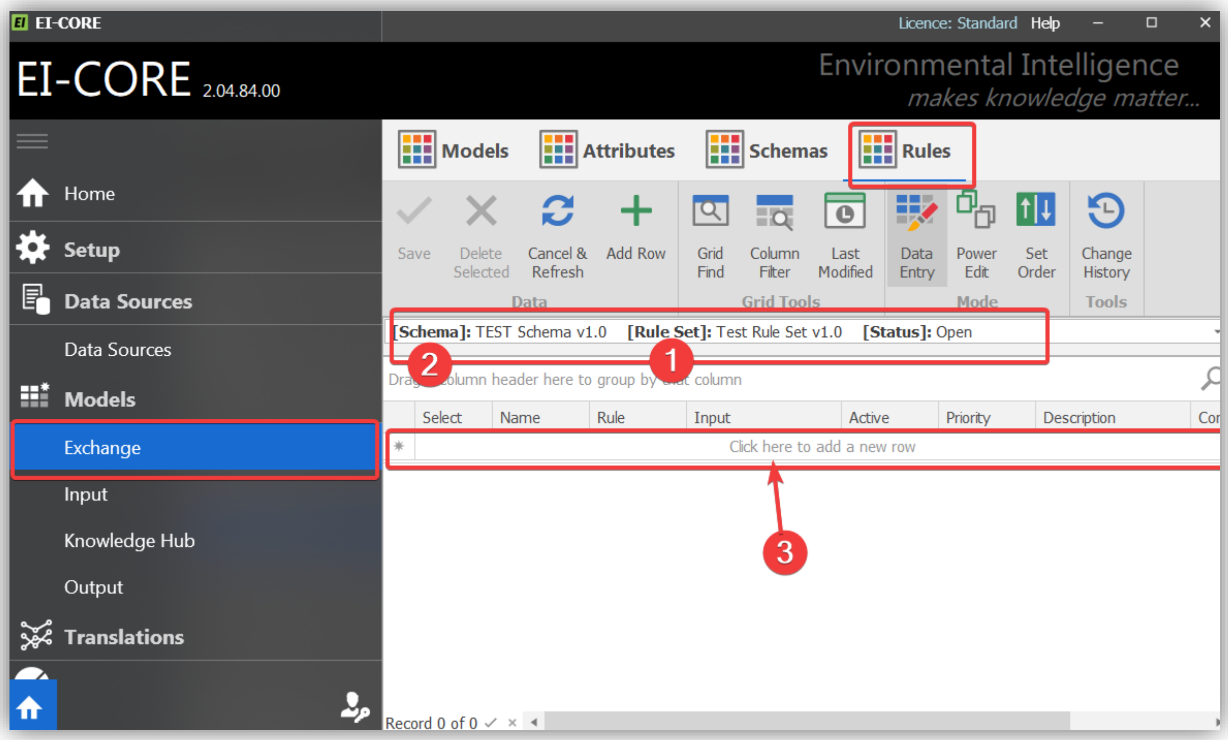

Projects
Sub Projects
Project Output Models
Save
Delete Selected
Cancel & Refresh
Add Row
Grid Find
Column Filter
Last Modified
Change History
Data
Grid Tools
Tools
[Name]: New Project [Active]: True [Sub Projects]: 1
Drag a column header here to group by that column
Select
Name
Description
Abbr
Active
Click here to add a new row
New Sub
SUBN
Record 1 of 1
New activity
SAVE
PRINT
New Group
Format (required)
AGS+ v1.0 / AGS+ Screening v1.0
AGS+ v1.0 / AGS+ Screening v1.1
AGS+ v1.0 / AGS+ Screening v1.2
AGS+ v1.0 / AGS+ Screening v1.3
Survey tif v1.0 / Survey TIF v1.0
1
2
3

