2022x Refresh2 Version News

Released on: July 7, 2023

The 2022x Refresh2 release introduces performance improvements to both the client-side and Teamwork Cloud-side, as well as general modeling and collaborative modeling enhancements.

The client-side performance enhancements include improved predefined validation performance and decreased table opening time.

For general modeling, this release presents new syncing with Excel options, the ability to temporarily activate or deactivate legends without the diagram lock, and automated package structure creation.

Additionally, collaborative modeling is improved with a new file exchange format .szip, allowing faster transfer of models between OEMs and suppliers, the ability to view Teamwork Cloud data markings in MagicDraw, and other enhancements. Also, Power'By has been updated with standard profiles migration and the ability to cut used project references if the used project is not found.

To download the latest version of the modeling tool, see Downloading installation files. For further information, check the product documentation.

⚠️ **2022x Refresh2 Hot Fix 1 available**

2022x Refresh2 Hot Fix 1 is now available for CATIA Magic and No Magic portfolios. It includes a number of improvements and bug fixes in our modeling tools and server products. Learn more >>

Client-side Performance Improvements

- Validation Performance Improvements
- Table Performance Improvements
- Other Improvements

Modeling and Infrastructure

- New Syncing with Excel Options
- Manipulate Legends without Diagram Lock
- Automated Package Structure Creation

Collaboration

Teamwork Cloud

- New File Exchange Format for Server Projects (Technology Preview)
- Teamwork Cloud Data Markings in MagicDraw
- Enhanced Set as Latest Functionality
- Pre-merge Check of Project Permissions
- Recursive Global Element Usage Search
- Other fixes/improvements

3DEXPERIENCE platform – Power'By
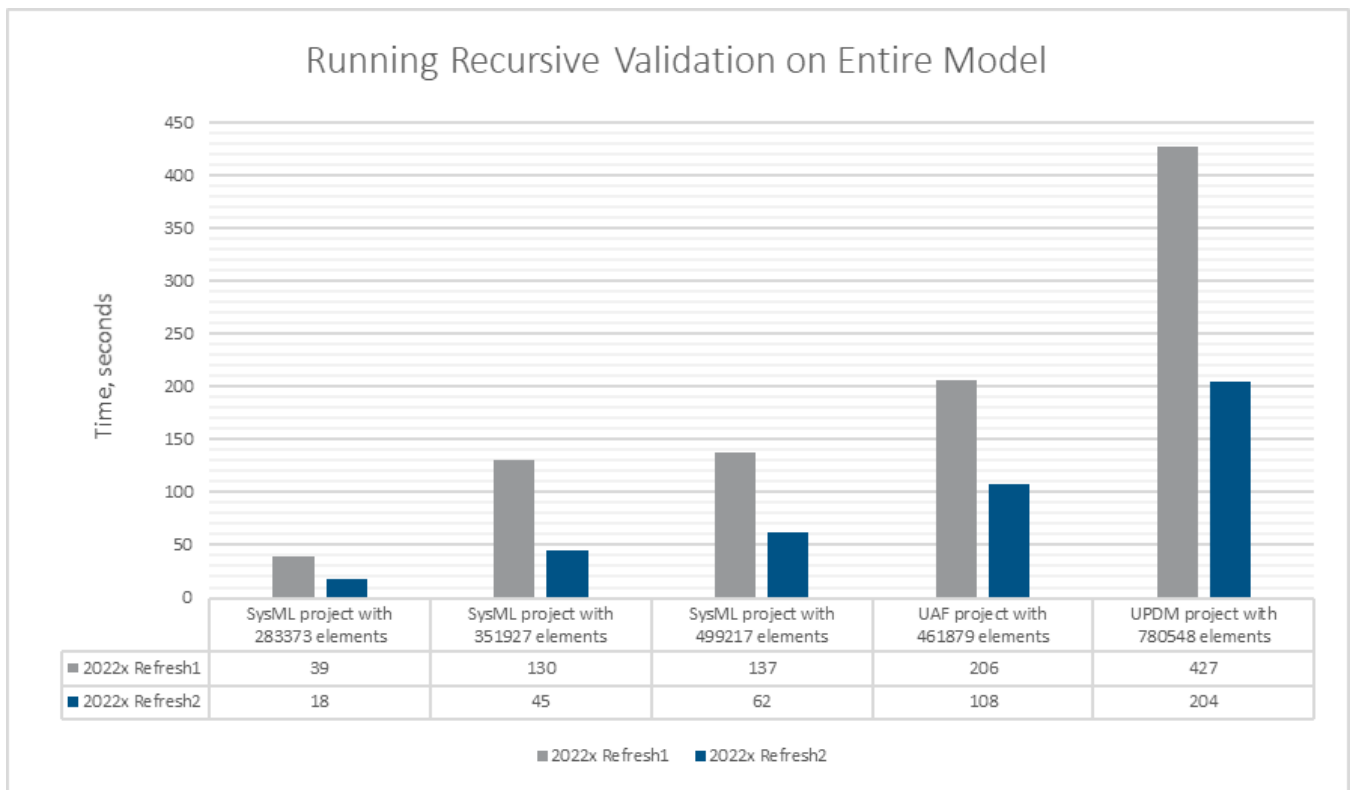
- Standard Profiles Migration
- Cutting References If a Used Project Is Not Found
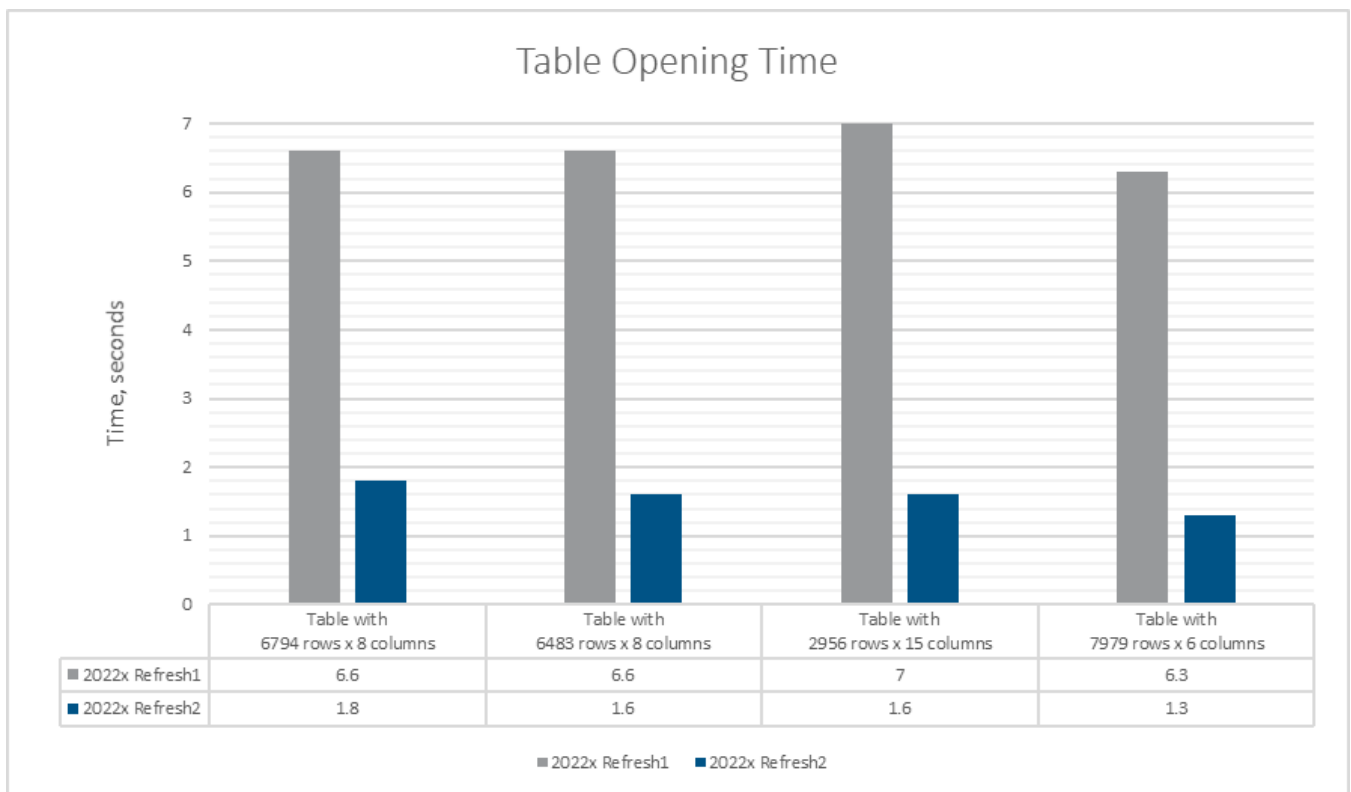
Upcoming Updates

