2022x Version News

Released on: July 1, 2022

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

The 2022x release launches the Data Markings and Classification Plugin for working with classified or sensitive data. This plugin allows system and software engineers, enterprise architects, and others to mark model elements to indicate different levels of classification or sensitivity.

For general modeling, this release presents diagram banner creation, improvements to Structured Expressions, extended filtering by Legend items functionality, an easier and safer way to manage secure connections, pre-bundled plugins, Product Line Engineering Plugin, and Project Merge Plugin improvements.

Beginning with this version, Reader is introduced as a modeling tool mode.

Additionally, collaborative modeling has been further enhanced with production-ready Global Element Usage Search functionality, allowing you to effectively analyze element modification impact in decomposed, highly interlinked models.

To download the latest MagicDraw version, see Downloading installation files. Don't forget to give us your feedback on LinkedIn. For further information, check the product documentation.

Data Markings and Classification Plugin

Client-side Performance Improvements

- Refactoring Elements
- Element Auto-Numbering
- Dependency Matrices
- Limits of Diagram Export as Image

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- Element History and Content History Performance Improvements

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- Using Structured Expressions in a More Intuitive Way
- Pre-bundled Plugins
- Hide Results of Legend Items
- Easier and Safer Way to Manage Secure Connections
- Other Improvements

Discontinued Products

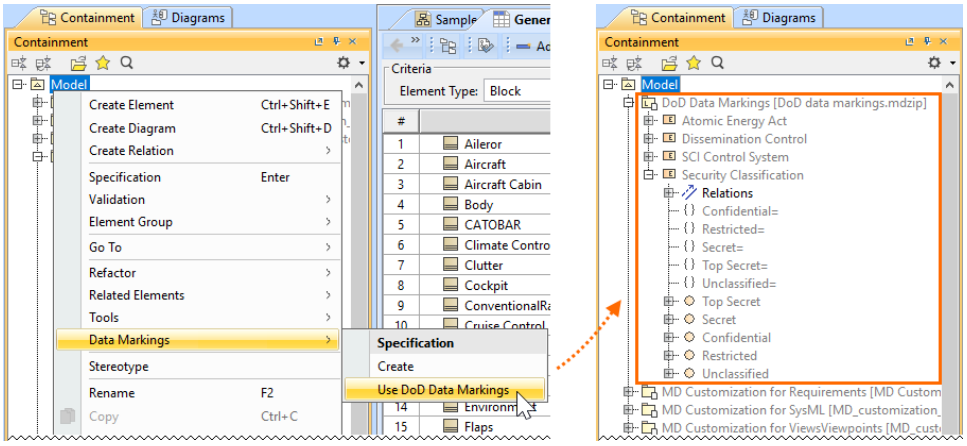
Reader Mode

Collaboration

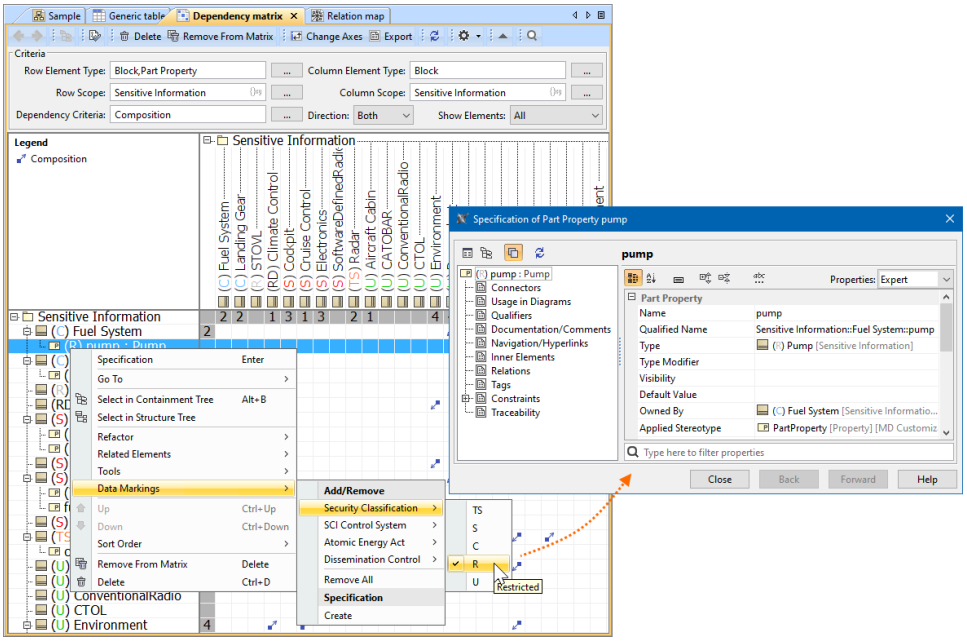
Data Markings and Classification Plugin

The 2022x version introduces a new product: **Data Markings and Classification Plugin**. This plugin is designed for system and software engineers, enterprise architects, business analysts, and others who work with classified or sensitive data. It provides compatibility with the DoD Manual 5200.01 Volume 2 specification. Using the **Data Markings and Classification Plugin**, you can specifically mark your model elements to indicate different levels of c lassification or sensitivity. The plugin allows you to:

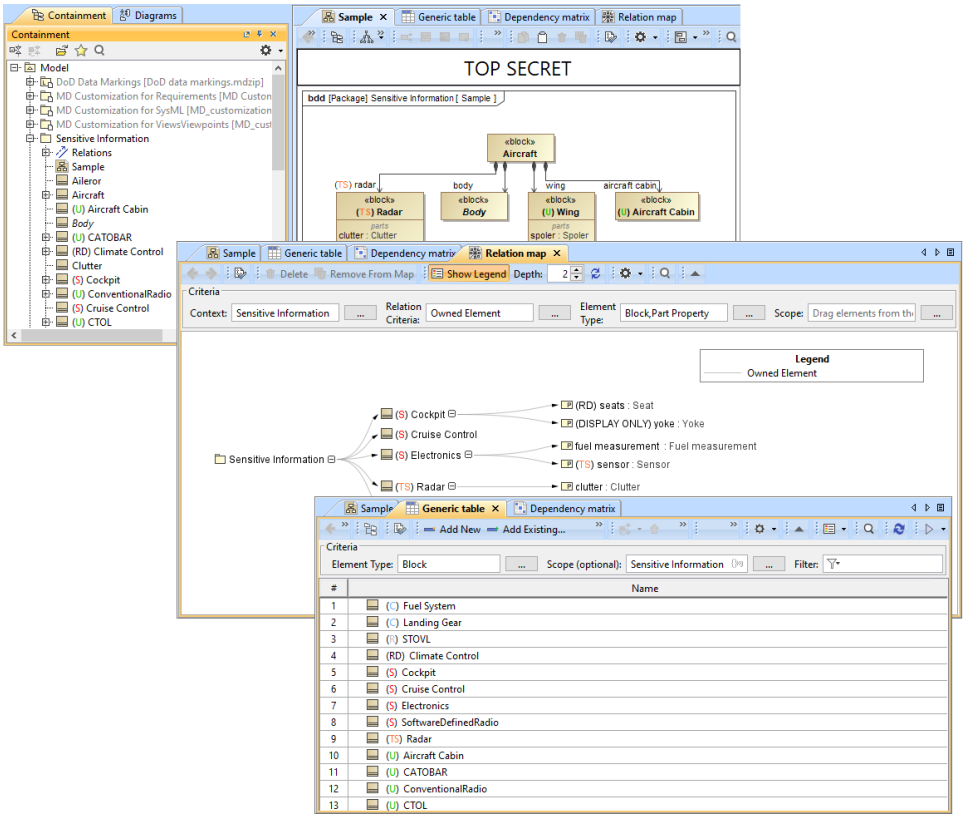
- Use predefined DoD data markings and/or create custom ones.