Expression Builder

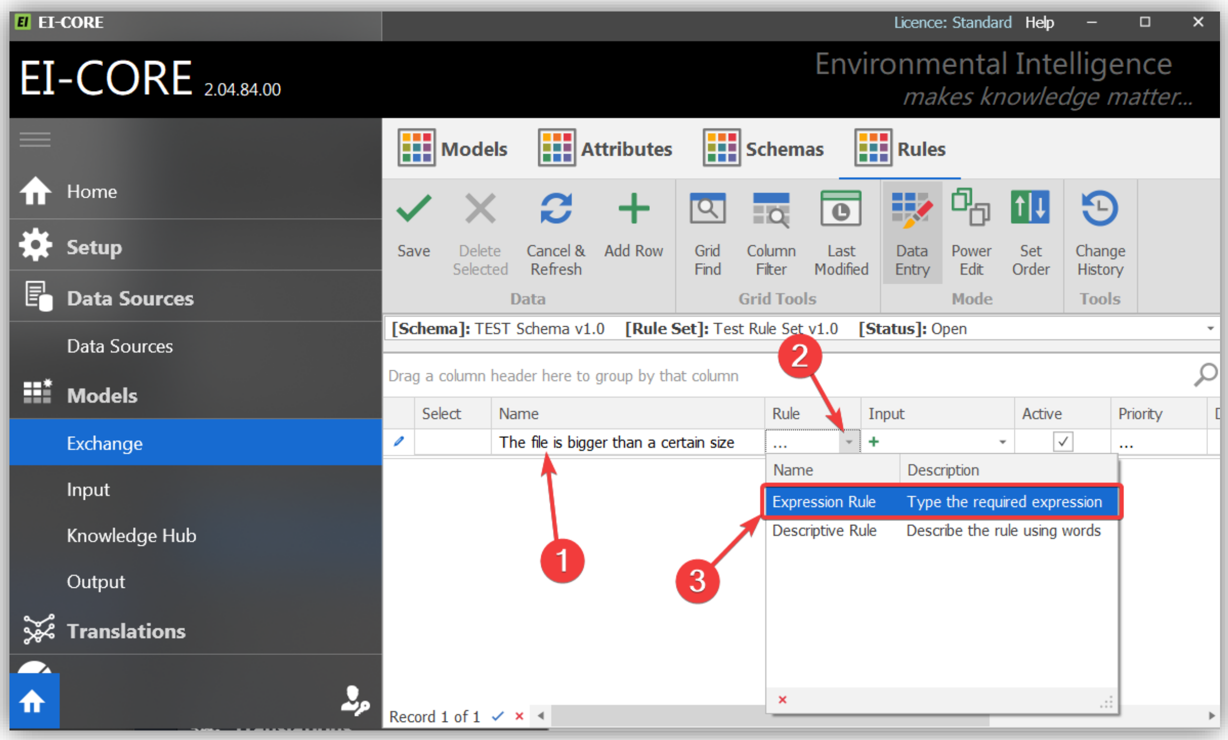
EI-CORE version number: 2.04.84.00
Document revision date: 23-01-2020

The **EI-CORE Expression Builder** is set of expressions used for defining univocal rules for exchange file formats.

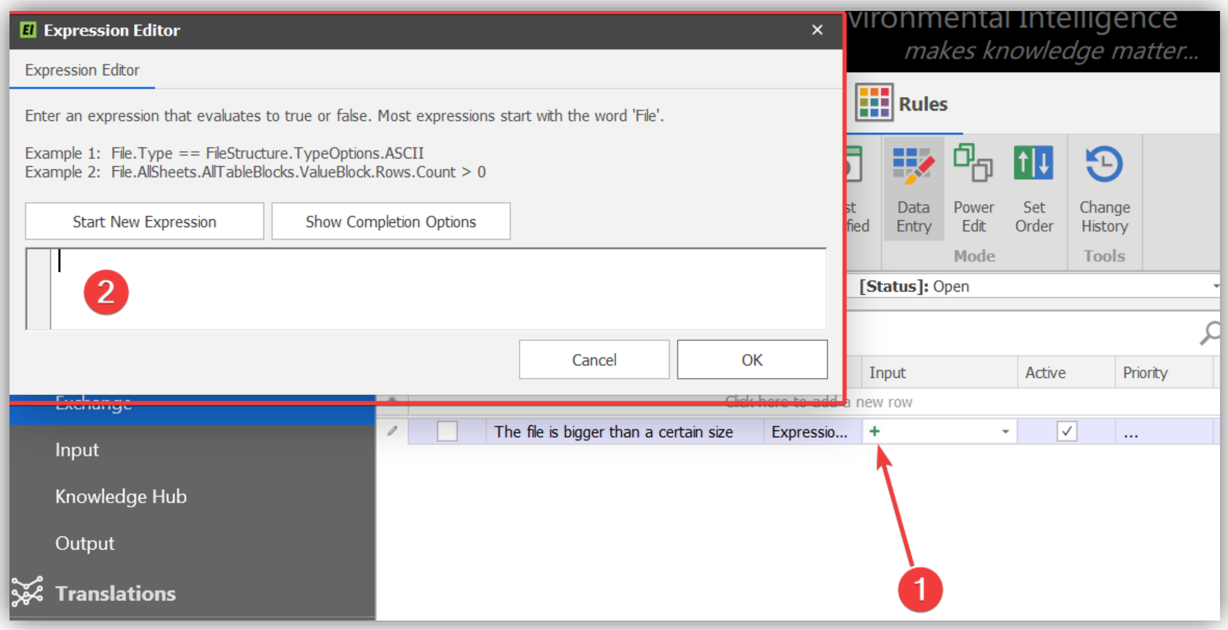
- An expression rule is applied to a **Rule Set(1)** that is applied to an **Exchange Schema(2)**. Both must be created beforehand.
  Click the **empty row(3)** to create a new rule:



