

# What's New in MagicDraw 18.5 FR



## News of earlier versions

- [MagicDraw 18.4 FR](#)
- [MagicDraw 18.3 FR](#)
- [Product News Archive](#)

Released on: February 20, 2017

No Magic extends its Model-Based Systems Engineering toolkit to increase modeling efficiency even further. In this release, several key innovative capabilities most frequently requested by our customers have been added. Included are dynamic legends to quickly visualize your diagrams and a new port layout reusability mechanism. Different structural views of a system (e.g., electrical, mechanical, optical), as well as Excel-like tables have been created. Enhanced Teamwork Cloud integration now makes collaborative modeling smoother, and more easily shared in your teams. These are just a few of the new features that make us confident that version 18.5 will enrich your MagicDraw experience, making you even more productive. Download it today at [nomagic.com](http://nomagic.com), or contact your sales representative, and don't forget to give us your feedback on [Twitter](#) or [Facebook](#). Also, please check the latest [documentation](#) and additional [resources](#).

### Model Visualization

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### Modeling Enhancements

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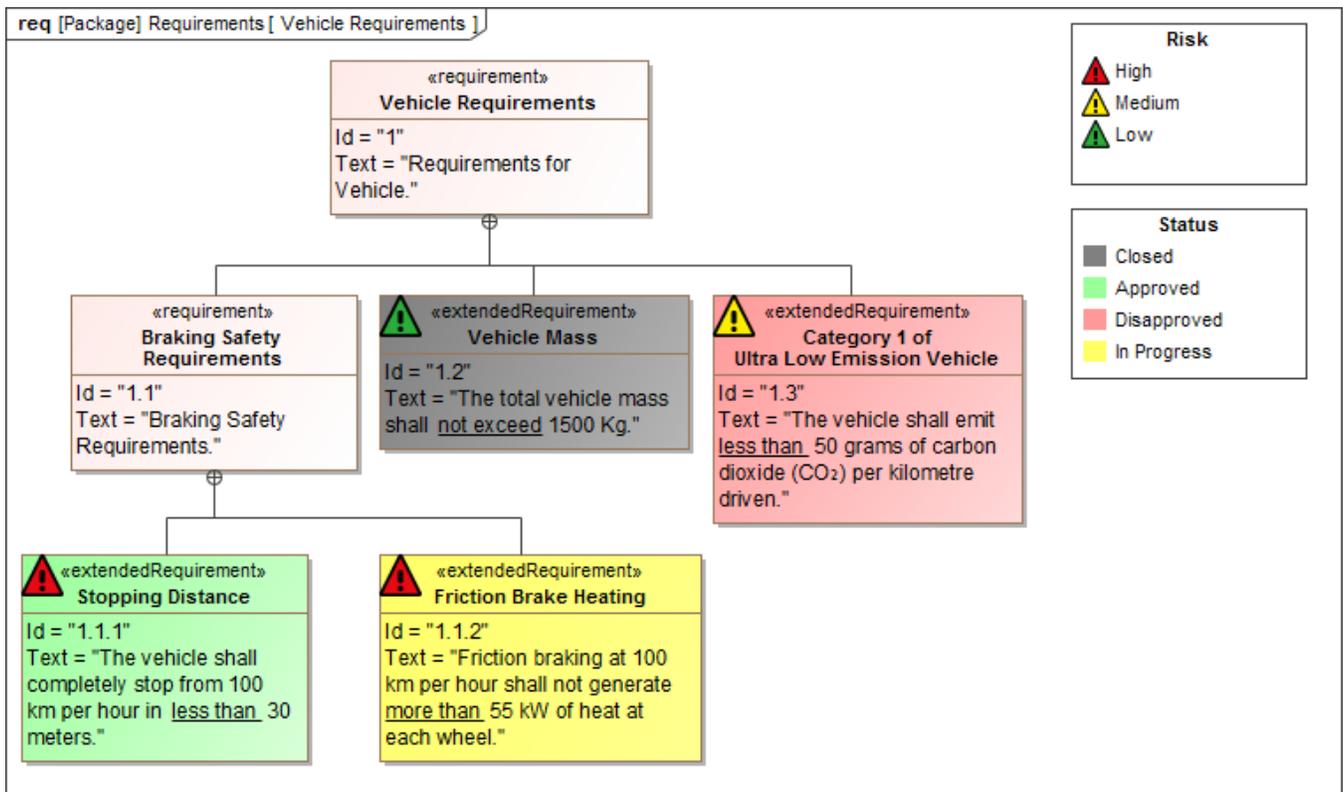
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## Dynamic Legends

In this version of MagicDraw, legends provide a way for the user to specify the condition, e.g., Risk Level=High, for a legend item, and visualize model elements in diagrams when conditions are met. Your work becomes considerably easier as the visualization of all elements that meet the specified condition is now automatically changed.

You can add visual effects such as icons, symbol transparency, or symbol background color.

The example below demonstrates how the style of legend items can be applied to element symbols. In the displayed diagram, the icons added to the legend items of the Risk legend show the level of risk, whereas the fill colors in the Status legend identify the status of displayed requirements. [Learn more about using legends >>](#)



Usage of dynamic legends in a Requirement Diagram.

