

Sync with Excel or CSV files

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Introduction

You can transfer data between Excel/CSV files and modeling tool tables. After sync, the data on Excel file of selected sheet or CSV file matches the data in the modeling tool table. This mechanism is bidirectional and ensures continuous work between Excel/CSV files and modeling tool tables. If you don't have the ability to collaborate via the internet but you need to share information through Excel or CSV files, you can use this feature,. The Excel/CSV file

syncing is available in all tables of the modeling tool by using the the **Excel/CSV Sync** button  in the [table toolbar](#).



How to sync your data

Follow these steps to manually sync data between an Excel/CSV file and a modeling tool table:

- [Turn on syncing](#)
- [Set the sync options \(optional\)](#)
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- [Open file \(optional\)](#)
- [Turn off syncing \(optional\)](#)

Turn on syncing

Before transferring data, you must turn on syncing by creating a reference between the Excel/CSV file and modeling tool table (i.e., link the Excel/CSV file with the modeling tool table).

 You can link only one Excel/CSV file with the same modeling tool table.

You can link:

- [An existing Excel/CSV file.](#)
- [A new Excel/CSV file exported directly from the modeling tool table.](#)

Linking an existing Excel/CSV file

To link an existing Excel/CSV file with a modeling tool table

1. Make sure the **Element Type** or **Classifier** is selected in the [Criteria area](#).
2. Do one of the following:

- Drag the Excel or CSV file directly onto the modeling tool table.

Drag the Excel or CSV file directly onto the modeling tool table. Hold it down until the Tooltip appears (long drag). Drop it, and select the **Link Excel/CSV File** or **Attach and Link Excel/CSV File** command from the opened menu.

- On the table toolbar, click  and select **Excel/CSV File > Select File**. Select **From file system** or **From model** in the [Excel/CSV Sync Options dialog](#), click , and select an appropriate Excel or CSV file.

Selecting files from model

If you want to link the file from your model, make sure the Excel or CSV file is attached to project. [How to attach the file to a project >](#)

The Excel or CSV file is linked with the modeling tool table and ready to be synced.

 If you select or drag another file (e.g. *Vehicle Requirements.xlsx*) on a modeling tool table that is already linked with the file (e.g. *Stakeholder Requirements.xlsx*), the previous file named *Stakeholder Requirements.xlsx* is replaced with the latest one *Vehicle Requirements.xlsx*.

Linking a new Excel/CSV file exported directly from the modeling tool table

To create a new Excel/CSV file from the modeling tool table and link it at the same time

- On the table toolbar, click , and select **Excel/CSV File > Write To File**. In the **Save** dialog, select the location from your file system, and save the new Excel or CSV file to your computer.
The Excel or CSV file is exported, linked with the modeling tool table, and ready to be synced.

 The file cannot be saved if a file with the same name and in the same location already exists.

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Set the sync options (optional)

You can specify different sync and mapping options than the default ones. For example, you can specify how the deleted rows in the Excel/CSV file will be transferred to the modeling tool table, define a specific Excel file sheet and cell, and create custom column mapping. All default settings are described next to each option in the [Excel/CSV Sync Options dialog areas](#).

To customize the sync and mapping options

1. On the table toolbar, click  and do one of the following:
 - Select the **Sync Options** button.
 - Select the **Excel/CSV File > Select File**. Click the **Details** button on the left bottom corner of the dialog.
2. Specify the **If rows in the file are deleted option** value in the **Sync Options** area. [How to >](#)
3. Specify the mapping options in the **Mapping Options** area. [How to >](#)
4. Manage the column mapping in the mapping area. [How to >](#)
5. Click **OK**.
The sync and mapping options are set. They will be applied next time you sync data.

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Sync data

Data can be synced bidirectionally by using two commands from the  :

- [Read From File](#) command.
- [Write To File](#) command.