Client-side Performance Improvements

- **Validation Performance Improvements.** Running the predefined validation on the entire model or a selected part is 2-5 times faster, depending on the model, than in 2022x Refresh1.

Running Recursive Validation on Entire Model

	SysML project with 283373 elements	SysML project with 351927 elements	SysML project with 499217 elements	UAF project with 461879 elements	UPDM project with 780548 elements
2022x Refresh1	39	130	137	206	427
2022x Refresh2	18	45	62	108	204

■ 2022x Refresh1   ■ 2022x Refresh2

A chart comparing the time it takes to execute the **Validate Elements Recursively** action on an entire project in 2022x Refresh1 and 2022x Refresh2.

- **Table Performance Improvements.** Opening a table is now significantly faster than in 2022x Refresh1. Tables with a large number of rows and columns (especially custom columns) will have noticeably decreased opening times.

Table Opening Time

	Table with 6794 rows x 8 columns	Table with 6483 rows x 8 columns	Table with 2956 rows x 15 columns	Table with 7979 rows x 6 columns
2022x Refresh1	6.6	6.6	7	6.3
2022x Refresh2	1.8	1.6	1.6	1.3

■ 2022x Refresh1   ■ 2022x Refresh2

A chart comparing the opening time of a table in a SysML project in 2022x Refresh1 and 2022x Refresh2. Now it is 5 times faster.

Other Improvements

- From now on, when a classifier containing ports is specified in an Instance table, the ports, along with their nested structure, are available for selection in the **Select Columns** dialog's **Properties** tab.
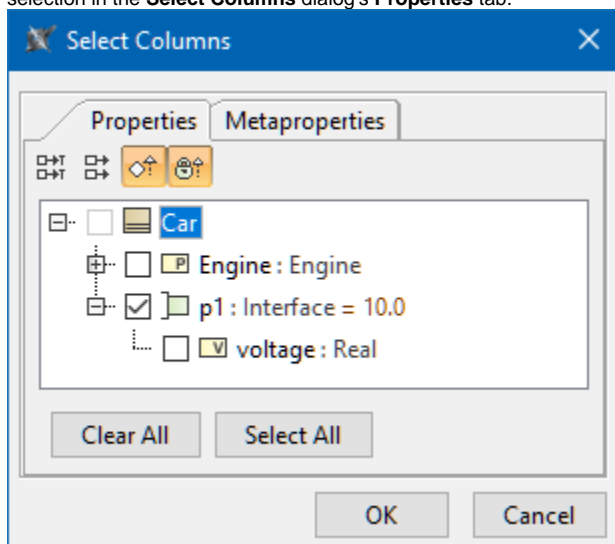
Modeling and Infrastructure

New Syncing with Excel File Options

Syncing with Excel files in tables is now improved with additional options:

- **Skipping empty rows and/or columns upon import.** If your Excel file contains any purposely created empty rows or columns, you can now skip them instead of stopping the import at the empty row or column, allowing you more control over the data import.

All data in the Excel file, including data following the empty row No. 5, is imported to the modeling tool.