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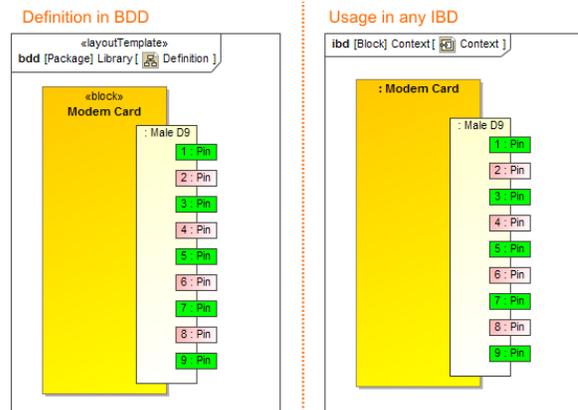
## Layout Templates

MagicDraw is now upgraded with a special Port layout reusability mechanism that:

- Saves time when trying to ensure good-looking diagrams.
- Increases the readability of Composite Structure diagrams.

This new functionality enables you to keep the same appearance of Parts, including their Ports positions, each time when representing them in different diagrams, as depicted in the example. The appearance is defined in templates that can represent different aspects of your designs, e.g., electrical, optical, mechanical.

[Learn more about layout templates >>](#)



Usage of a layout template. The illustration displays concepts from SysML Plugin.

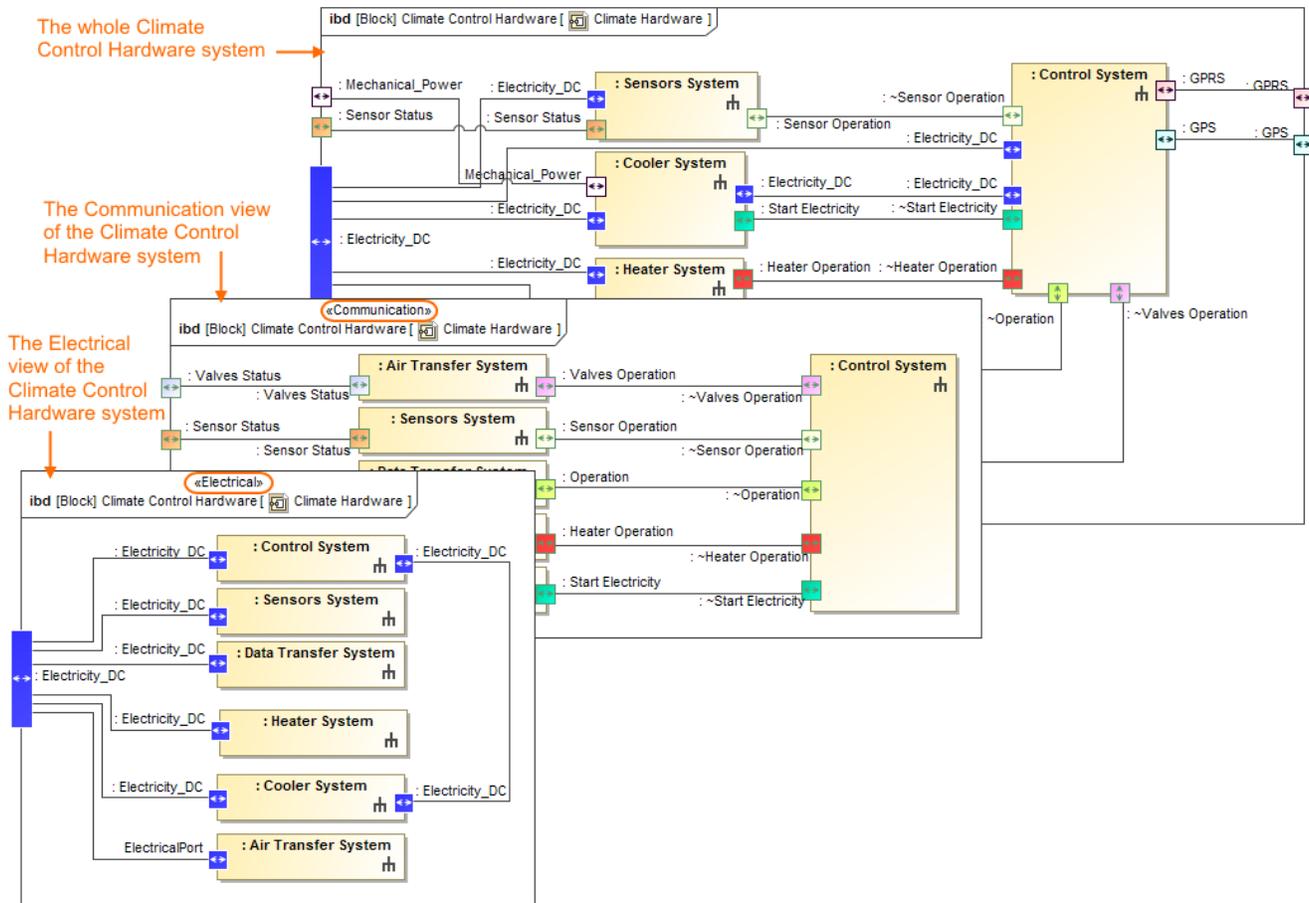
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## Diagram Aspects

Diagram aspects allows you to quickly create the different structural views, e.g., electrical, mechanical, optical, for the system structure. Using diagram aspects provides the following benefits:

- Simplified drill-down navigation through diagrams.
- Accelerated development of a particular view diagram.
- Multiple layout templates definition and usage.