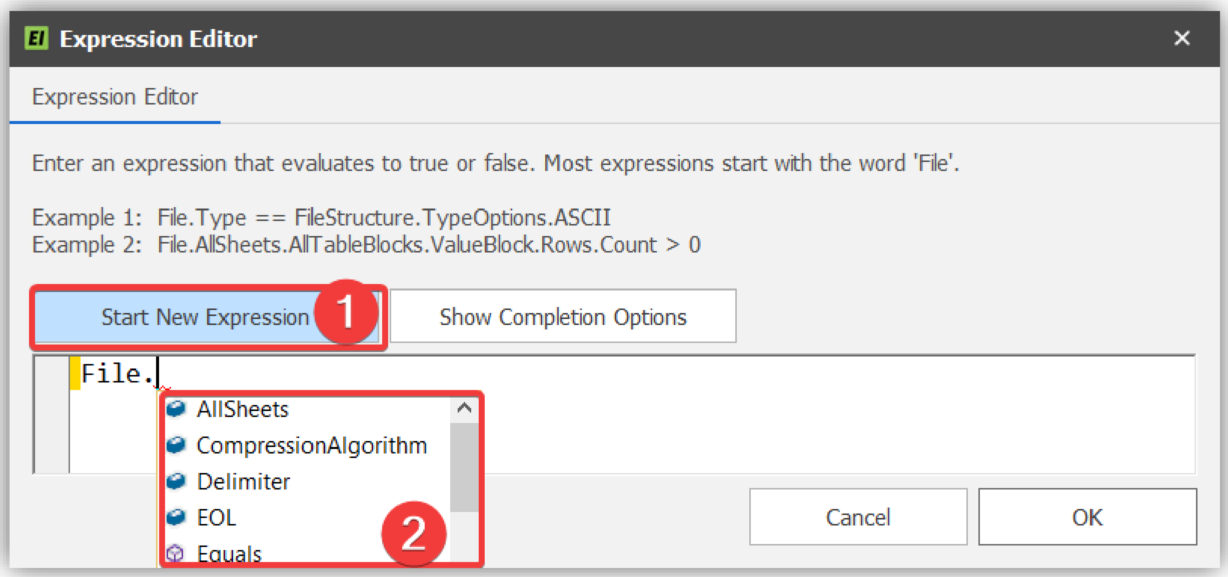
- Provide a descriptive **name** for the rule (1), Click the **Rule Drop-down(2)** and select **Expression Rule(3)** from the list:



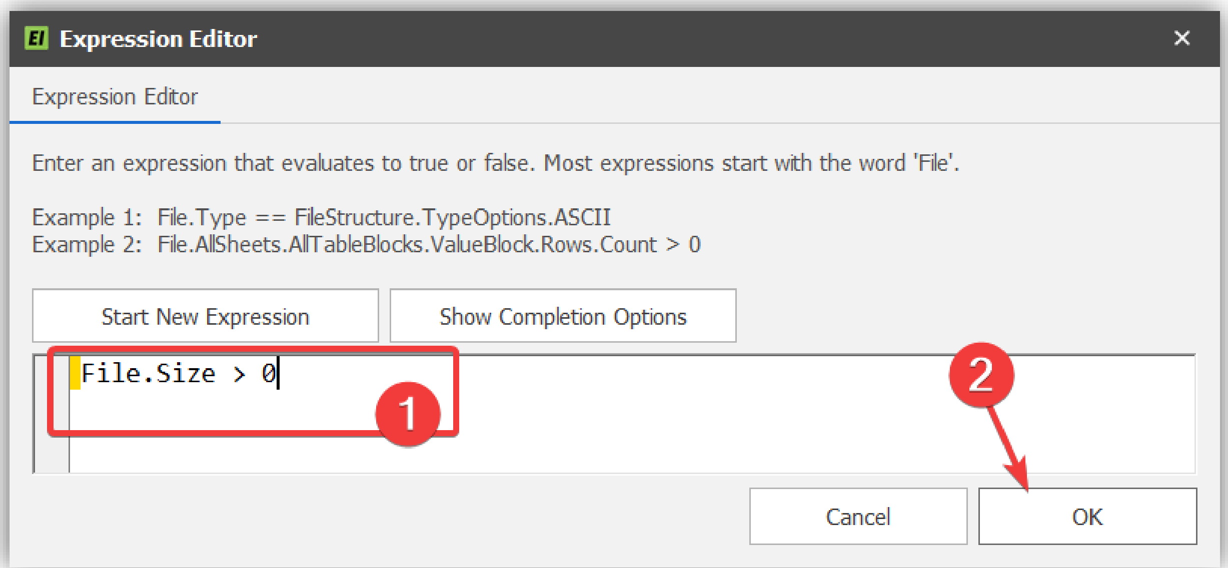
➢ Click the green **plus sign** (1) to open the **Expression Editor window**(2):



