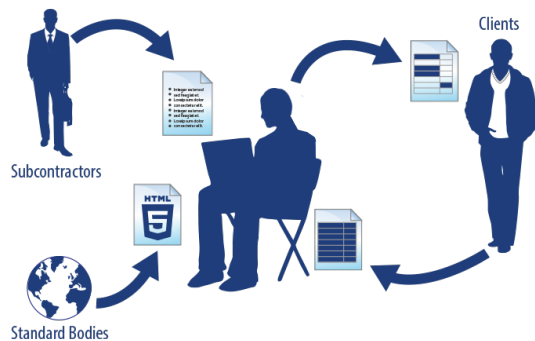


What's new in MagicDraw 18.1 FR

Released on: November 17, 2014

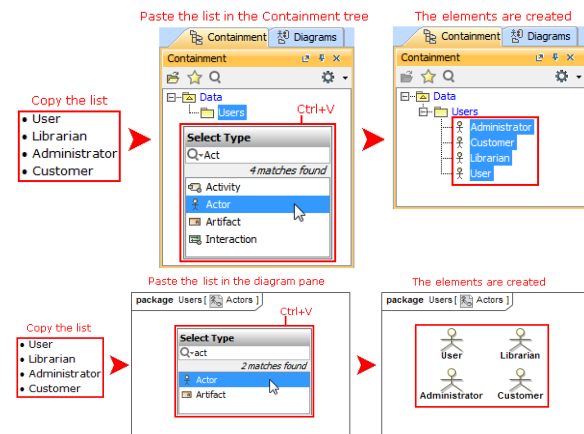
Easy Transition from Documents to Models

Good news for modelers, who frequently exchange information with project stakeholders that are not modelers and work exclusively with documents! Information exchange becomes easier and faster, because now you can copy listed texts and tables to your MagicDraw model directly from documents, web pages, email messages, presentations, or other text sources.



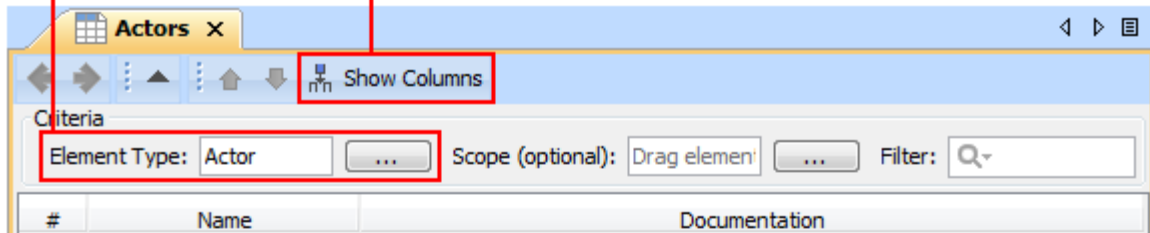
When you copy a listed text, each item of this list becomes a new named element in your model (to simplify the creation, basic numbering and bullets are not reproduced in the model).

Elements can be created either in the Containment tree or on the diagram pane, as you can see in the following figures.



When you copy a table, each row becomes the corresponding element with its properties. If elements already exist in the model, the information updates.

1. Select element type
2. Choose the columns



3. Copy the table

Term	Description
Administrator	The role of administrator is to register and remove librarian users, also edit system settings. Administrator needs to access system only locally.
Customer	Customers need the following functionality from the system: Search for an item in library funds; Get details of a library item; Reserve items; Check status summary.
Librarian	The role of librarians is to register customer users, handle loans and returns, provide information to customers, and manage library items: register new items, remove (discard) old library items, edit item.
System user	The following properties need to be defined for both customer and librarian users: System access info, ID, Full Name, Birth date, Contact info.

4. Paste the table

Actors x

Show Columns

Criteria

Element Type: Actor ... Scope (optional): Drag elemen ... Filter: Q

#	Name	Documentation
1	Administrator	The role of administrator is to register and remove librarian users, also edit system settings. Administrator needs to access system only locally.
2	Customer	Customers need the following functionality from the system: Search for an item in library funds; Get details of a library item; Reserve items; Check status summary.
3	Librarian	The role of librarians is to register customer users, handle loans and returns, provide information to customers, and manage library items: register new items, remove (discard) old library items, edit item.
4	System user	The following properties need to be defined for both customer and librarian users: System access info, ID, Full Name, Birth date, Contact info.