The figure below demonstrates three SysML Internal Block Diagrams of the same *Climate Control Hardware* system. Two of them are of different aspects: electrical and communication. The IBD with electrical aspect shows only the electrical structure of *Climate Control Hardware* system. Correspondingly, the IBD with communication aspect shows only the communication structure. [Learn more about diagram aspects >>](#)



The Climate Control Hardware through electrical and communication aspects. The illustration displays concepts from SysML Plugin.

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## New Features for Collaboration

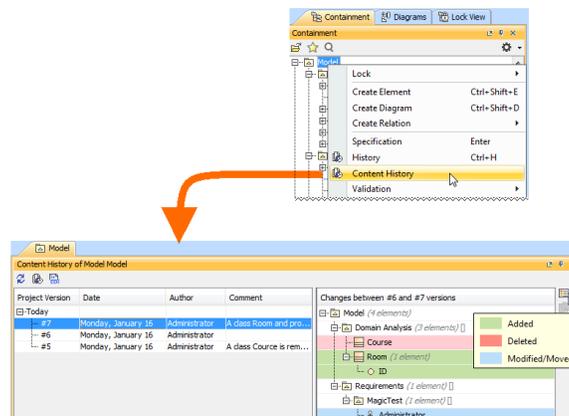
Teamwork Cloud has a new functionality related to the management of changes in server projects. This new functionality allows you to review the changes in a model in different views, such as by the scope of a package, an author, or the users working on a specific scope or package. The differences in a model and upcoming changes from the server can now be reviewed and compared. A new feature for creating a server project from a predefined template is also now available.

Teamwork Cloud has significant performance improvements for large teams - the new multi-node clustering support that allows you to connect multiple TWCloud servers. [Learn more about TWCloud >>](#)

## Content History

You can now define a particular model scope, and view your model changes at the element level. By clicking the **Content History** command, you can view the resulting changes in:

- Revisions in which the defined project scope has been modified, showing who and when the modifications were made, as well as comments of commitments.
- The list of elements that have been modified, so you can



see which elements were modified/added/removed in that scope.

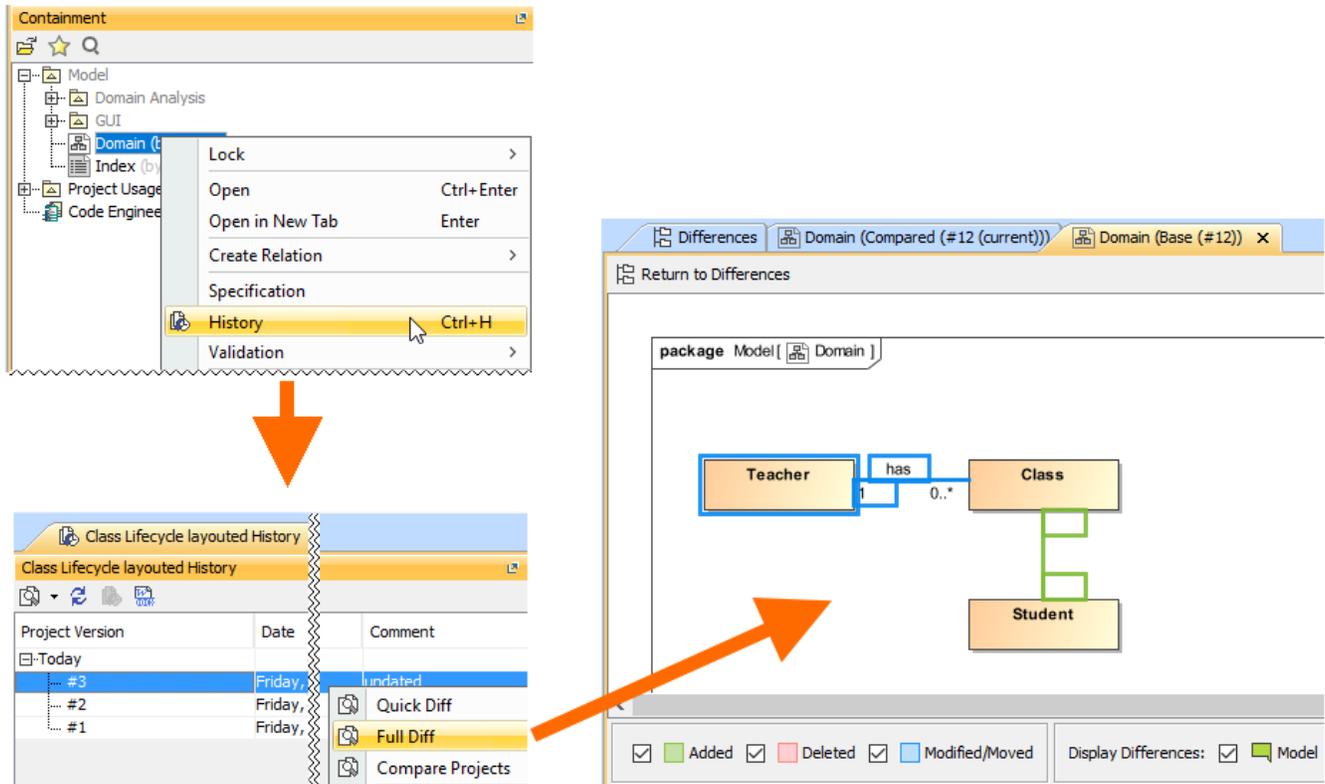
Revision of the server project content history.