- Access data markings via diagram (also symbol, table row, etc.) and element shortcut menus, as well as their specification windows.



- Add data markings to various elements (relationships, blocks, packages, ports, operations, properties, comments, etc.) of your project.

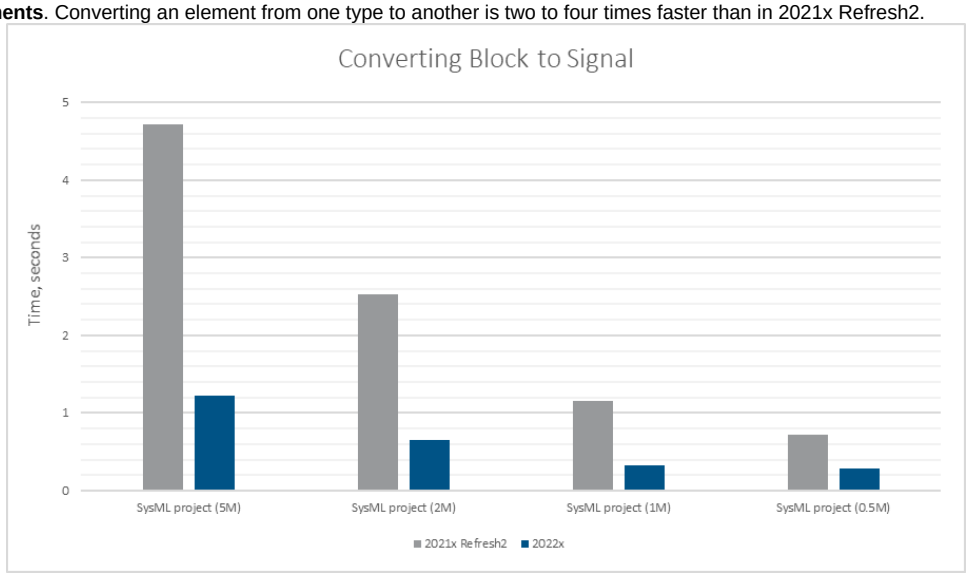


To see it in action, watch the following demo.

Learn more about the Data Markings and Classification Plugin >>

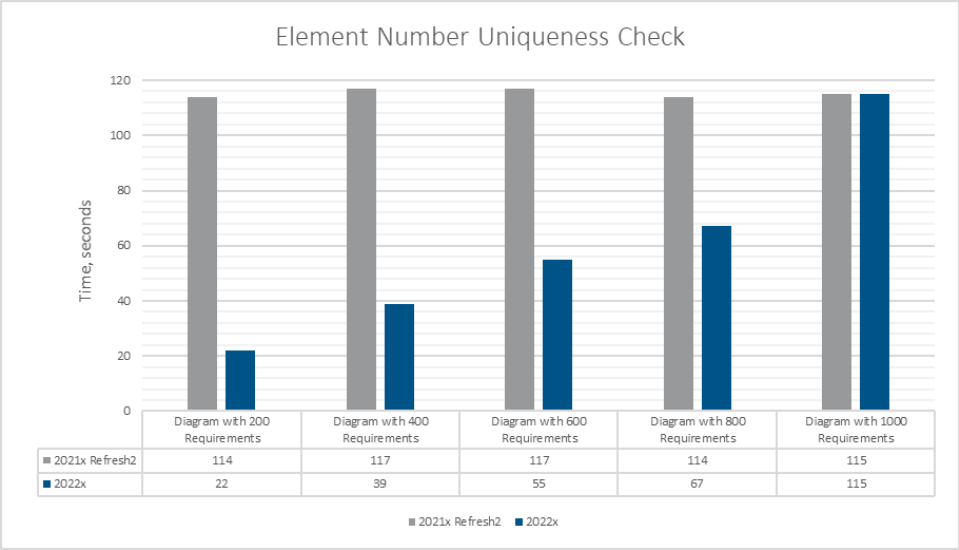
Client-side Performance Improvements

- **Refactoring Elements**. Converting an element from one type to another is two to four times faster than in 2021x Refresh2.



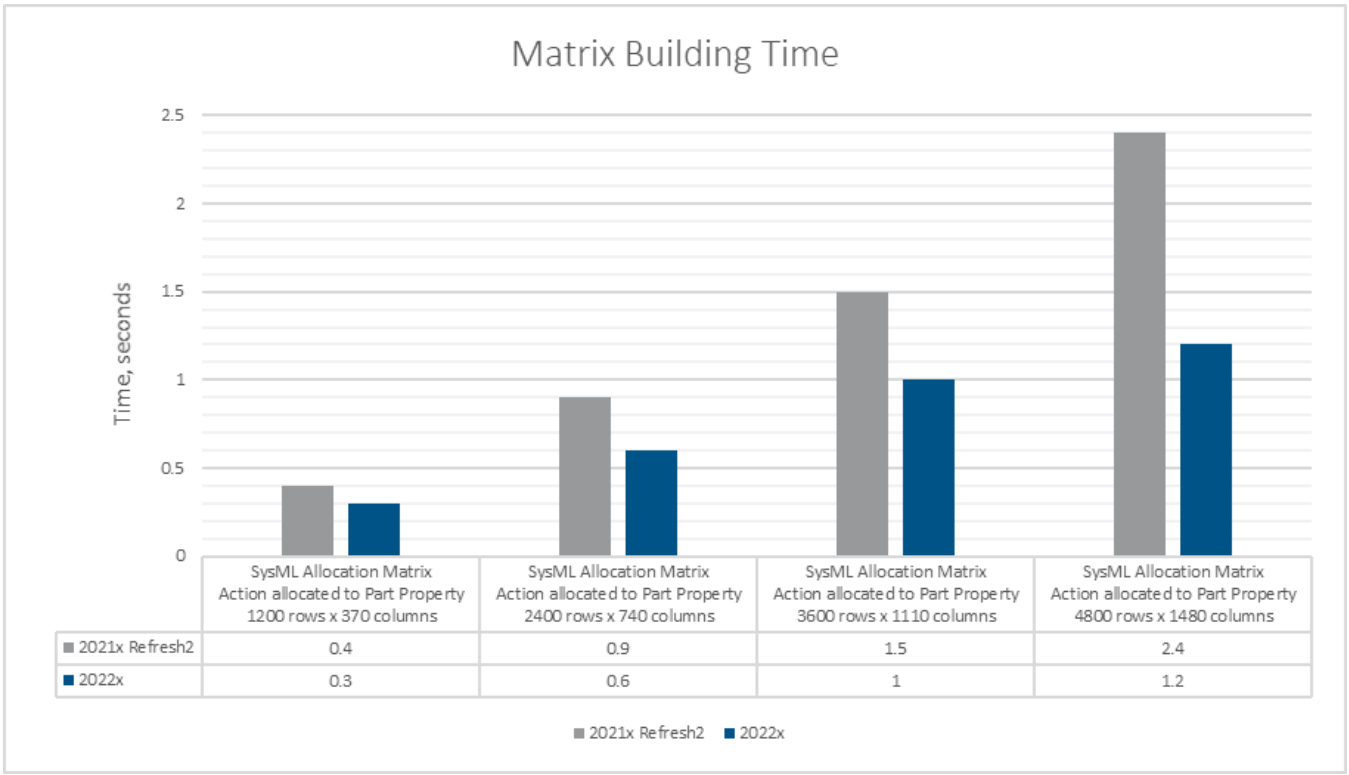
A chart comparing the conversion of the Block to Signal operation in Refresh2 and 2022x.