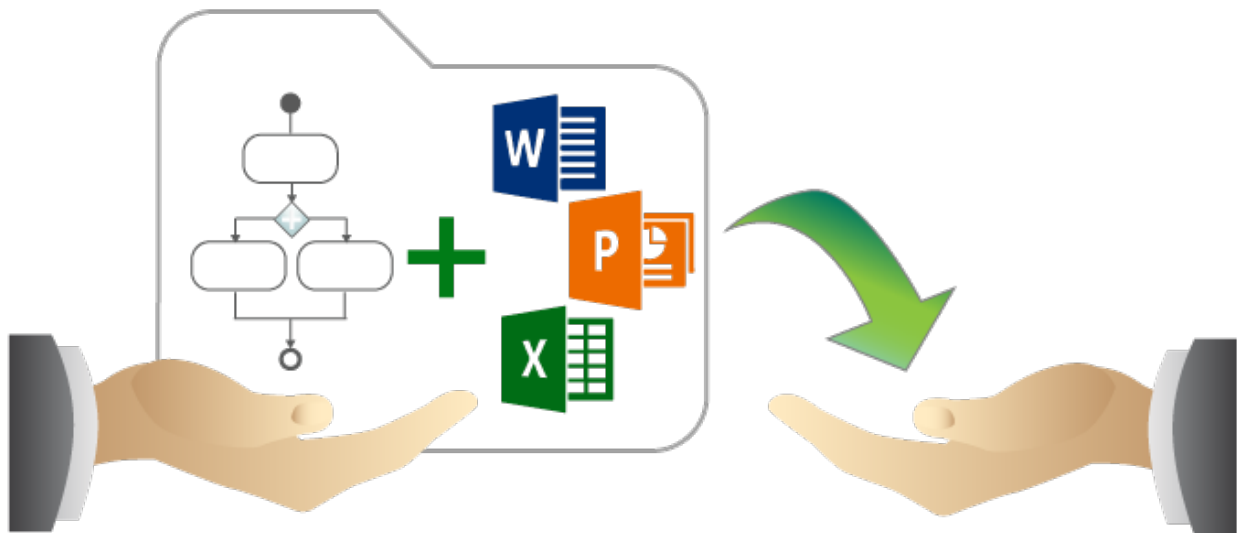
Projects with File and Report Template Attachments

Do you use hyperlinks to external files in your project? If so, then you must be familiar with the common issues:



- The project references the file, but not its particular version. Hence, as soon as the newer version of this file is committed to your version control system, the project starts referencing inappropriate information.
- If you have a systems specification consisting of a set of models and documents, you need to manually collect the referenced files before giving the entire specification to your peers.
- It takes time to establish a commonly accessible location (e.g., a network drive) where you share hyperlinked files from models to your colleagues.

The latest version of the product includes the solution! Now you can attach any type of file to your project simply by dragging the file icon from the file system to the Model Browser. The particular file version becomes embedded in this project. The contents of the attached file can be modified and the changes are instantly saved to the project.



Attached files can be:

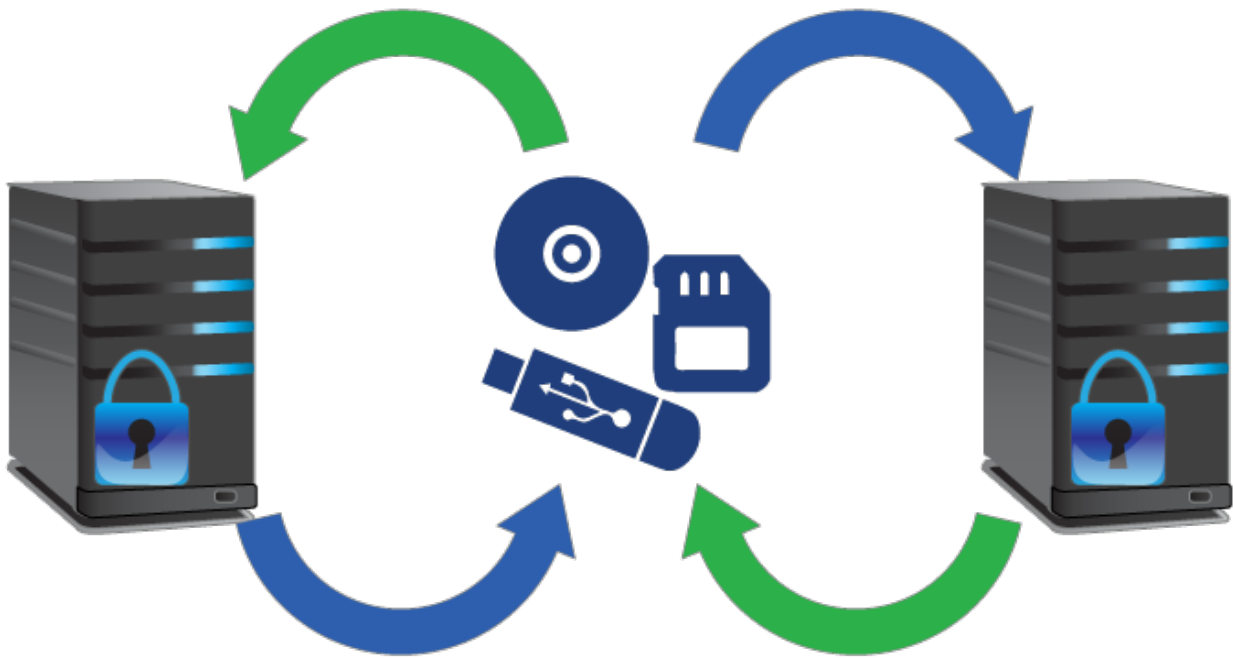
- Hyperlinked from model elements.
- Inserted into rich text format (HTML) and displayed on diagrams (image files only).
- Included in reports.
- Reused in other projects.