- **Color marking modified data upon export.** You can now color-mark exported table data based on its changes. This allows you to easily review data changes in the Excel file.
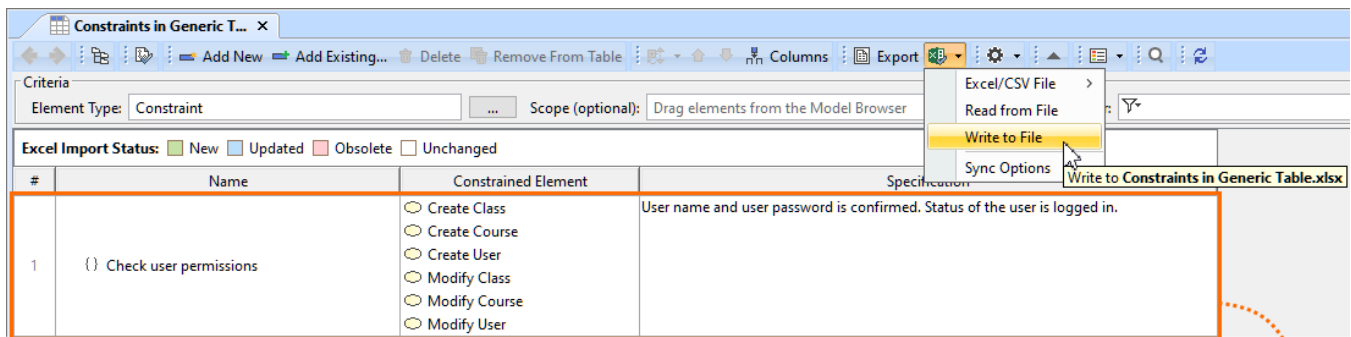

Exported table data is color-marked based on its changes. Red indicates removed, blue - updated, and green - added data.

- **Mapping elements by ID upon export.** From now on, you can map elements by ID upon export, which allows you to export new additional table data to a synced file without overwriting previously existing content in the file.

Before export

After export

Check user permissions row is added to the synced Excel file *Constraints in Generic Table* without overwriting the data already existing in the file.

- **Syncing data in Plain Text or HTML upon import/export.** You now have the option to import/export data in HTML (default) or Plain Text via the **Sync Plain Text** and **Import Plain Text** check box options, allowing you to choose the data format for the import/export without affecting the styling specified in the file.
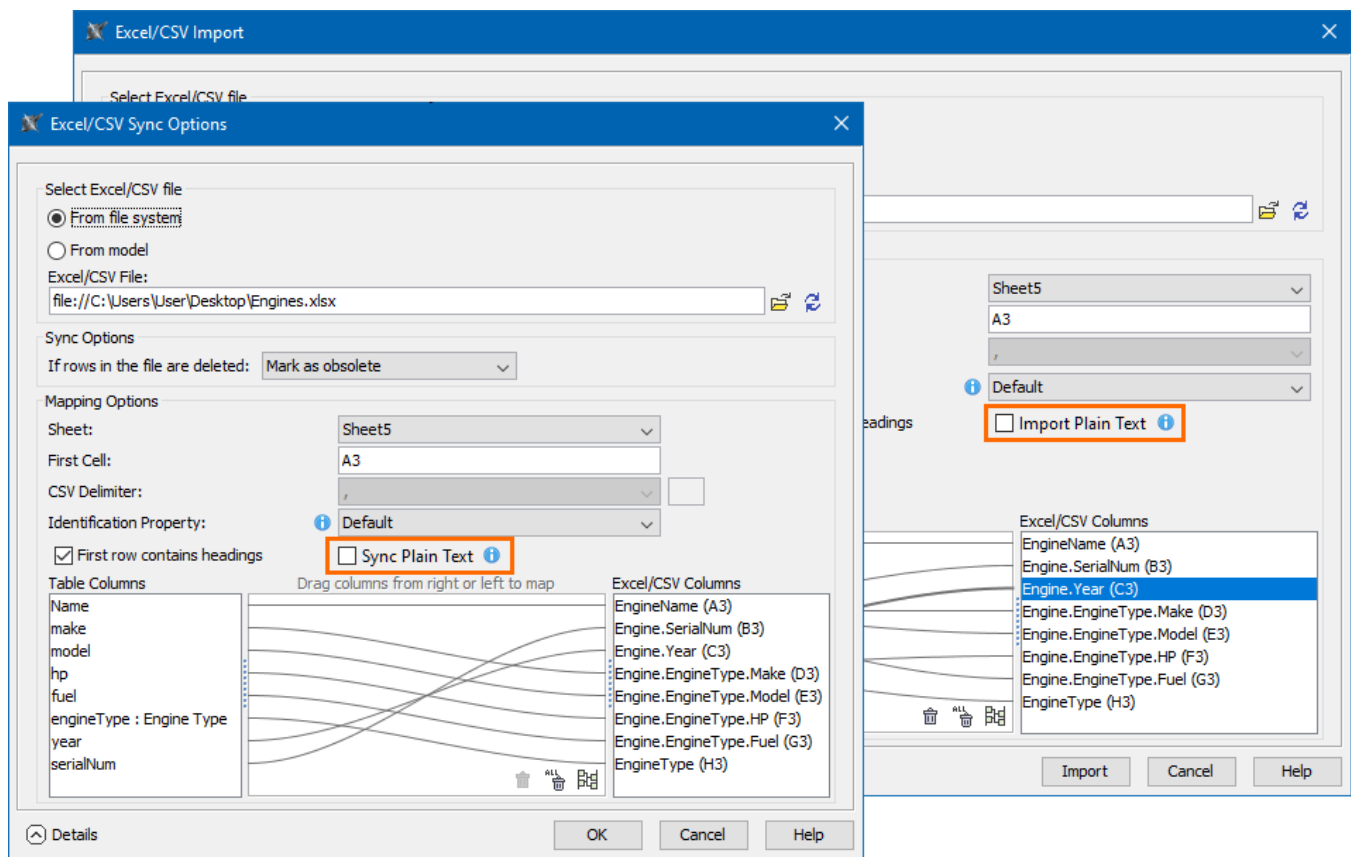
The **Sync Plain Text** check box in the **Excel/CSV Sync Options** dialog and the **Import Plain Text** check box in the **Excel/CSV Import** dialog.