- **Element Auto-Numbering**. Every time the diagram is opened, the active validation for numbering is triggered to maintain the uniqueness of displayed model elements that are numbered (e.g., requirements). The uniqueness check is now significantly faster when opening diagrams (including tables, matrices, etc.) containing up to 1000 numbered elements.



A chart comparing the time it takes to execute element number uniqueness check in a SysML (0.5M) project with 60k requirements in 2021x Refresh2 and 2022x.

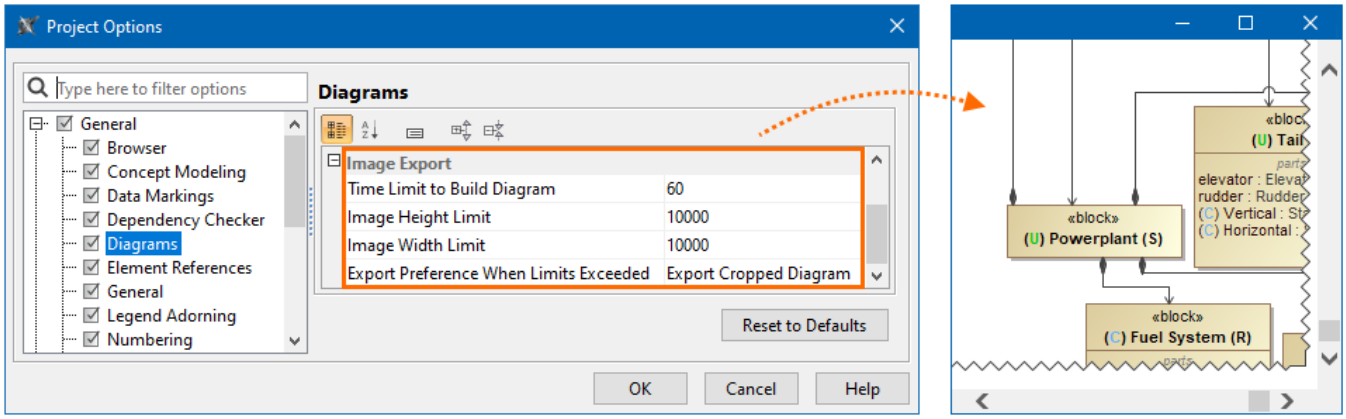
- **Dependency Matrices**. Further performance improvements have been introduced to matrix building; it is up to twice as fast compared to 2021x Refresh2.



A chart comparing the SysML Allocation Matrix building time in 2021x Refresh2 and 2022x projects.

Limits of Diagram Export as Image

You can now specify dimension limits to prevent extremely large diagrams from being exported as images. Additionally, you can set a time limit for table and matrix building to skip image export. This is especially handy when exporting hundreds of diagrams, including large ones, i.e., generating reports and publishing models to Cameo Collaborator is significantly faster and smoother as the diagrams exceeding the limits are exported as cropped.



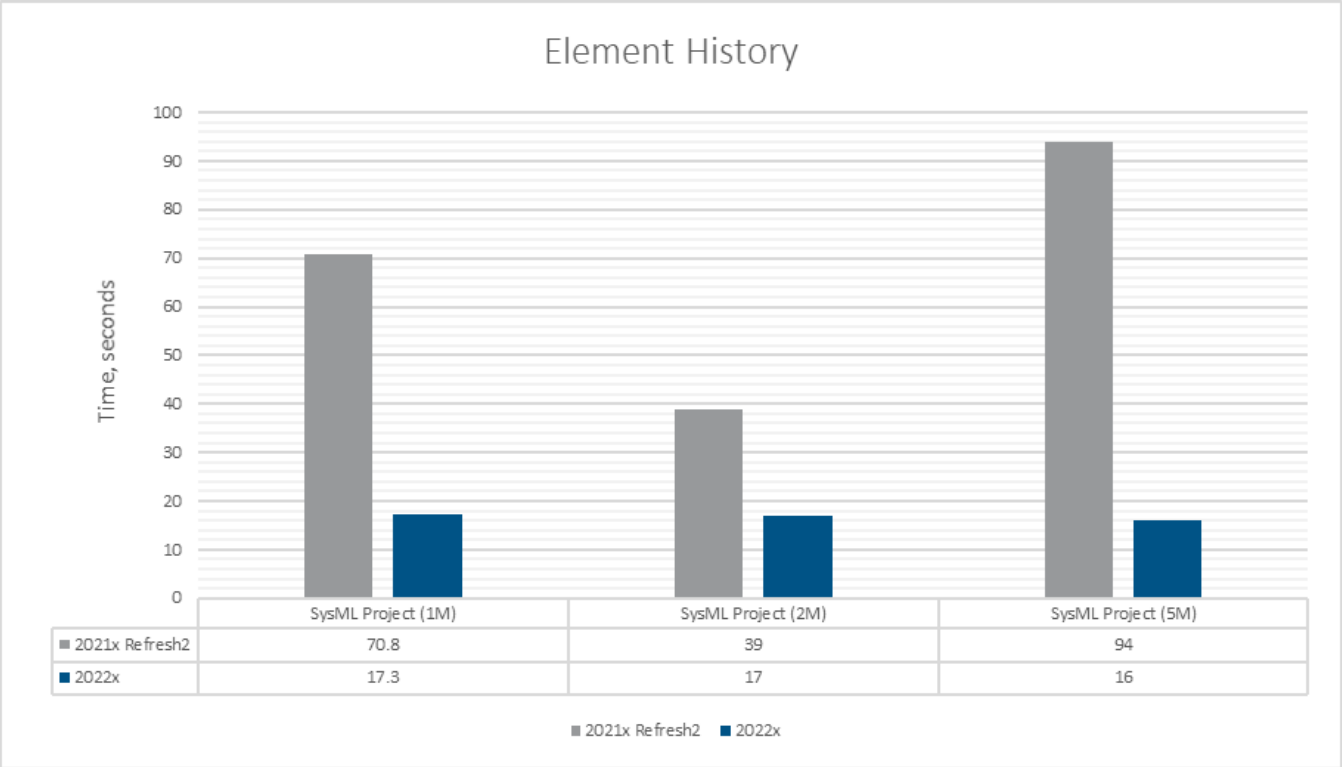
The diagram is cropped upon export based on Image Export options.