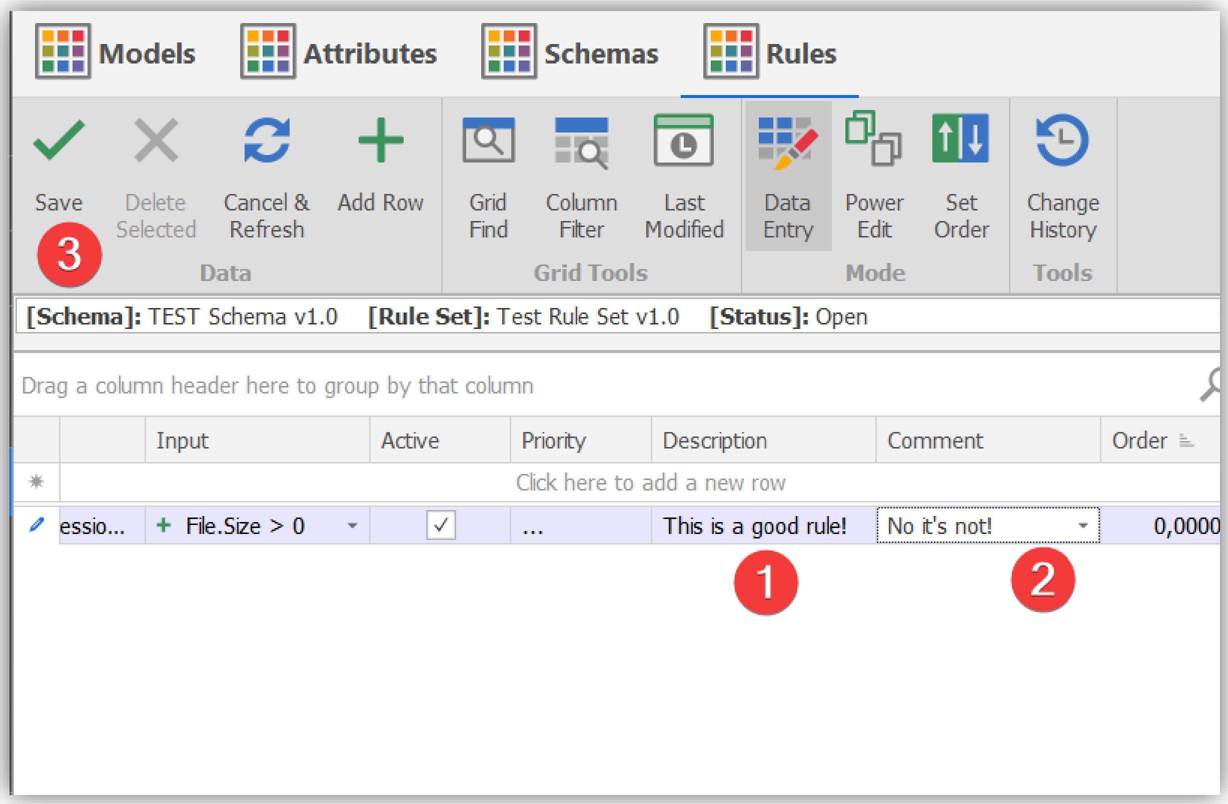
➢ Select **Start New Expression(1)**. The expression editor will provide a menu of available expressions(2):



- Complete the rule(1) and close the Expression Editor by hitting **OK-button(2):**



- Provide a description(1) and comment(2) at will, and click **Save(3)** to finish:



Extracting data from EI-CORE

EI-CORE version number: 2.05.00.00
Document revision date: 2020-02-12

About EI-CORE data

Data entered in EI-EICORE, can be extracted from a third-party application by the use of Database Queries. The EI-CORE database is equipped with predefined Functions to easily extract common values.