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You can also export all changes to the document.

### Diagram Diff

Instead of having to compare two projects in order to visually analyze the changes between them, you can now compare just the diagrams. This new feature is extremely helpful when working on large projects.



Visualization of diagram differences.

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### Upcoming Changes

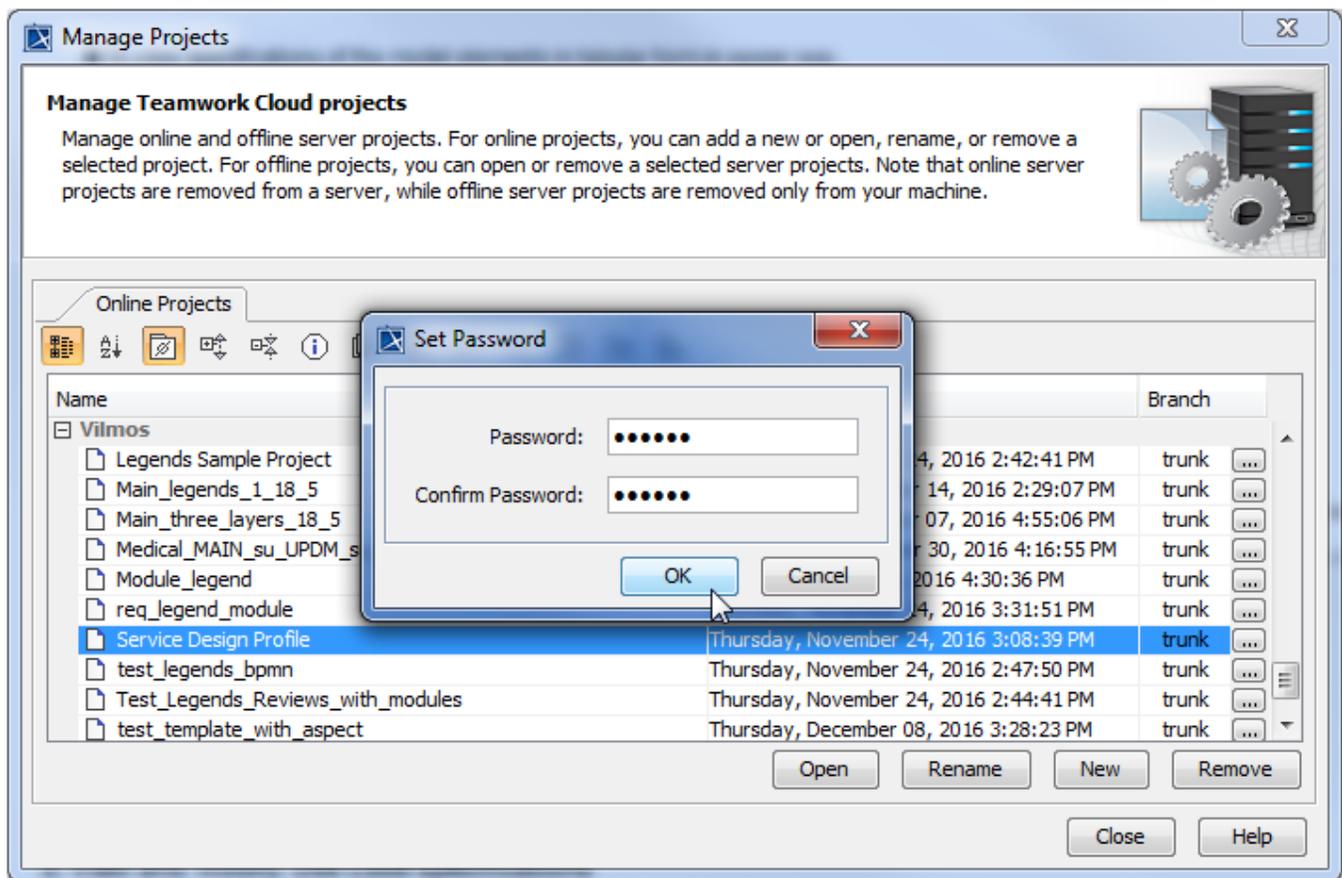
A server can send you a notification when changes are made by other people in a server project on which you are currently working. Additionally, you can see who made commitments, and how they modified the model by comparing element by element.