Learn more about diagram export options >>

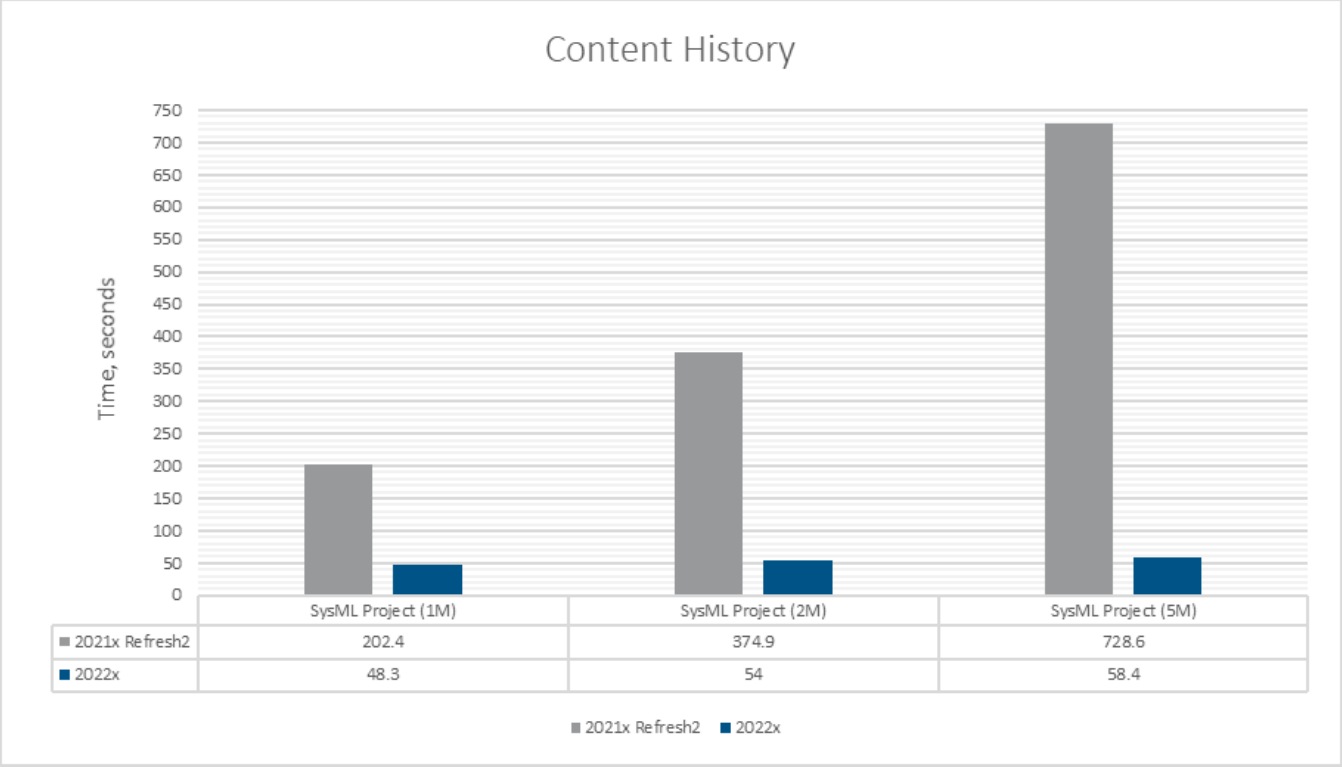
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Teamwork Cloud-related Performance Improvements

- **Element History** and **Content History** performance improvements. In version 2022x, we present major performance improvements of Element History and Content History, two of the most widely used features related to project history. Depending on the size and type of a project, the initial history results should now appear 3 to 10 times faster compared to our latest 2021x Refresh2 release.



A chart representing the improved Element History performance in version 2022x as compared to 2021x Refresh2.



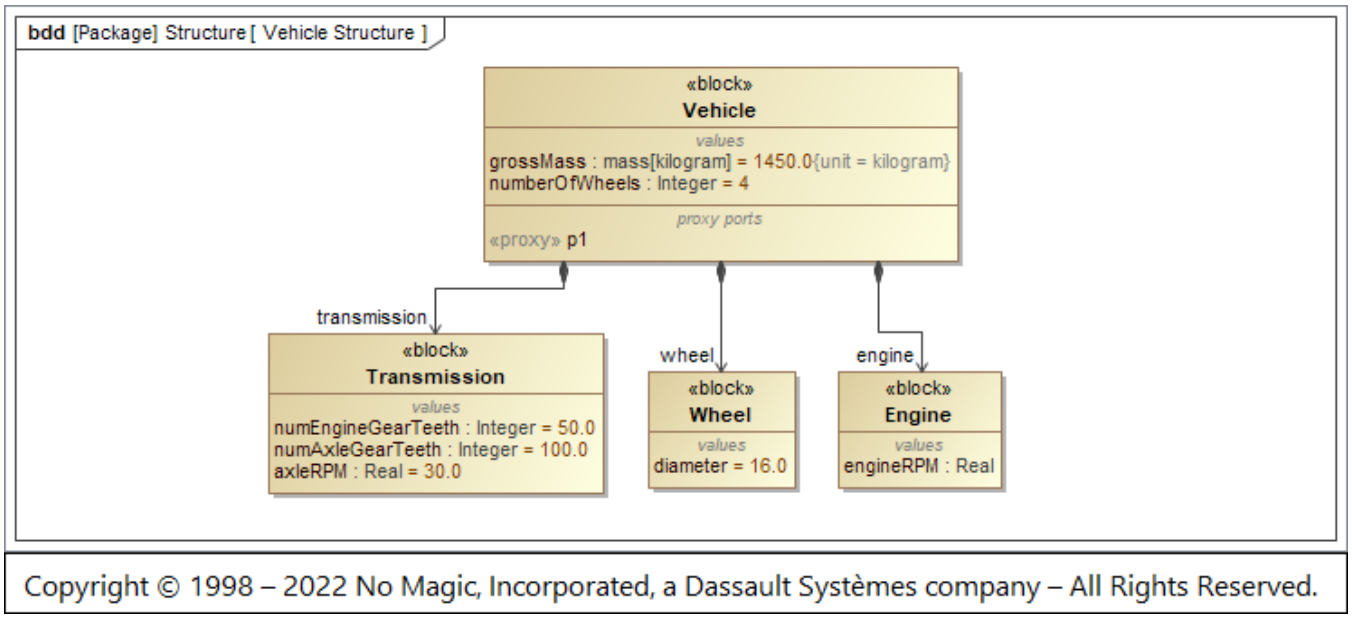
A chart representing the improved Content History performance in version 2022x as compared to 2021x Refresh2.

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Modeling and Infrastructure

Diagram Banners

From now on, you can create diagram banners, such as headers and/or footers, to display important information on the diagram. The diagram banners can be created for all diagram types, such as tables, matrices, or maps. Upon diagram image export, the diagram banners are also included in the exported image.