Learn more about Syncing with Excel files >>

Manipulate Legends without Diagram Lock

You can now temporarily activate or deactivate a Legend via the **Suspended/Active** toggle button, allowing you to preview a diagram or table with or without adornments of a Legend without making permanent changes.
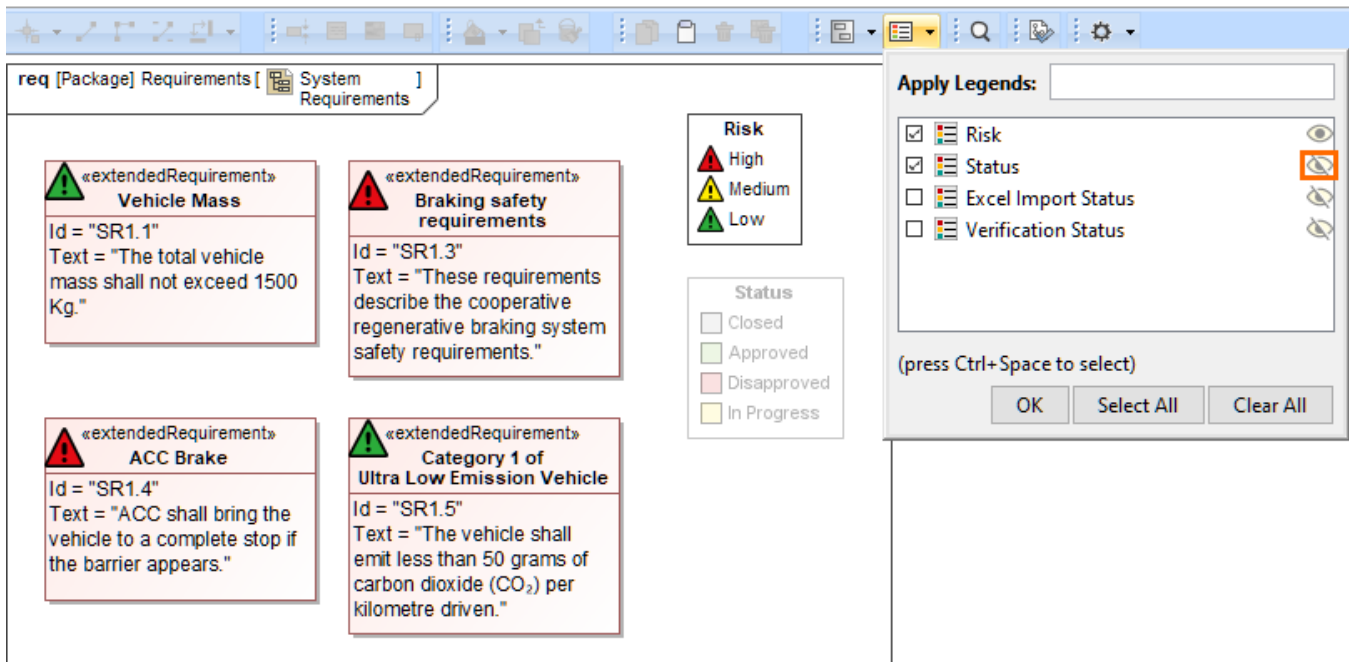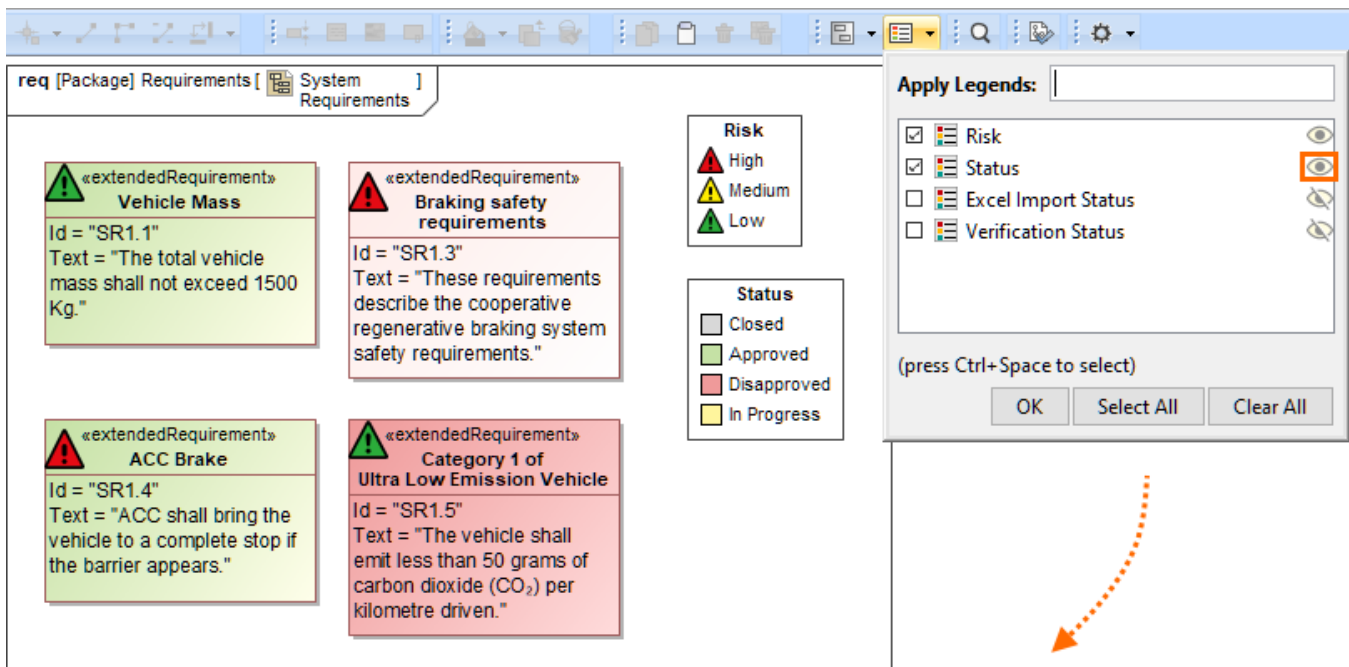
Temporarily suspending the applied Legend *Status* via **Suspend/Active** toggle button.