### Enhancements in Project Merging

Merging projects becomes considerably quicker, and will no longer require complete model locking. Essentially, you can merge single elements or diagrams of your model without interfering with other team-members working on the same projects.

### Password-protected projects

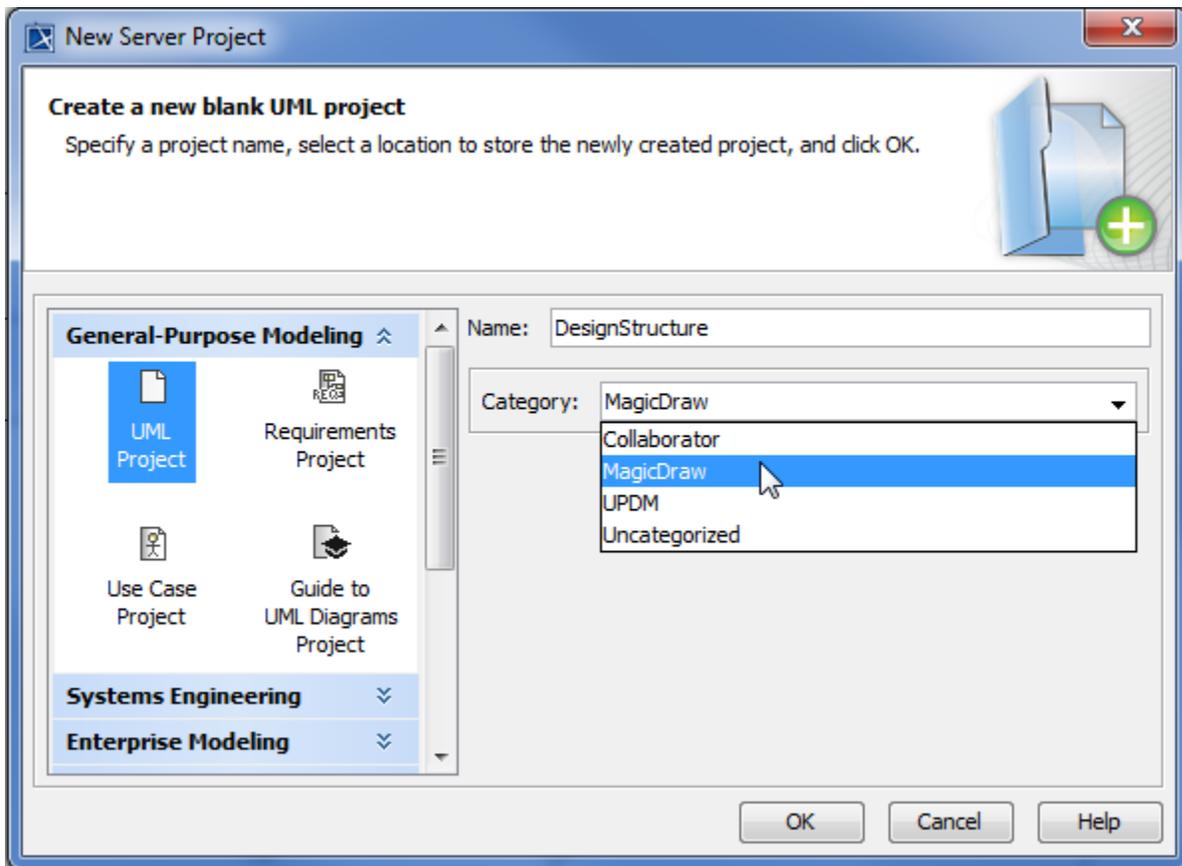
Now, you can protect your server projects with a password. The password covers all project versions, and can be set or removed by a project owner or a user having **Administer Projects** permission.



Setting a password for a selected project.

### Creating server projects from templates

You can now create a new server project from a predefined template. As in creating local projects, you need to simply select a project template and a location (category) when creating a server project.



Creating a new server project from a template.

### News for Developers

- A command-line Interface for users and permissions management has been created.
- REST API to access a model from the server can now be used.

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### Excel-Like Tables

In this new release, working with MagicDraw tables is now as easy as working with tables in Microsoft Excel. The new functionalities listed below have markedly improved the usability of all MagicDraw tables and allows you:

- To navigate between cells using the keyboard.
- To copy and paste data between MagicDraw tables and Excel spreadsheets, and MagicDraw table cells.
- To select the entire column, row, or table.
- To clear the cell values.
- To sort by multi-criteria.