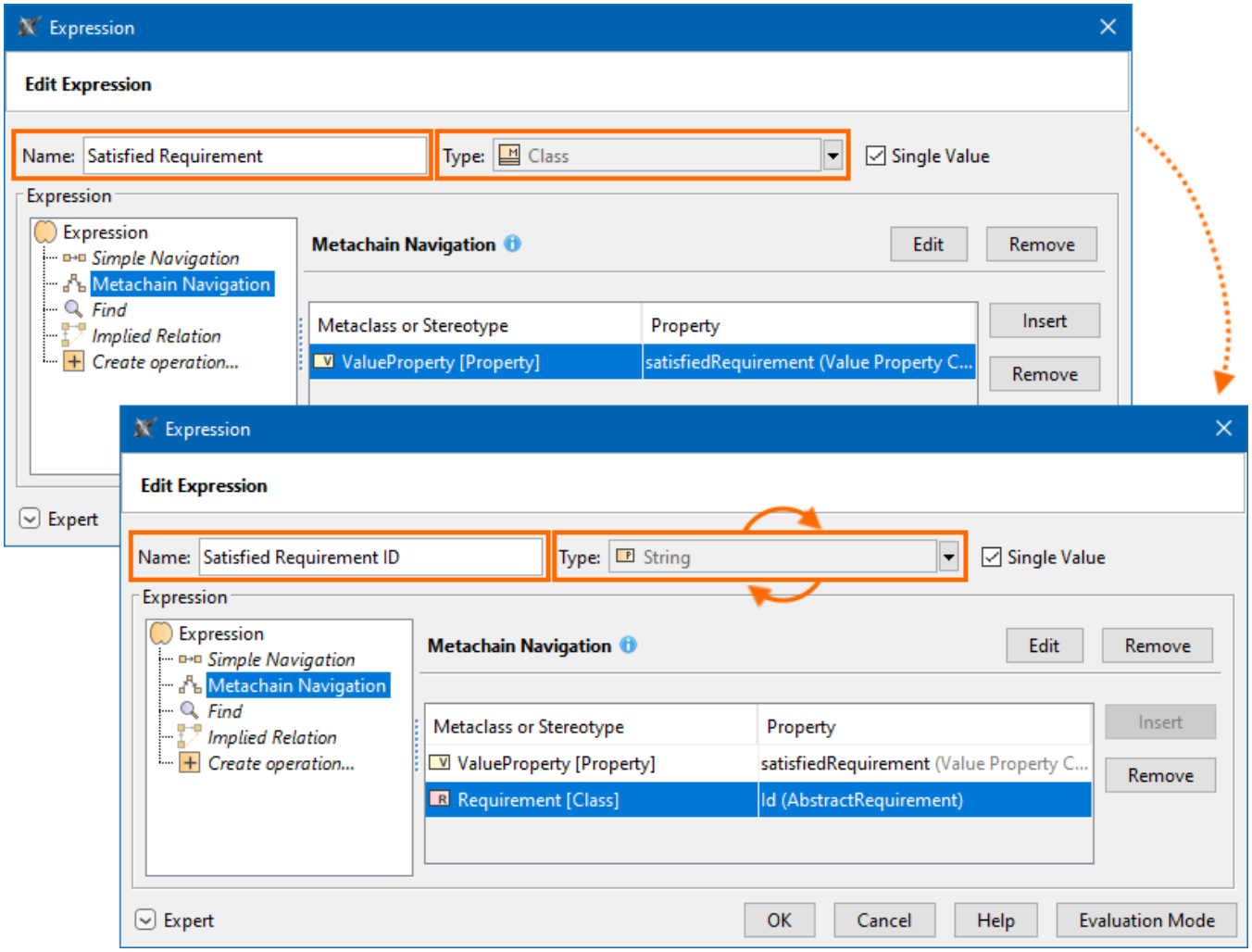
A diagram with a diagram banner displayed at the bottom of the diagram pane.

Learn more about diagram banners >>

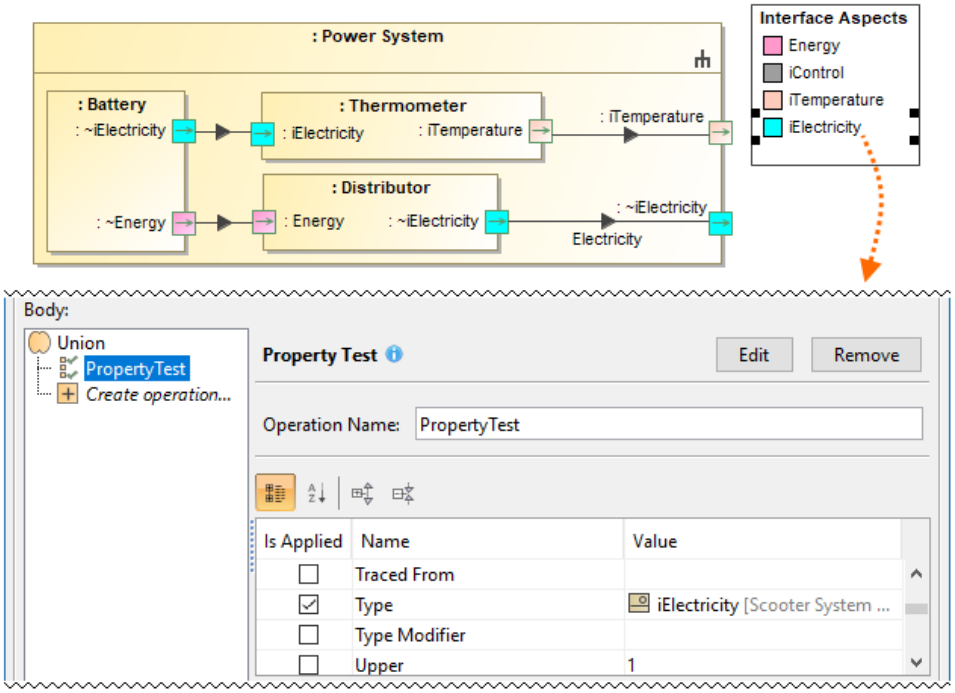
Using Structured Expressions in a More Intuitive Way

Modelers rely on Structured Expressions to perform one of the basic tasks: querying the model. Building Structured Expressions is now easier and more efficient:

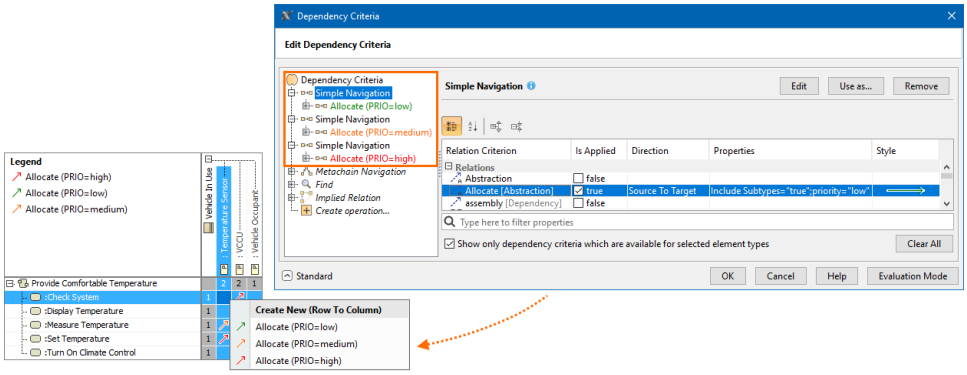
- The smart result type update lets you forget about manually adjusting the type for columns or derived properties:



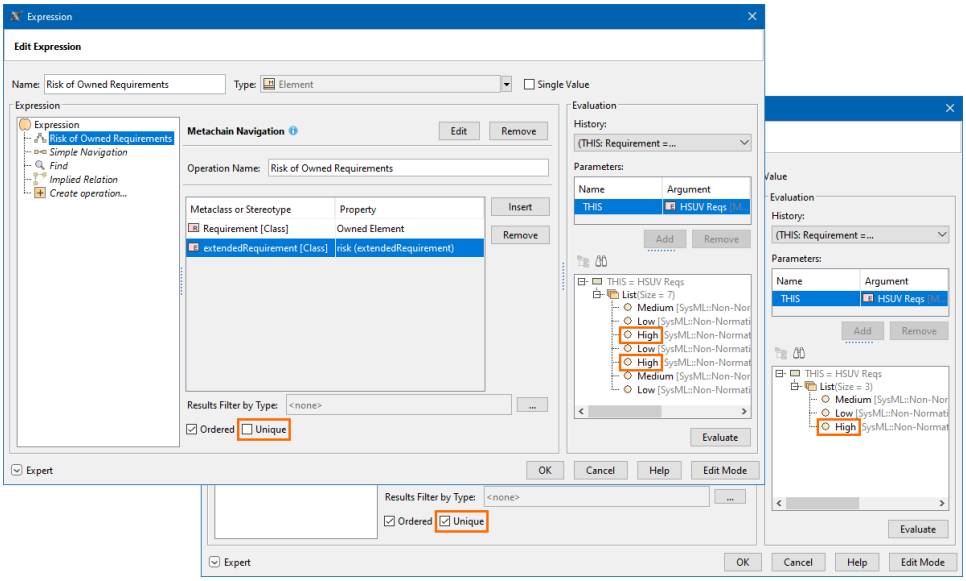
- The Property Test operation now supports more testing properties. In addition to checking properties' primitive values (e.g., string, boolean, integer), you can also test properties whose values are model elements:



- Apply the same type relation criterion with different properties multiple times:



- The Unique check box allows you to control whether value duplicates should be taken into account using Simple and Metachain Navigation operations:

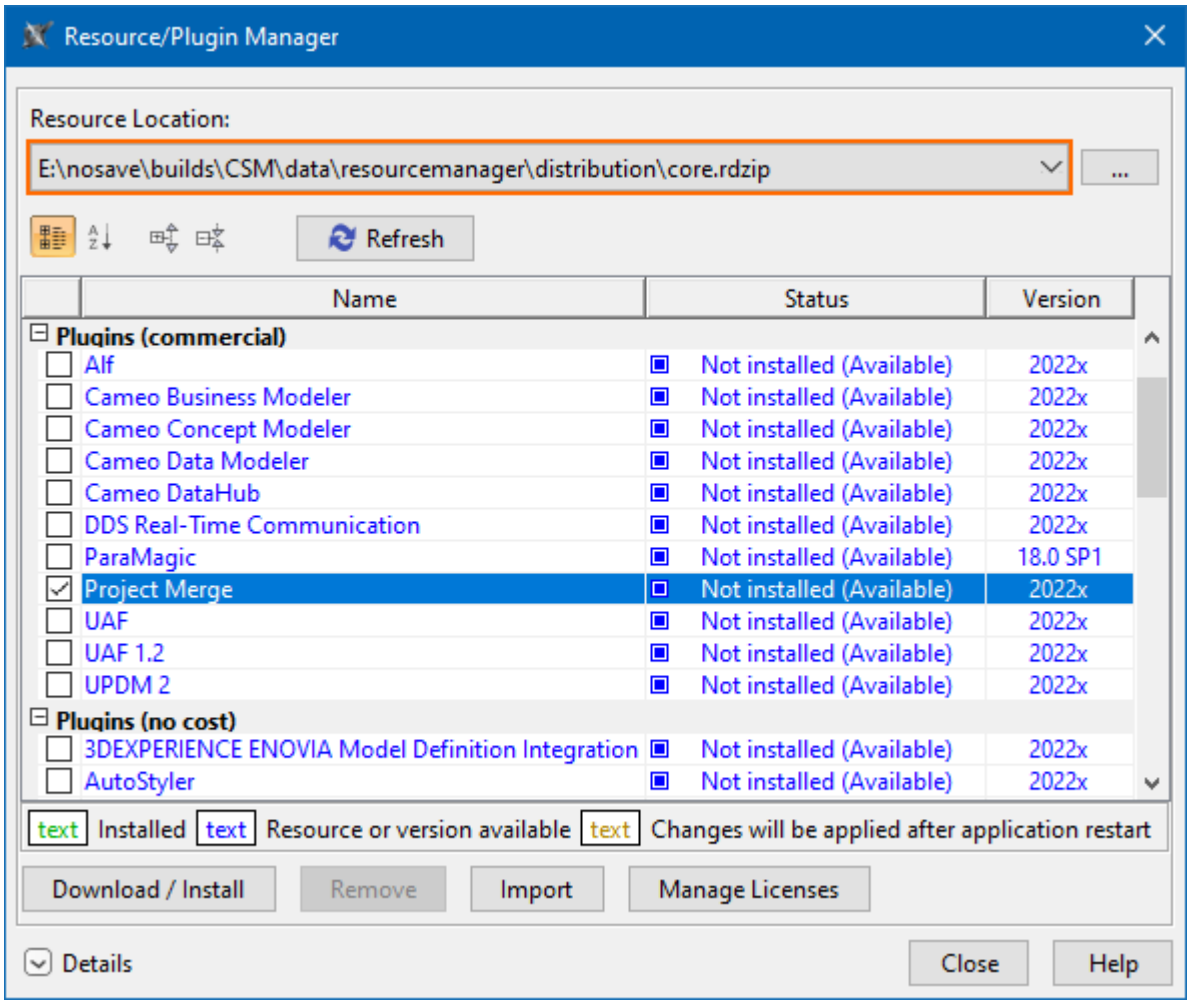


Additionally, there is enriched learning material that includes detailed steps for completing the most common model querying tasks. Learn more on the Case Studies for Querying the Model page >>

Learn more about Structured Expressions >>

Pre-bundled Plugins

Installing plugins has now become easier. All available plugins, both commercial and no-cost, are now pre-bundled together with the installation files and automatically added to the **Resource/Plugin Manager**.

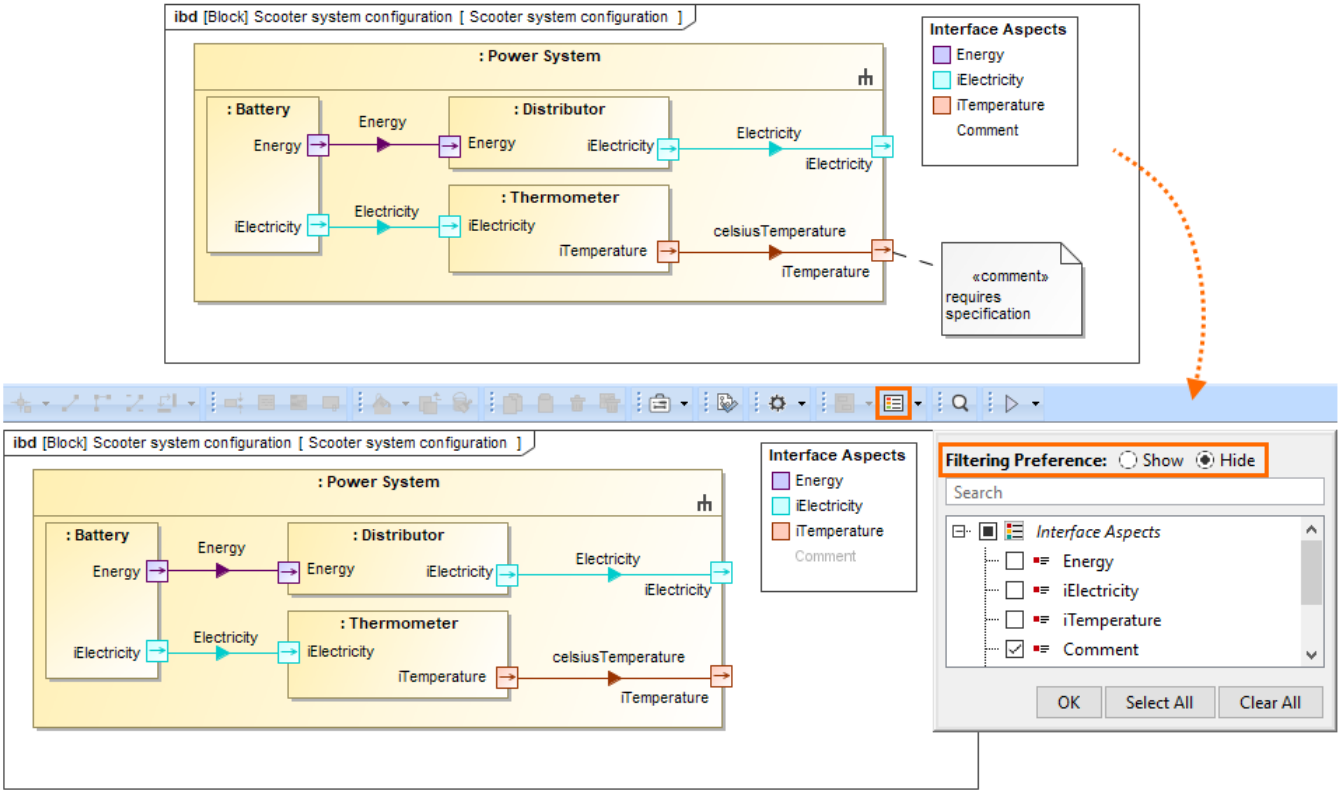


All available plugins are accessible via the pre-bundled *core.rdzip* file in the Resource/Plugin Manager.