To learn more, watch the following video:

Learn more about Manipulating Legends without Diagram Lock >>

Automated Package Structure Creation

You can now easily create additional package structures you may require in your model. Previously, this could have been achieved by copy-pasting an existing package structure. Now you can do that efficiently by defining your package structure configurations and then creating those structures via the **Create Package Structure** action.
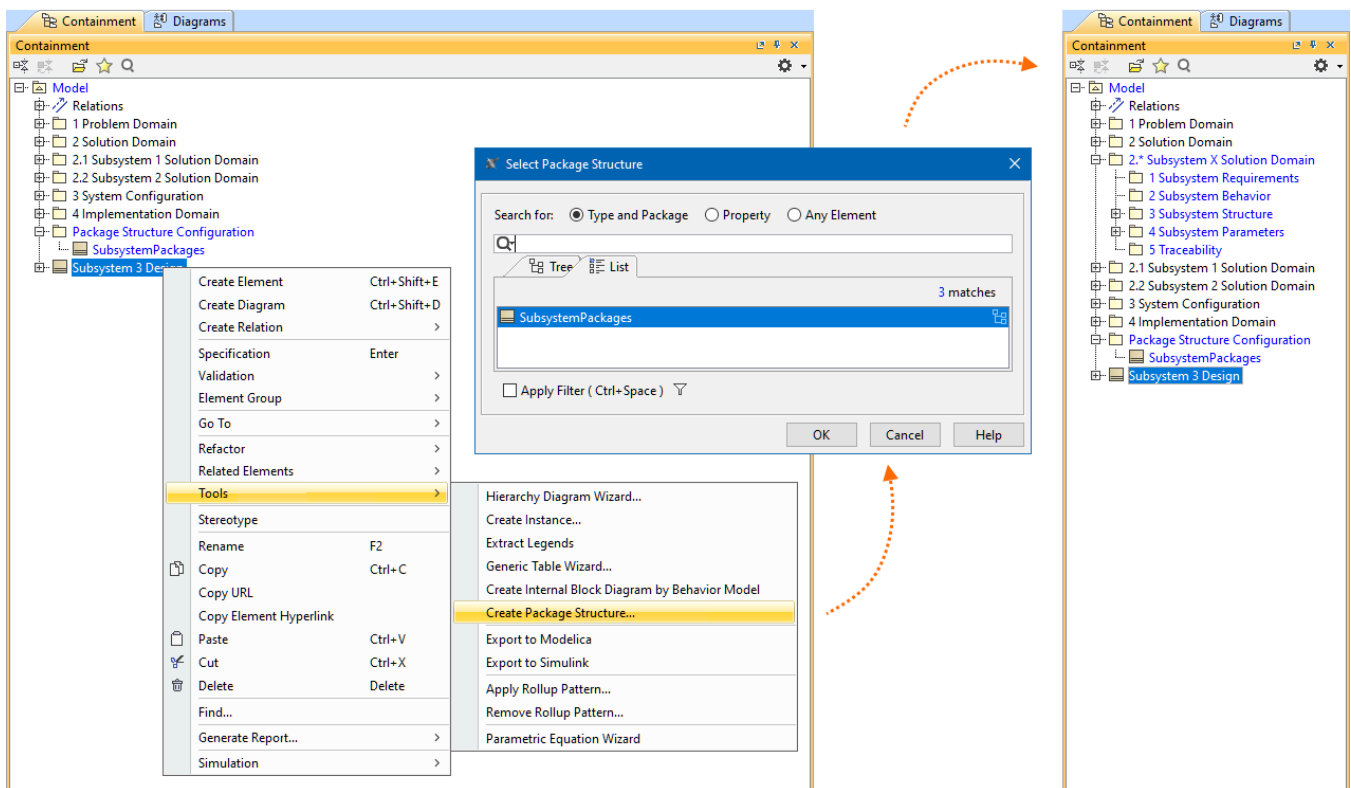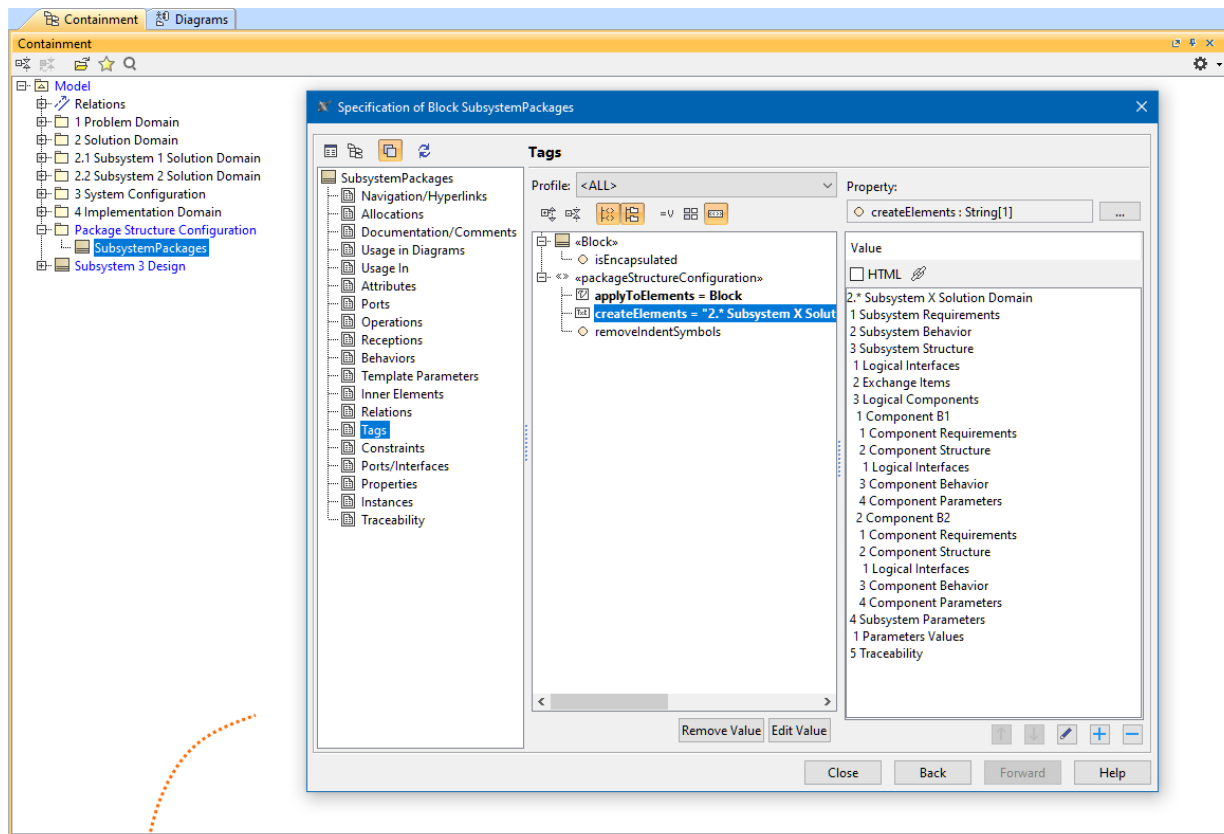
The package structure configuration element *SubsystemPackages* defines the subsystems package structure for a Block element. This subsystems package structure is created for the Block element *Subsystem 3 Design* via the **Create Package Structure** action.