[Learn more about tables >>](#)

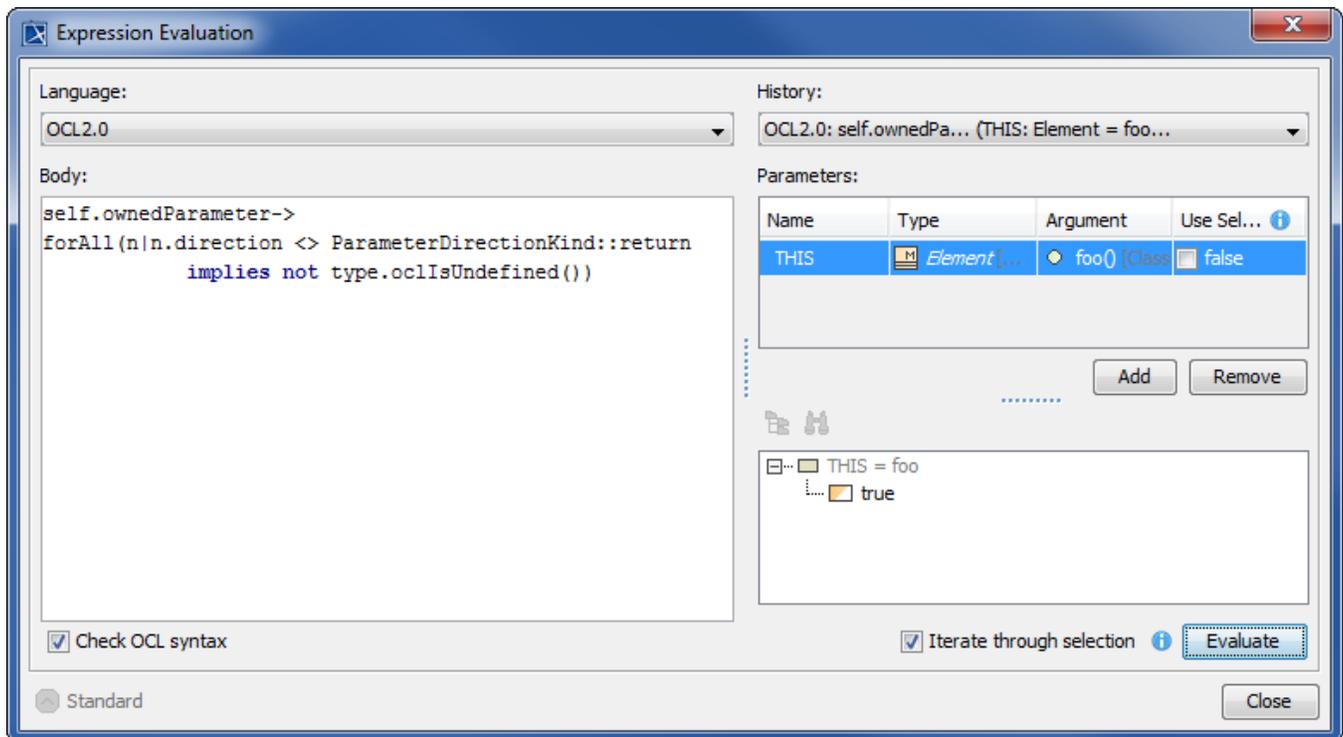
#	Name	Risk
1	1.4.1.1 Methods to find item	High
2	1.4.1.2 Found item reservation	High
3	1.4.1.3 Immediat loaning of available item	High
4	1.4.1.3 Search availability for item	High
5	1.1.1 User types BL 3	Low
6	1.1.2 Item assignment to categories	Low
7	1.1.3 Item history maintainance	Low
8	1.2.1 Library description	Low

The multi-sorting and multi-selection in MagicDraw tables.

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### Expression Evaluation

The new expression evaluation capability is added into the expression editor. It allows you to run/execute an expression on the actual testing model while editing. [Learn more about evaluating expressions >>](#)



Expression Evaluation dialog showing the expression body in the left and values of parameters in the right.

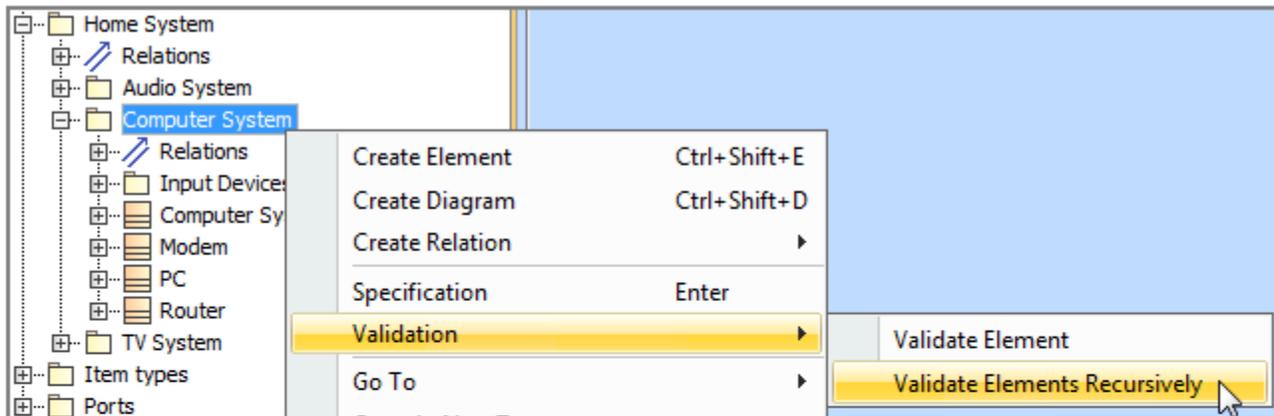
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Other