Functions

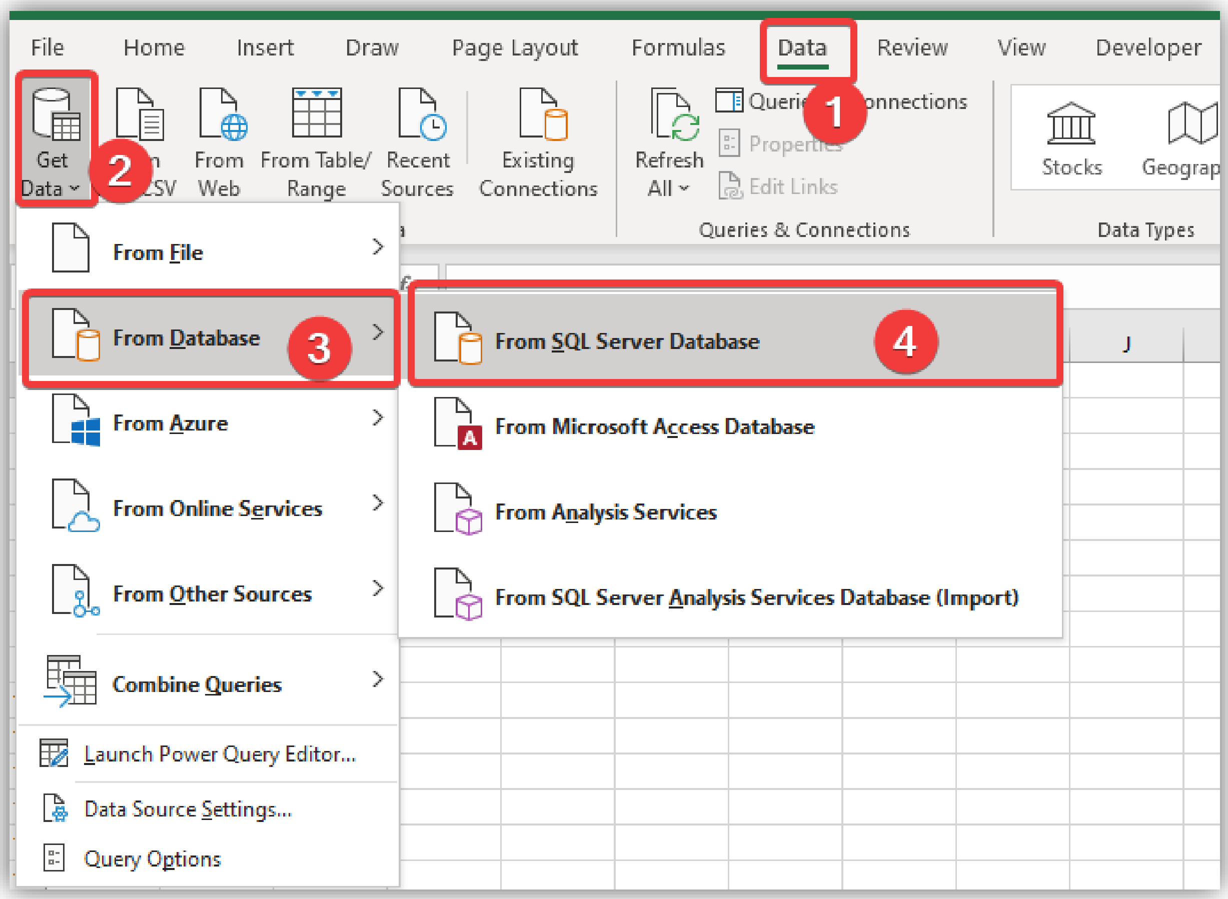
A function stores a pre-entered DB query, for consistent data extraction.

To Call a function from an external application like Excel, a connection must be made to the EI_CORE database.

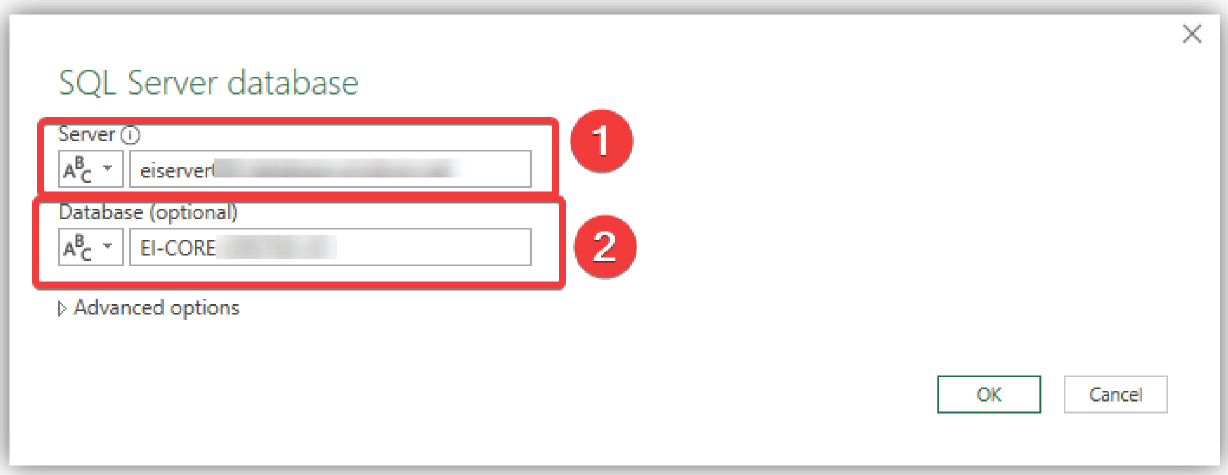
From Excel it can be done as described here:

Go to the **Data menu(1)** and select **Get Data item(2).** Select the **From Database-option(3)** and choose **From SQL Server Database**(4).
If you database is not a SQL Server Database, please enquire at you local Database Admin in order to obtain

required connection information.