Report templates from the local report templates folder can be attached to your project too. For this, use the new functions of the **Report Wizard** dialog.

Transferring Projects between Consciously Disconnected Environments

Teamwork Servers, which run in consciously disconnected or secured environments, can still exchange projects!

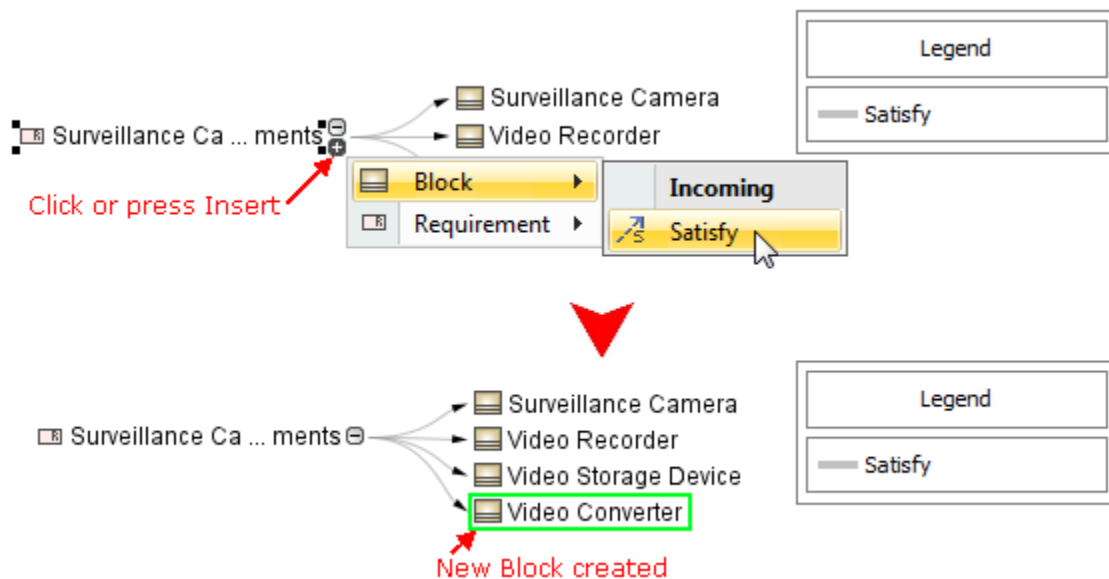
MagicDraw Teamwork Server 18.1 supports transferring project data from one Teamwork Server to another by using any external storage device, such as CD, DVD, hard disc, or flash memory device. The updated version of the shared project can be transferred back to the sharing server and smoothly merged with the original project version. Furthermore, the same project version can be given to several contributors simultaneously, and the contributions to the model they make can be successfully merged as well.



Editable Relation Maps

Now with the Relation Map you can do more than just analysis! You can expand your model with new elements or edit the names of the existing ones directly in the relation map.

Elements you can create depend on the selected Element Type and Relation Criterion.