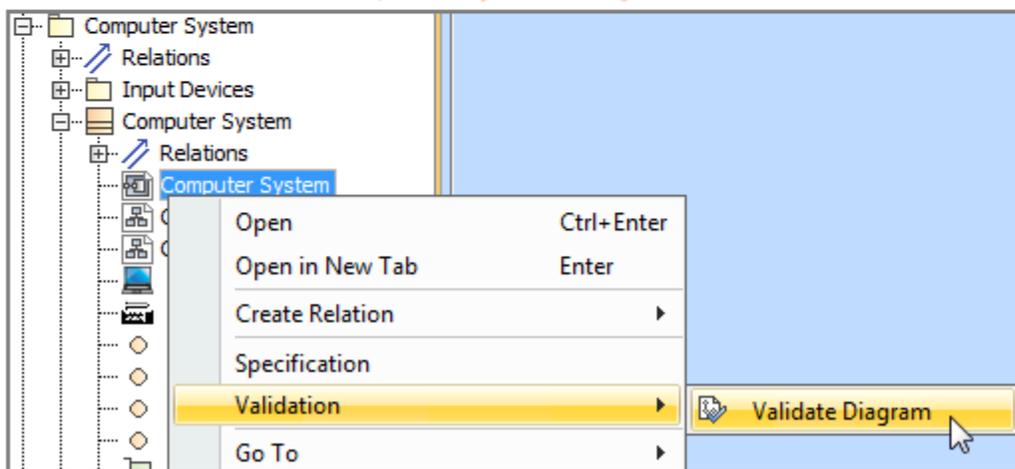
#### Validation Enhancements

- You are now able to validate a separate element, elements recursively, or diagram directly from the Model Browser. [Learn more about starting the validation >>](#)

## The validation of the Computer System Package recursively

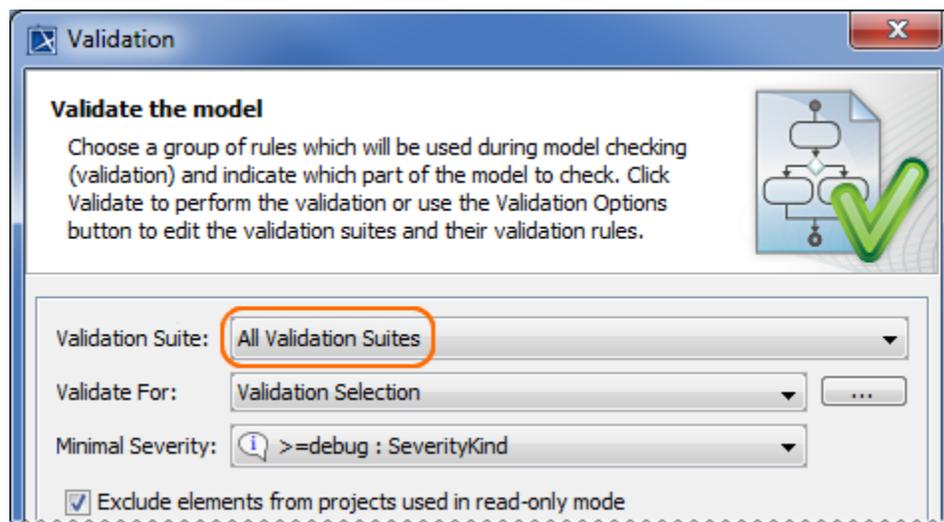


## The validation of the Computer System diagram



The validation commands that are available in Containment tree.

- All validation suites can now be included in the validation process when using the **Validation** dialog.



The Validation dialog with All Validation Suites selected.

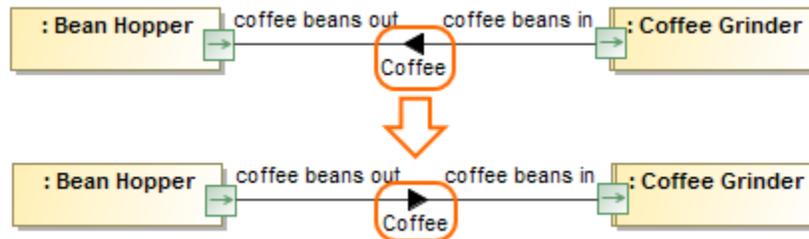
- With this version, in Standard and higher editions, you can run validation rules without any restrictions. [Learn more about validation >>](#)

## OCL Improvement

- OCL execution engine now achieves better performance and compliance with the latest OCL specification version 2.4.
- Derived properties can now be used in OCL expressions.
- Scripts having multiple parameters can now be defined using OCL in structured expressions.