Enter Server path(1) and database name(2) as provided by your Database administrator, and select **OK:**

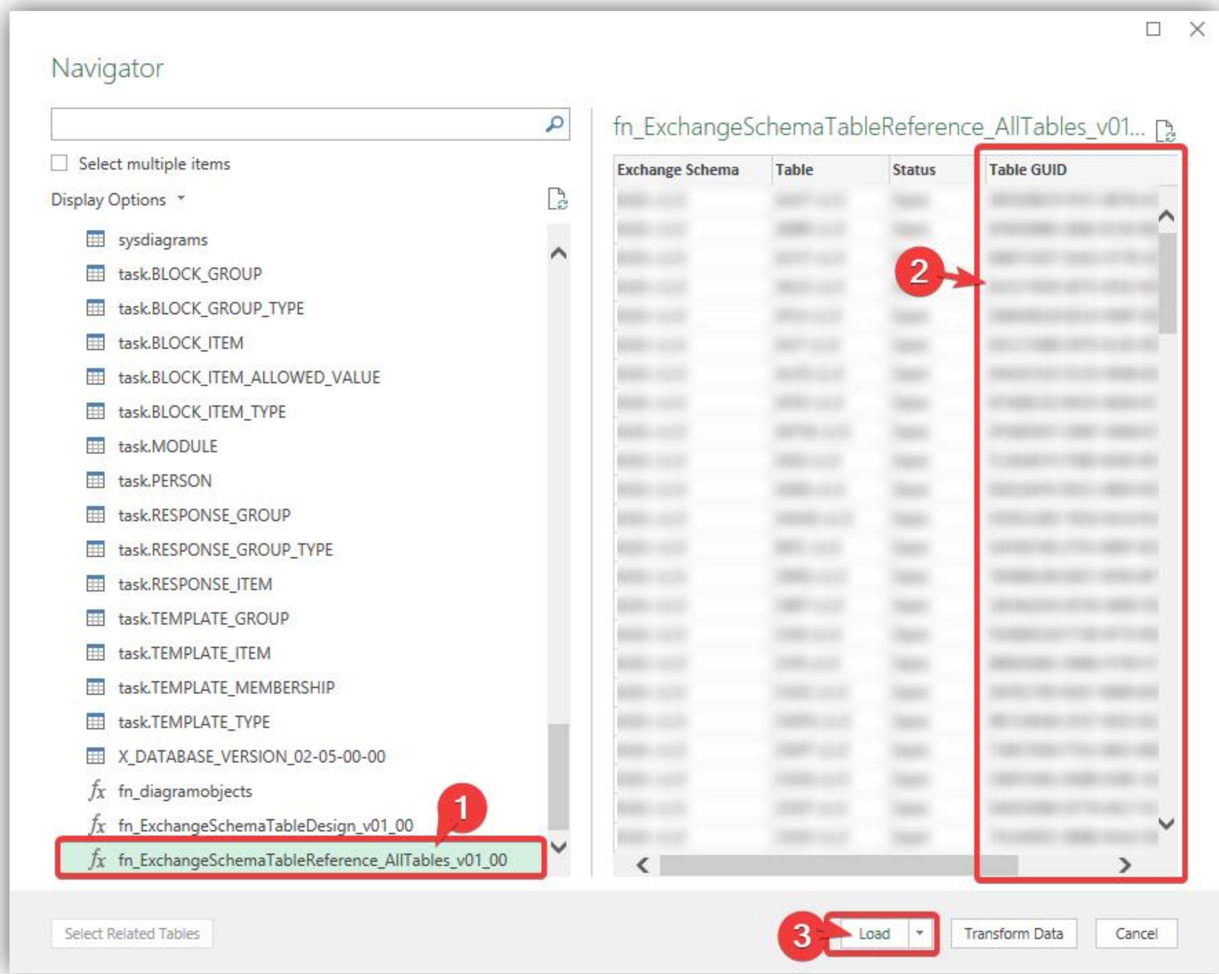


If prompted during the process provide database credentials as obtained from your DBA. A windows showing the content of the Database should now appear.