Read From File command

You can import data from a selected sheet in an Excel file or CSV file to a modeling tool table by using the **Read From File** command. Read the following rules before using this command:

- The **Read From File** command is available only if the Excel/CSV file is linked with a modeling tool table. [How to link it >>](#)
- After making any changes in the Excel or CSV file you must save them before using the **Read From File** command. Otherwise, the changes will not be imported to the modeling tool table.
- The Excel or CSV file can be open while importing data from them.
- When syncing data from an Excel file, the **Read From File** command:
 - Syncs only one sheet of the Excel file. By default, the first sheet is synced. You can change the sheet number in the [Excel/CSV Sync Options dialog > Mapping Options area > Sheet](#) option.
 - Syncs the first cell of the sheet filled with data. If the selected sheet is empty, it will sync from the A1 cell. You can change the cell you want to start syncing from in the [Excel/CSV Sync Options dialog > Mapping Options area > First cell](#) option.
- When syncing data from a CSV file, the **Read From File** command syncs the comma delimiter (,) by default. You can change the delimiter in the [Excel/CSV Sync Options dialog > Mapping Options area > CSV delimiter](#) option.
- You can indicate the heading titles of the Excel/CSV file; change this option in the [Excel/CSV Sync Options dialog > Mapping Options area > First row contains headings](#) check box.
- After sync, the deleted rows in the file are marked as obsolete in the modeling tool table. You can change this behavior in the [Excel/CSV Sync Options dialog > Sync Options area > If rows in the file are deleted](#) option.
- The columns of the Excel/CSV file and modeling tool table by default are mapped on the ordinal position. You can create your own column mapping in the [Excel/CSV Sync Options dialog > Mapping area](#).

To import data from an Excel/CSV file to a modeling tool table

1. On the table toolbar, click .
 2. Select the **Read From File** command.
 3. In the **Select Type** dialog, select the element you want to create in the modeling tool table.
- The data is imported from the Excel/CSV file to the modeling tool table. If you made changes in the file and saved them, the table [Legend](#) displays automatically and highlights the **New**, **Obsolete**, **Unchanged**, and **Updated** rows. In the following figure, the first requirement is updated, the seventh is newly created, and the second is deleted.

Excel Import Status: ☐ New ☐ Obsolete ☐ Unchanged ☐ Updated		
#	Name	Text
1	 Original Statement	Describe a system for purifying dirty water. - Heat dirty water and condense steam are performed by a Counter Flow Heat Exchanger - Boil dirty water is performed by a Boiler. Drain residue is performed by a Drain. The water has properties: vol = 1 liter, density 1 gm/cm3, temp 19 deg C, specific heat 1cal/gm deg C, heat of vaporization 540 cal/gm.
2	 Purify Water	The system shall purify dirty water.
3	 Heat Exchanger	Heat dirty water and condense steam are performed by a Counter Flow Heat Exchanger
4	 Boiler	Boil dirty water is performed by a Boiler.
5	 Water Properties	Water has properties: density 1 gm/cm3, temp 20 deg C, specific heat 1cal/gm deg C, heat of vaporization 540 cal/gm.
6	 Water Initial Temp	Water has an initial temp 20 deg C
7	 Drain	Drain residue is performed by a Drain.



Read From File exceptions

Data cannot be imported or imported correctly if:

- The CSV file format is invalid.

Write To File command

- Cells are non-editable.

You can export data from a modeling tool table to an Excel/CSV file by using the **Write To File** command. Read the following rules before using this command: Data types of columns are not compatible with source information.

- Columns do not support information updates.
- If the file is not linked with the table, this command allows you to export a new Excel or CSV file to your computer and create a reference automatically between the table and the exported file. The file cannot be saved and linked with the table if a file with the same name and in the same location already exists. You can use the **Export** button from the [table toolbar](#) to export a table without creating a reference.
- If the table is linked with the table, this command transfers the data directly to the Excel/CSV file.

Also, some text formatting may not be transferred.

To export data from a modeling tool table to an Excel/CSV file

1. On the table toolbar, click .
2. Select the **Write To File** command.
The data is exported from modeling tool table to Excel/CSV file.



Write To File exceptions

The data cannot be exported or exported correctly if:

- The Excel file is corrupted.
- The CSV file is open.

Open file (optional)

The CSV file is locked or you do not have the necessary permissions to access it.

You can open the linked Excel or CSV file directly from a modeling tool table.

To open a linked Excel and/or CSV file directly from a modeling tool table

1. On the table toolbar, click  .
2. Select **Excel/CSV File > Open File**.
The linked file is opened.

Turn off syncing (optional)

You can turn off syncing if you do not want to import/export data between your modeling tool and an Excel/CSV file. For this, you must remove the reference between the Excel/CSV file and the modeling tool table.

To remove a reference between a Excel/CSV file and a modeling tool table

1. On the table toolbar, click  .
2. Select **Excel/CSV File > Clear Selection**.
The reference between tables is removed and syncing is turned off.

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