## Reversing the Information Flow direction

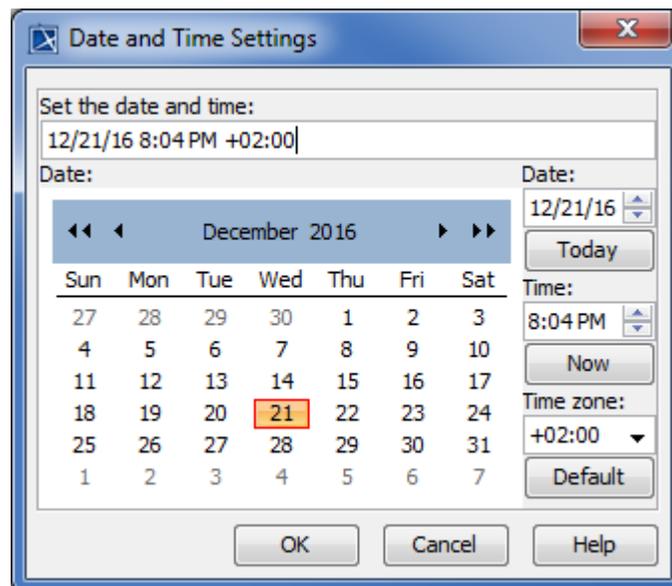
You can now reverse the Information Flow direction on Connectors. To do this in a diagram, right-click to select the flow, and, from the shortcut menu, choose **Refactor > Reverse Flow Direction**. The flow directions are updated in all the related diagrams. [Learn more about reversing Information Flow direction >>](#)



The direction of *Coffee* Information Flow is reversed. The illustration displays concepts from SysML Plugin.

## Date and Time Setting Improvements

MagicDraw offers a simpler way to set date and time property values. When you try to specify a property with a date type value, the **Date and Time Settings** dialog opens to assist you with this task. [Learn more about setting the time>>](#)



The figure displays the Date and Time Settings dialog with specified date, time, and time zone values.

## Layout enhancements

- The Class and Composite Structure Diagrams Layout mechanisms now take into account the direction of ports. For example, if the layout orientation is from left to right, the port with direction **in** is arranged on the left side of the shape, the port with direction **out** is arranged on the right side of the shape.
- The hierarchic layout mechanism now considers labels when arranging shapes. You can specify the **Label consideration** mode (Full, Partial, or None) in the **Diagram Layout Options** dialog. [Learn more how to use label consideration mode >>](#)

## Copy/Paste in the Expression dialog

In the **Expression** dialog, you can copy and paste the selected structured expressions. Select the whole or a part of the structured expression in one dialog and paste it into the same or another dialog.

In addition, you can copy the structured expression:

- from one smart package and paste it into another;
- from the matrices and paste them into the relation maps and vice versa;
- and use it in the smart package.

## Miscellaneous

- The *Diagram Used Elements* operation is added into the built-in operations library for structured expressions. Using this operation, all elements that are used in a selected diagram are collected automatically.
- The Quick properties panel > **Properties** tab has been enhanced in the following ways:
  - The **Tags** tab is added to the **Properties** tab of the Quick properties panel. You can now modify the tagged values easier.
  - In earlier versions, in the Quick properties panel > **Properties** tab, you could edit only the primitive properties, such as the visibility or the applied stereotype for the multiple selected elements. In this version, the Quick properties panel enhancement allows you to edit the reference properties of the multiple selected elements directly in the **Properties** tab. For example, you can set a behavior for the multiple selected CallBehaviorActions, or change a type for multiple Parts/Properties.
  - All matrices have become more user-friendly diagrams after the Quick properties panel > **Properties** tab shows the properties of the selected element in the matrix. In earlier versions, instead of element properties, only the matrix properties were shown.
- Now, after typing a Send Signal Action name, the new Signal element is created in the model automatically.
- You can now hide the type name of the Connector on the diagram pane by setting the **Show Type** option value to *false* in the **Symbol Properties** dialog. [Learn more about hiding type name of Connector >>](#)
- You can now identify the number of criteria and the direction of relations between the same elements directly in the Dependency Matrix cell. [Learn more about cell content in the Dependency Matrix >>](#)

## Announcement about Discontinued Integrations

This 18.5 modeling tool version is the last version supporting the openArchitectureWare (oAW) and AndroMDA integrations. In the next version, the integration will be dropped. Also, there will be the following product line changes starting with version 19.0:

- The Personal edition is discontinued to develop for all modeling tools.
- For business process modeling, only the Cameo Business Modeler plugin will be supported. The development of Cameo Business Modeler tool is discontinued after the current version.
- For Cameo Enterprise Architecture, only the Enterprise edition remains. Support of other editions is discontinued. We assure you that the modeling features will not be affected by this change.
- Development of the Cameo SOA+ plugin will be discontinued after the current version. However, you will still be able to load projects created in earlier versions with this plugin in your modeling tool. SoaML diagrams will be converted to pure UML diagrams and maintenance of the SoaML profile will continue.

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### MagicDraw Documentation

- [MagicDraw 185](#)

### Other Resources

- [Modeling Community Blogs](#)
- [Modeling Community Forum](#)
- [Webinars](#)
- [FAQ](#)