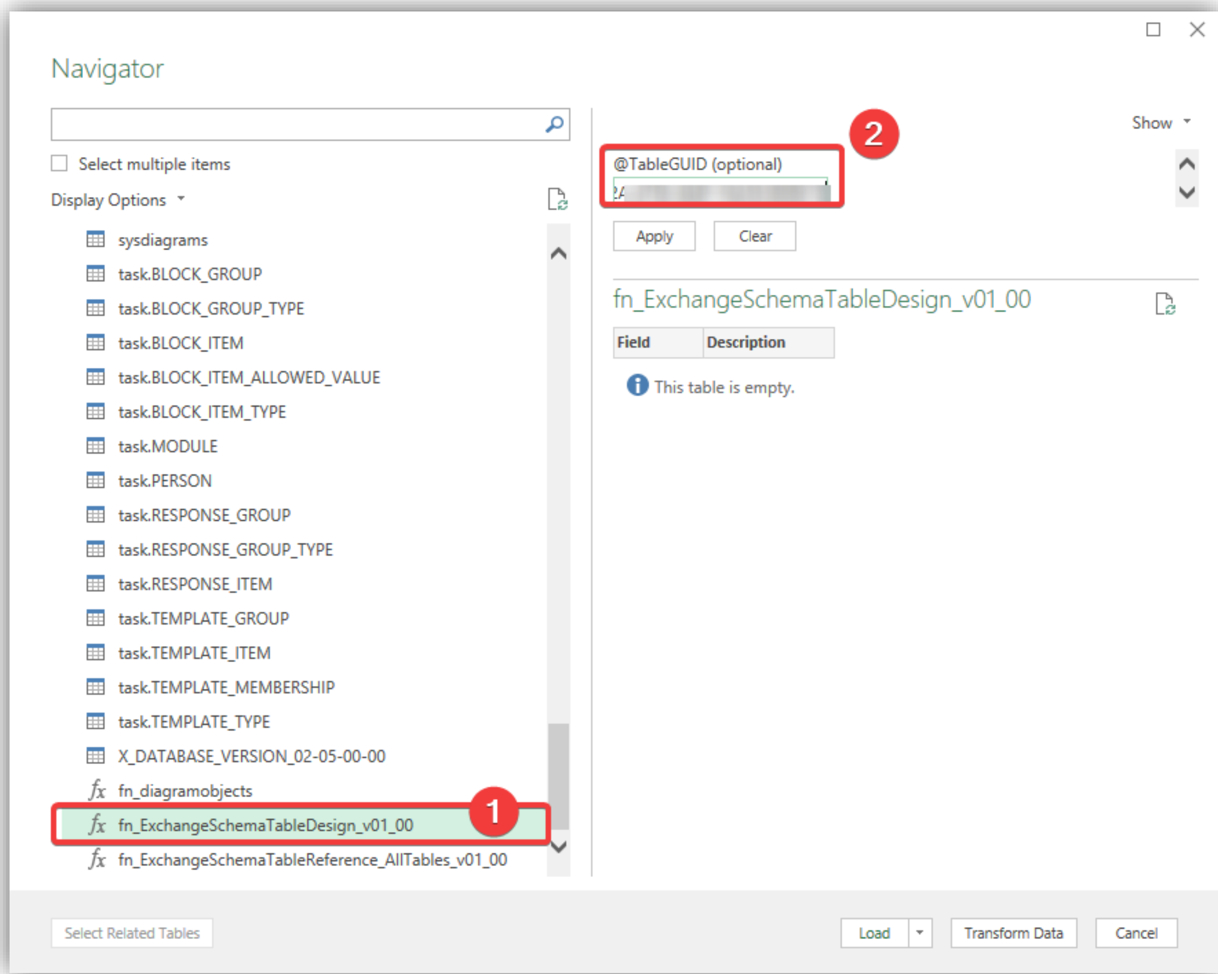
At left pane, scroll to the bottom, and select the desired formula (1).

The *ExchangeSchemaTableReference_AllTables* formula provides an overview of applicable Table GUIDs(2) needed for selecting a specific table with the *ExchangeSchemaTableDesign* formula.

When the correct formula is selected, select **Load(3)** to load the table to the excel Sheet.

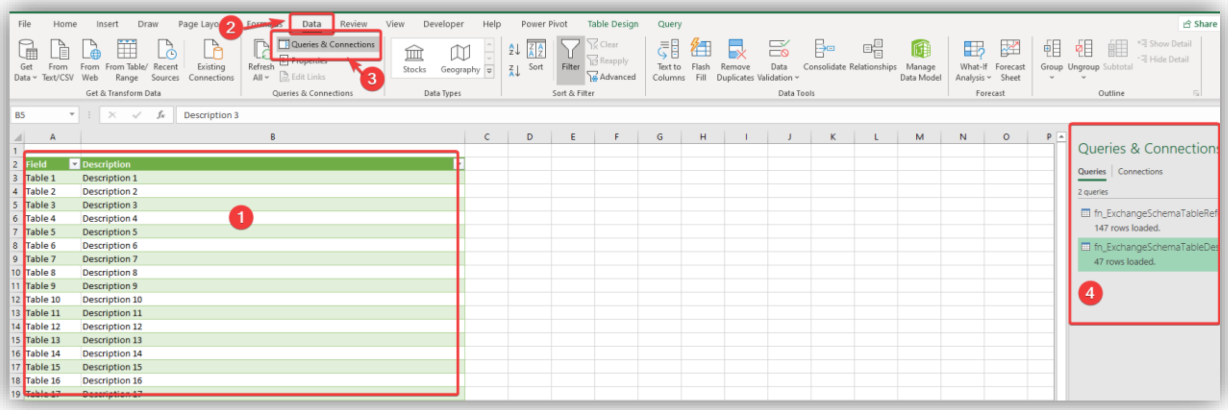


If a formula needs parameters as with the the *ExchangeSchemaTableDesign* formula(1), the parameters are entered in the parameter field(2).