Learn more about Automated Package Structure Creation >>

Collaboration

Teamwork Cloud

New File Exchange Format for Server Projects (Technology Preview)

Until now, .mdzip files were used for swapping projects in disconnected environments; however, this format is not ideal as there are issues with slow performance and project structural changes. We wanted to solve both problems to ensure faster project export and import while retaining the same project structure. Therefore, we present a technology preview of a new file exchange format: .szip. This format can be used for project export with or without used projects, adding a project as a new server project, and updating a project from a local project. We encourage our users to try out this format, which allows faster model transfer. Do not hesitate to share your feedback with us!

### Teamwork Cloud Data Markings in MagicDraw

Teamwork Cloud data markings are now shown in **Open Server Project / Manage Project** and **Use Server Project** dialogs in MagicDraw. Additionally, a check is performed to ensure that users are not trying to open or use a project with a higher access level than they are assigned, in which case a notification is displayed.
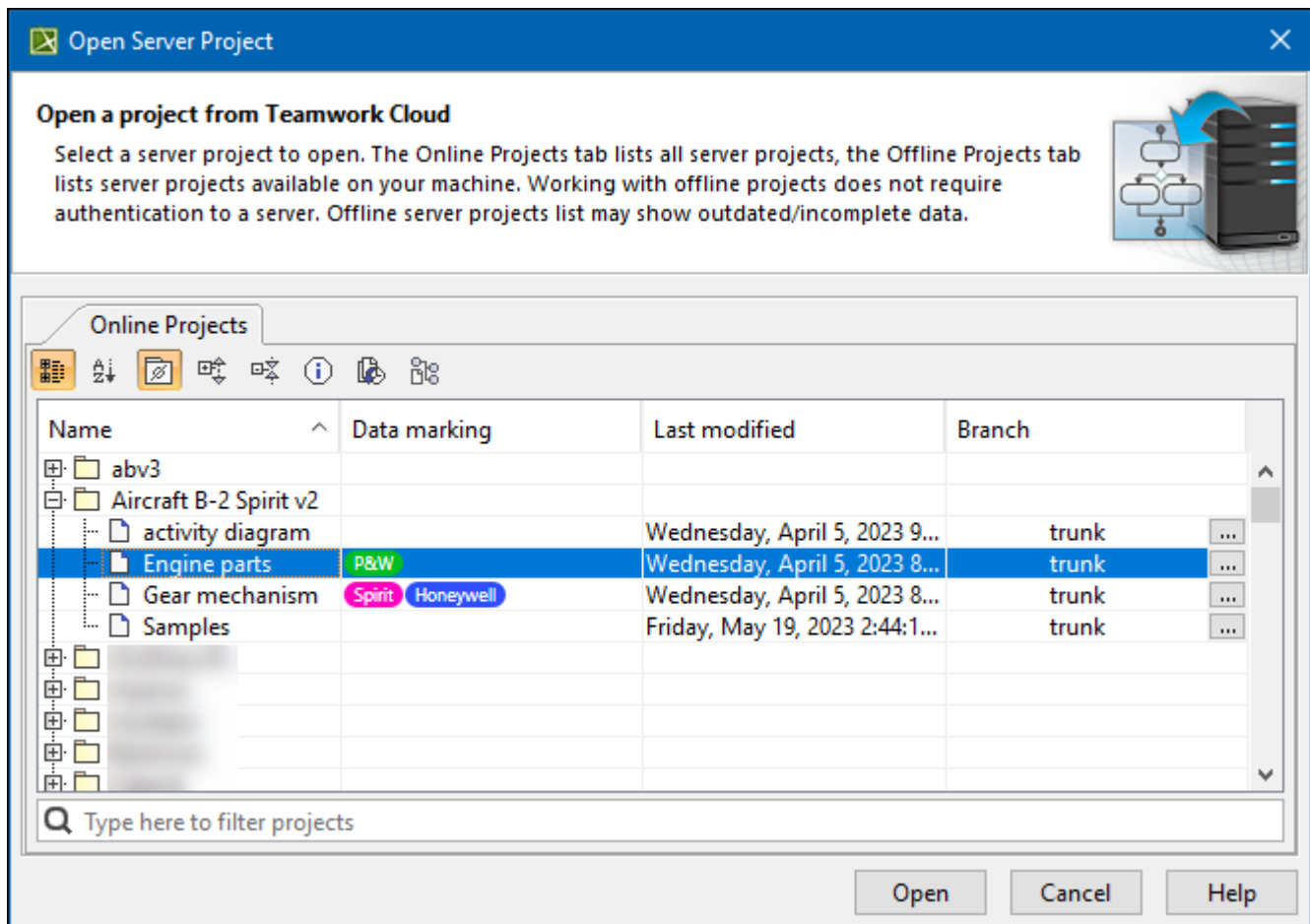
Opening a server project with Teamwork Cloud data markings shown.