Learn more about plugin installation for No Magic portfolio products >>

Hide Results of Legend Items

You can now select the filtering preference (show or hide) to either display or hide the results of a Legend item.



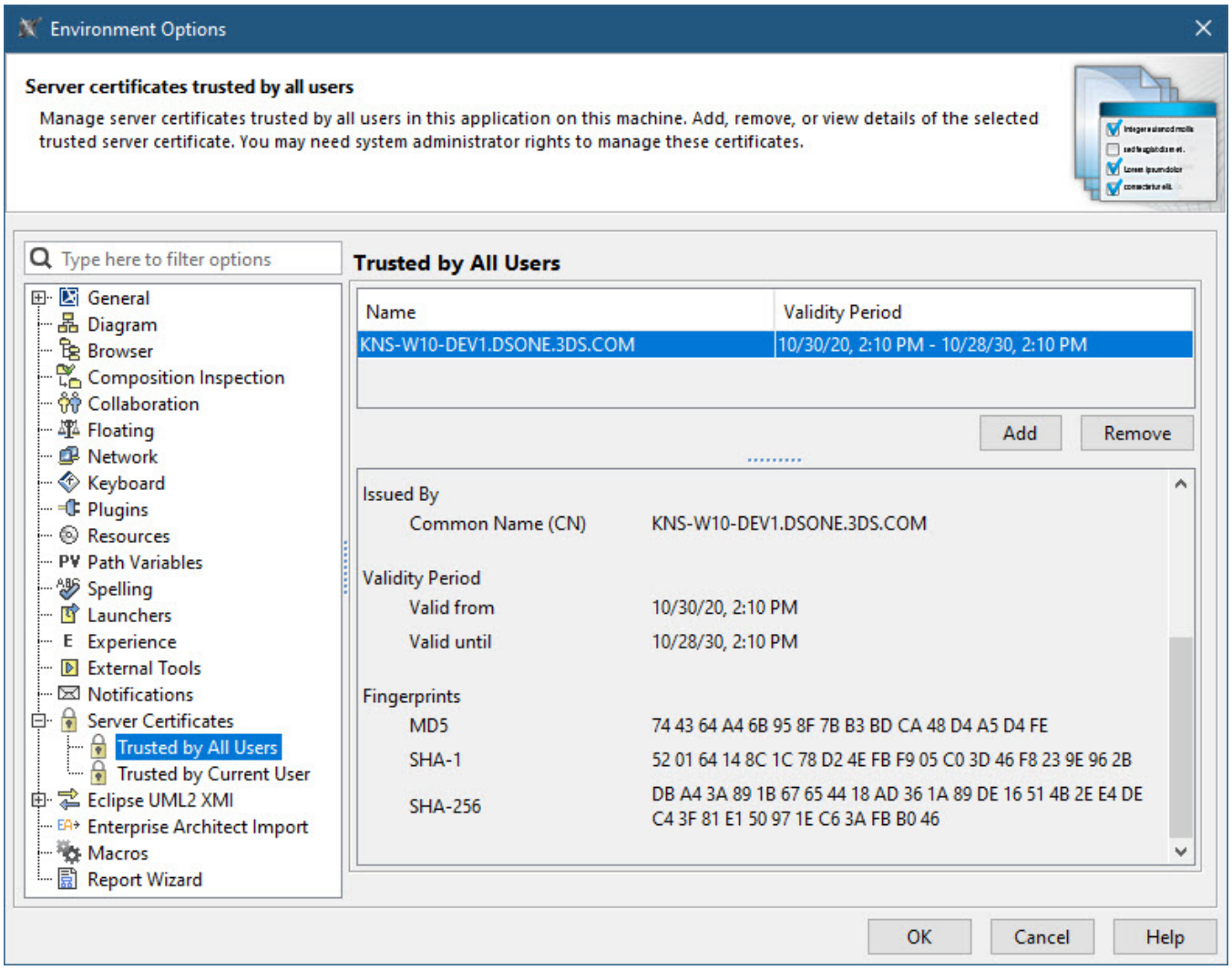
Filtering a diagram by the selected Legend item *Comment* with the filtering preference set to *Hide*.

Learn more about filtering by Legend items >>

Easier and Safer Way to Manage Secure Connections

With the release of version 2022x, we have consolidated server certificate management for all secure network connections made on the client-side. Now a new Server Certificates Management tool handles all secure connections supported by the client. In addition to automatically adding existing certificates from the operating system, the tool allows you to add or remove certificates without running complex commands via the command-line interface. You can simply use the Environment Options dialog in your modeling tool to:

- See the list of all currently added certificates and their details.
- Add new certificates or certificate storage trusted by the current user or by all users.
- Manage all added certificates.



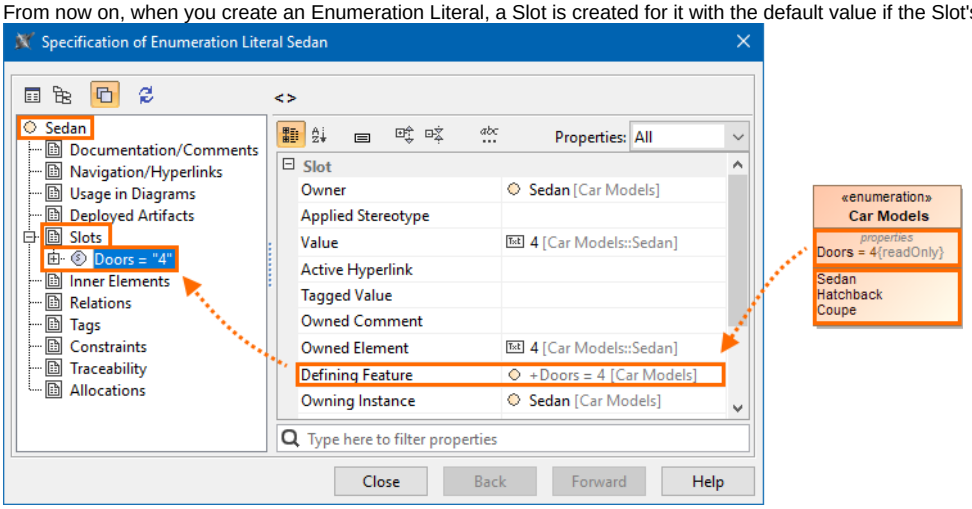
Managing secure connections.