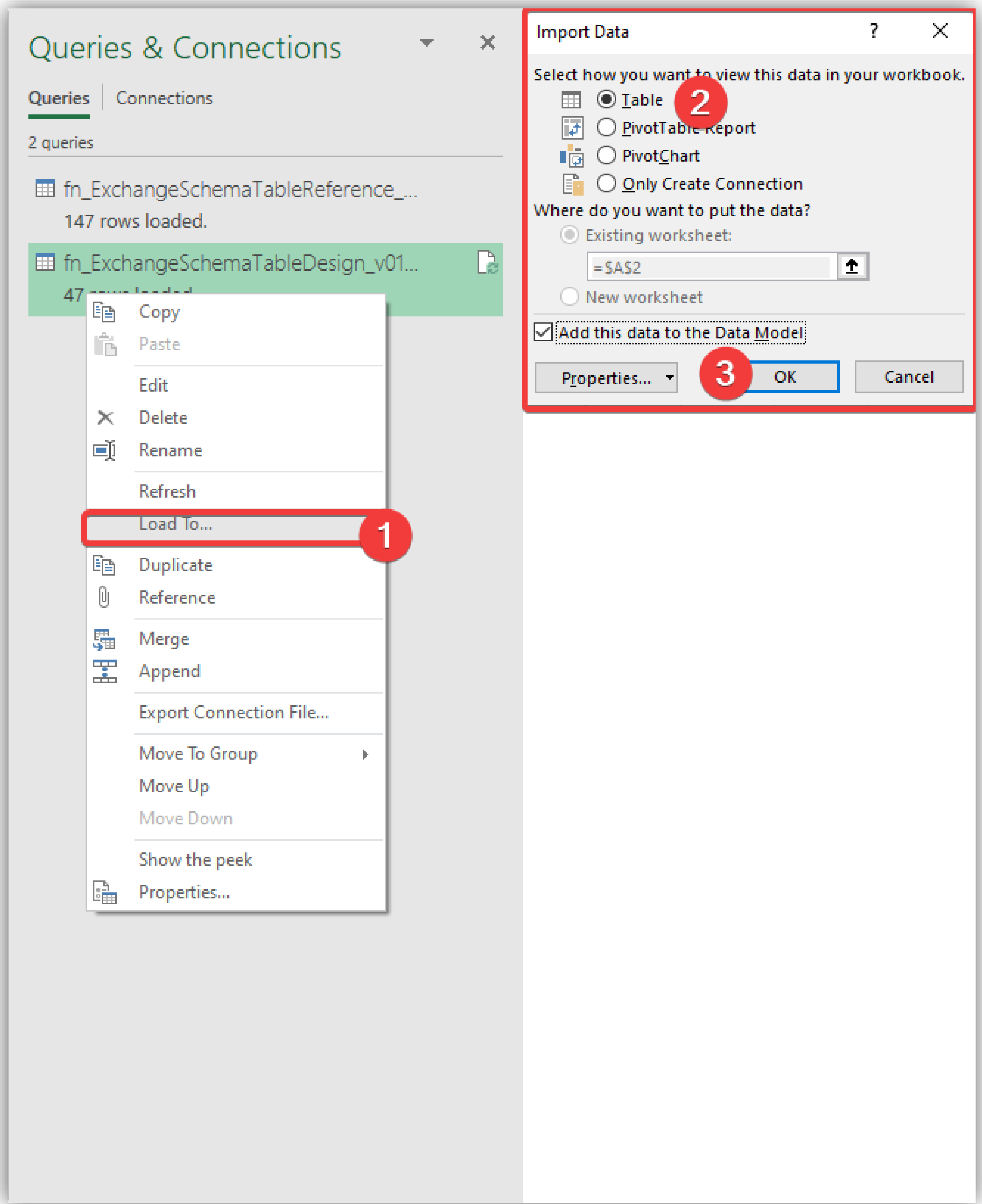


Once a formula is loaded, it will usually appear as a table in the spread sheet(1).

To view and edit connections, navigate to the **Data** menu(2) and make sure **Queries and Connections**(3) are highlighted. The Queries will the show in the right pane(4):



To load a query to the spread sheet, right click the query and select **Load To…(1)** In the Import data-window select **Table(2)** or any appropriate option an press **OK(3).**


Queries & Connections
Queries
Connections
2 queries
fn_ExchangeSchemaTableReference_...
147 rows loaded.
fn_ExchangeSchemaTableDesign_v01...
Copy
Paste
Edit
Delete
Rename
Refresh
Load To...
1
Duplicate
Reference
Merge
Append
Export Connection File...
Move To Group
Move Up
Move Down
Show the peek
Properties...
Import Data
?
Select how you want to view this data in your workbook.
Table
2
PivotChart
Only Create Connection
Where do you want to put the data?
Existing worksheet:
=A2
New worksheet
Add this data to the Data Model
Properties...
3
OK
Cancel

Missing a topic?

The EI-CORE help files are continuously incremented. If you have a request for a topic or if you need assistance not covered in these files, please send us an email at support@ei-group.dk