Enhanced Set as Latest Functionality

The Set as Latest functionality was updated and now allows users to set a specific version as the latest in another branch. Therefore, it is now possible to quickly set a particular version of the branch to be the latest in the trunk without time-consuming merging processes.
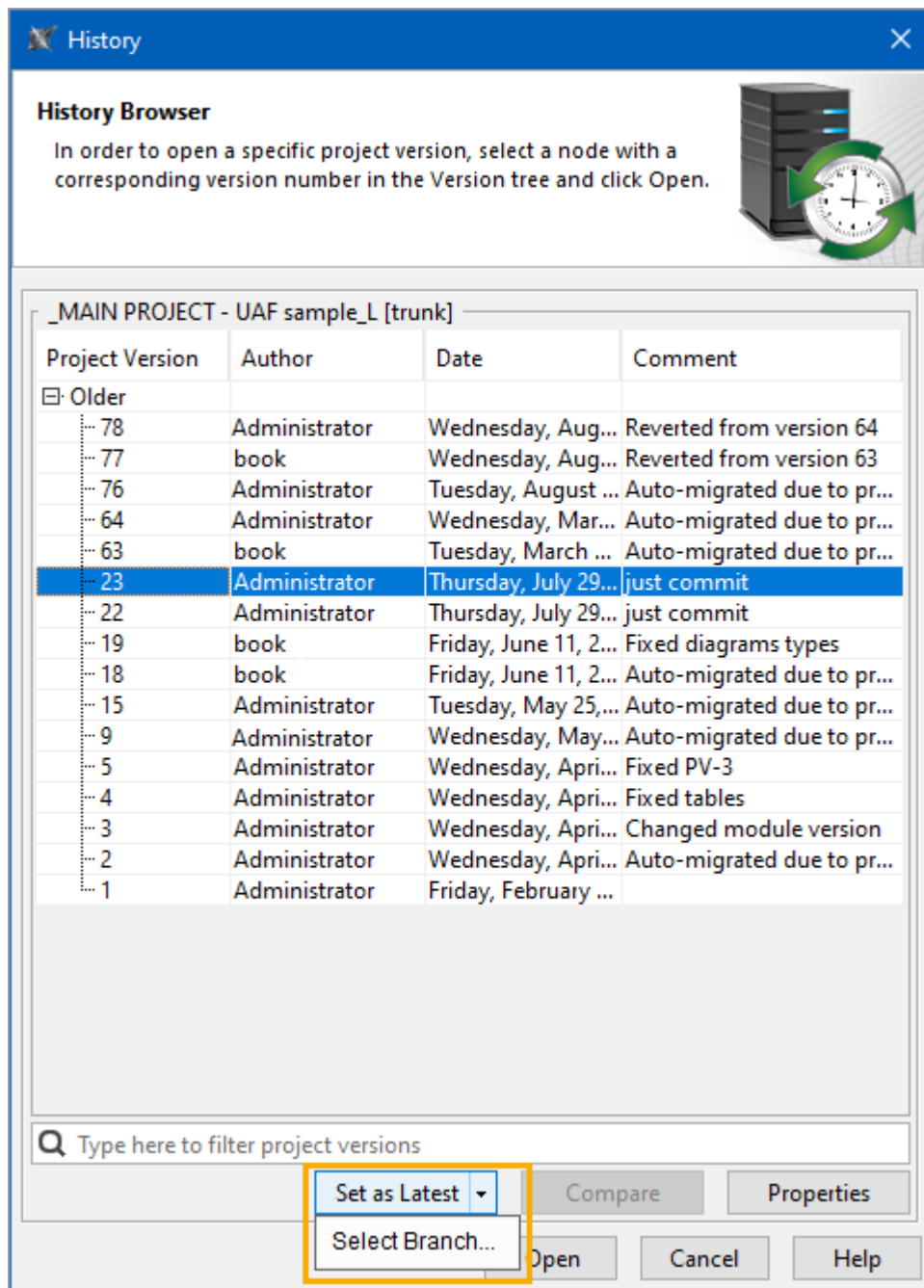
New Select Branch... option of the Set as Latest functionality.

**Pre-merge Check of Project Permissions**

We introduced the ability to check permissions before merging to avoid project merge delays due to delays in the delivery of error messages about insufficient permissions. The Check Permissions button is now available in the Merge Projects dialog, allowing users to see if the merge will be possible.
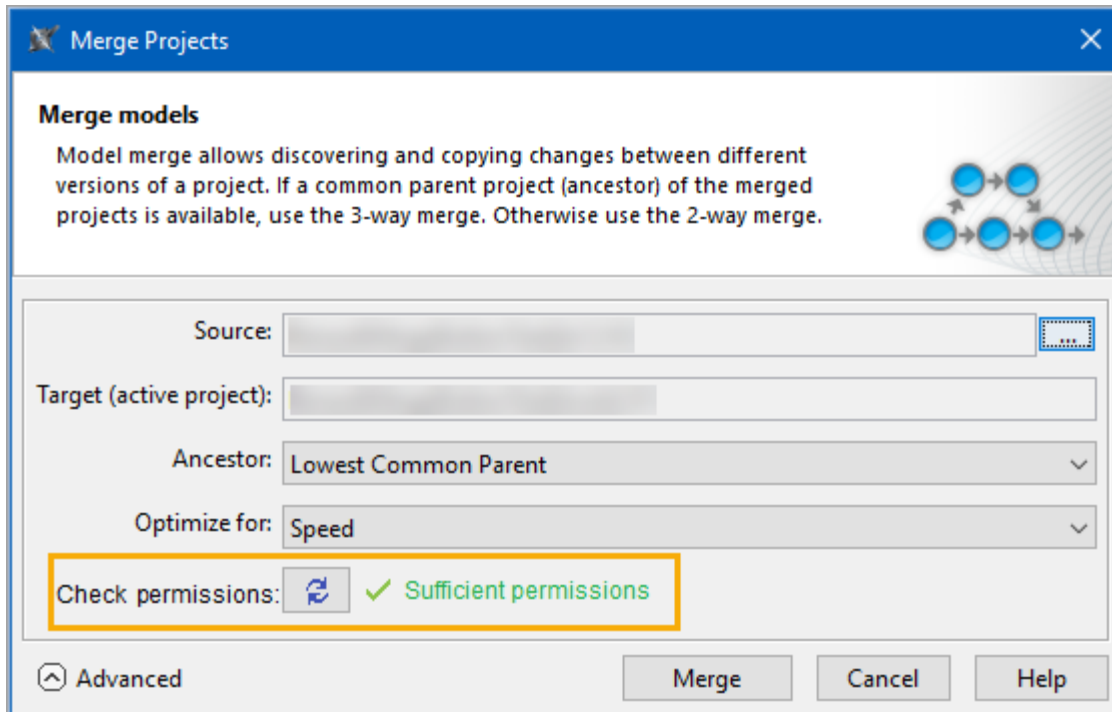
Merge Projects dialog with the new Check permissions button.