Learn more about the Server Certificates tool »

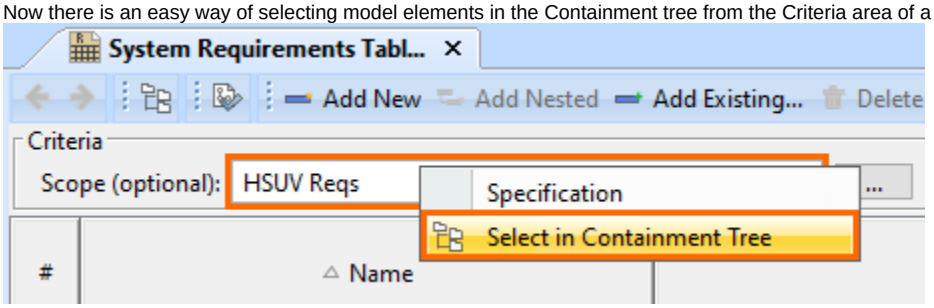
Other Improvements

- The **Product Line Engineering Plugin** is now split into two plugins: the **Variability Core Plugin**, which provides technical mechanisms and functions for various PLE and Data Marking activities, and the **Product Line Engineering Plugin**, which provides Model-Based Product Line Engineering method support for the user.
- The **Project Merge Plugin** is no longer pre-installed, so you will not be receiving license expiration notifications if the plugin is not used. In addition, you no longer need the **Project Merge Plugin** to execute project comparison, element and content history review, as this functionality is now part of the built-in **Merge Core Plugin**. The **Project Merge Plugin** is now only required for project merging functionality.
- A new UML **Invalid Redefinition** validation rule has been introduced to the UML correctness constraints validation suite. It checks whether a property redefines the inherited property of the owner classifier. Learn more about UML validation rules >>
- You now have the option to use a custom encryption algorithm instead of the default one with the **Model Obfuscation Plugin**. Learn more about Model Obfuscation >>
- Now you can choose whether or not to display the Presentation Mode icon in the status bar.

- From now on, when you create an Enumeration Literal, a Slot is created for it with the default value if the Slot's Defining Feature has one.



- Now there is an easy way of selecting model elements in the Containment tree from the Criteria area of a Table, Matrix, and Map.



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Discontinued Products

Beginning with the 2022x version, support of the following products is discontinued:

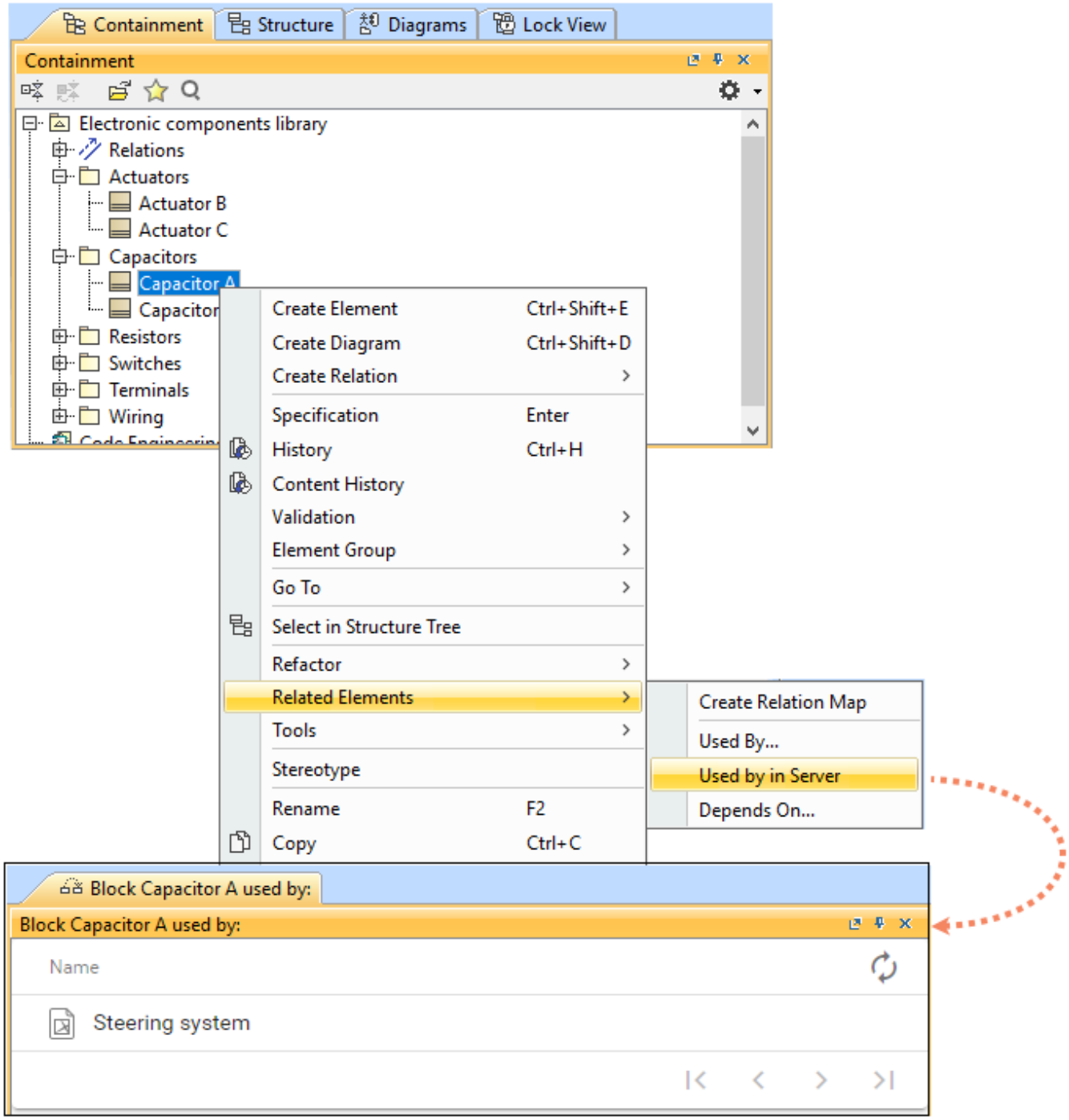
- **CSV Import Plugin**. Excel/CSV Sync or Excel/CSV Import features will be replacing the CSV Import Plugin.
- **MagicDraw Professional Java Edition Floating License** and **MagicDraw Professional Java Edition Seat License.** Java Code Engineering will be available in the modeling tool Enterprise editions. For customers with active software assurance (ALC), the upgrade to the Enterprise edition will come at no cost.
- **JRuby scripting language**. Any previously used scripts written in JRuby need to be rewritten in a different built-in scripting language. Otherwise, you can manually add JRuby to the modeling tool to continue using the existing JRuby scripts.

Starting with this version, **Reader** is introduced as the modeling tool mode. Learn more about how to activate the Reader Mode >>

Collaboration

Global Element Usage Search

The 2022x version includes the release of production-ready **Global Element Usage Search** functionality. It allows you to search for usages of an element that you want to modify or delete. Depending on the server-side configuration, projects that use the element in question can be returned either from the entire Teamwork Cloud repository or the selected custom indexed scope. This minimizes the probability of unexpected Recovered Elements appearing whe n updating the Used Project versions.



Searching for element usages within the Teamwork Cloud repository.

Learn more about the Global Element Usage Search feature >>

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- SysML Plugin 2022x
- Cameo Simulation Toolkit 2022x
- UAF 1.2 Plugin 2022x
- Cameo DataHub 2022x

MagicDraw Documentation

- MagicDraw 2022x

News of earlier versions

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