Recursive Global Element Usage Search

Previously, it was only possible to search for element usages individually, which is not an optimal solution in many cases. With 2022x Refresh2, we are introducing the **Used By in Server Recursively** option for the **Search in Server** action. **Used By in Server Recursively** works similarly to **Used by in Server**, except it searches for usages of the selected element and all its child elements.
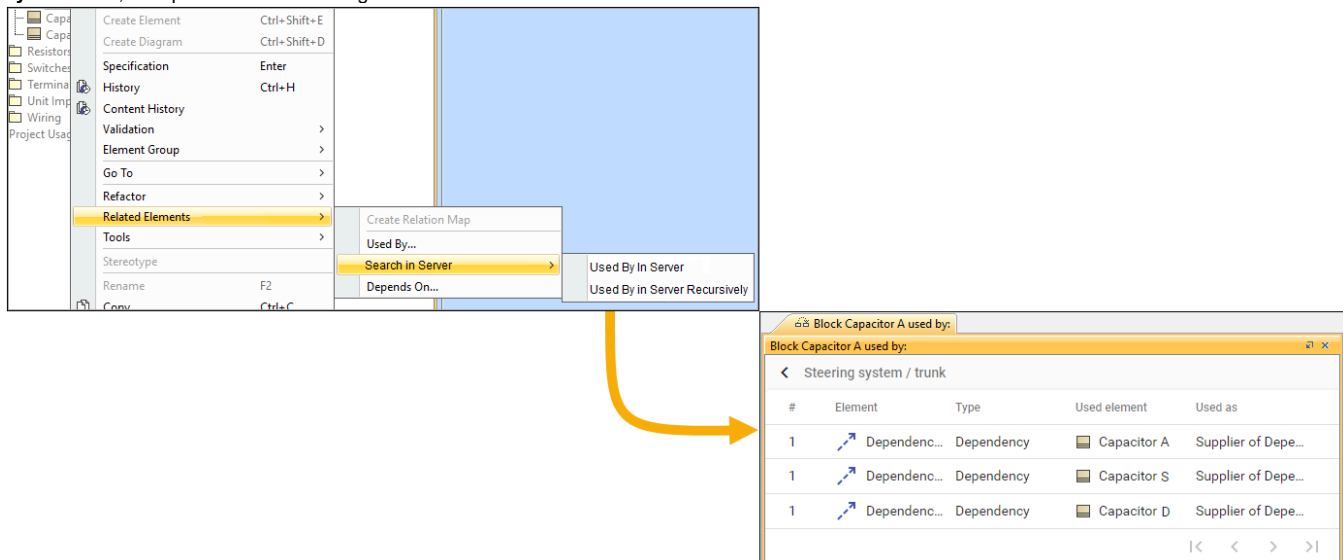
Used By in Server Recursively action.

Other fixes/improvements

- Relations (including connectors) are now represented in more detail in the conflicting changes tree of the **Conflicting Changes** panel.
- **Remove, keep References** operation has been improved to work faster.

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Standard Profiles Migration

To successfully migrate from 2022x Refresh1 to 2022x Refresh2, Power'By users need to upgrade their standard profiles. To help them accomplish this, we have provided a dedicated filter that allows users to select standard profiles and migrate them in bulk.
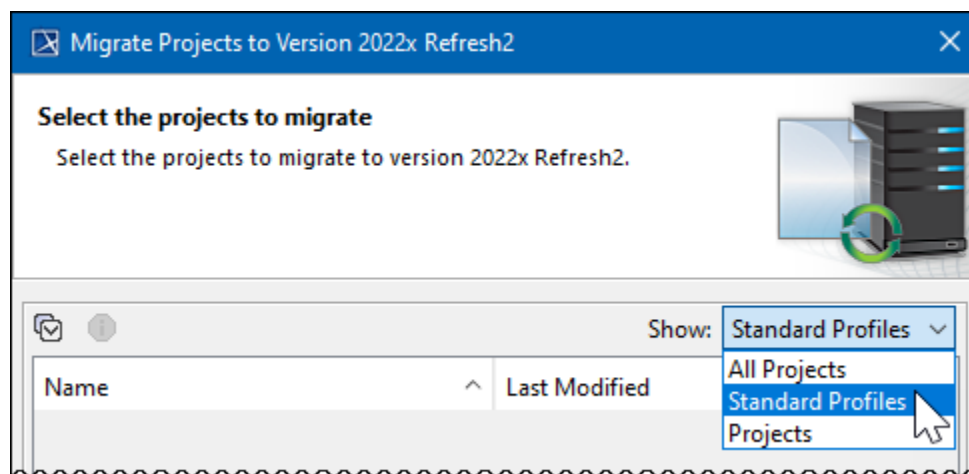
Selecting Standard Profiles in project migration dialog.

Cutting References If a Used Project Is Not Found

If users try to open a main project and its used project or projects are not found, it is possible to remove the used project or projects and cut all references. This way, users can still work on the main project.

Upcoming Updates

Important updates coming with the next major version release:

- **OpenJDK version change.** Desktop applications (MagicDraw, Cameo Systems Modeler, Cameo Enterprise Architecture, Magic Software Architect, Magic Cyber Systems Engineer, Magic Systems of Systems Architect) and Teamwork Cloud will only run using OpenJDK 17.0.7+7 version.
- **JavaScript Nashorn scripting removal.** The JavaScript *Nashorn* language usage is deprecated with the intention of removing it from the next major version. Please use JavaScript *Rhino* instead. Learn more about the deprecated JavaScript Nashorn >>
- **Record Macro functionality discontinuation.** The Record Macro functionality will be discontinued in the next major version release.

Version news of servers and plugins

- Teamwork Cloud 2022x Refresh2
- SysML Plugin 2022x Refresh2
- Cameo Simulation Toolkit 2022x Refresh2
- UAF 1.2 Plugin 2022x Refresh2
- Cameo DataHub 2022x Refresh2

MagicDraw Documentation

- MagicDraw 2022x Refresh2

News of earlier versions

- MagicDraw 2022x Refresh1
- MagicDraw 2022x
- MagicDraw 2021x Refresh2
- MagicDraw 2021x Refresh1
- MagicDraw 2021x
- Product News Archive