TIP! To create elements faster and more easily:

- Select the element and press Insert (Cmd+I for Mac users) to decompose it.
- Type element name and press Ctrl+Enter to create the element of the same type.

Increased Modeling Efficiency

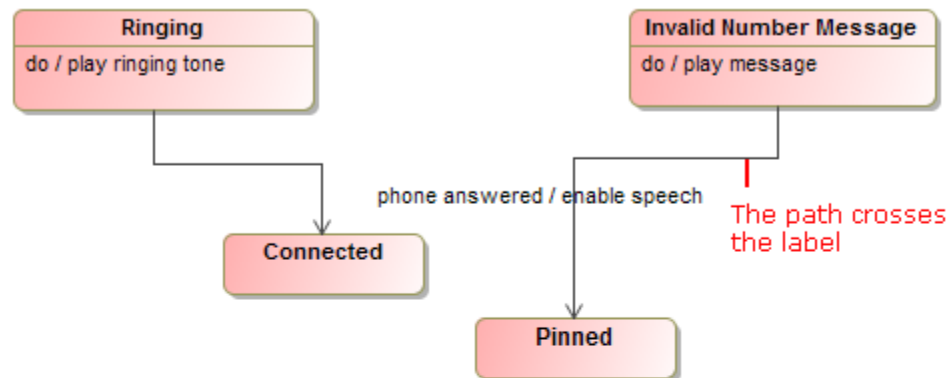
Smarter diagram layout, simplified search options, more efficient synchronization of elements and their properties, **rake icon**, and **many more** features save modeler's time and allow focusing on *what* to model, but not *how* to model and keep the result well-formed.



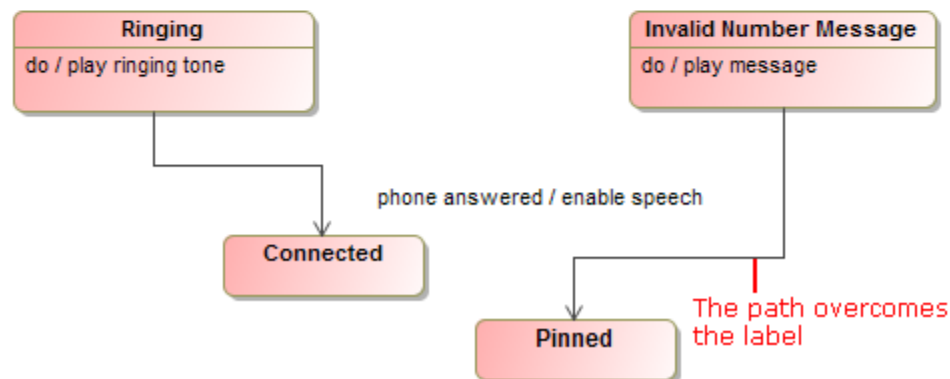
Smarter diagram layout

- When drawing a new path, the layout now overcomes the path labels.

In earlier versions

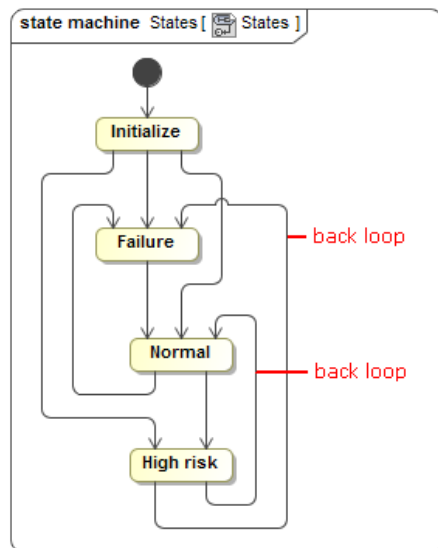


In 18.1

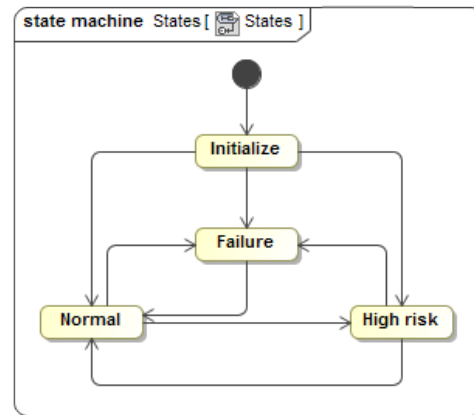


- State Machine diagrams now look better and are easier to read. Plus, the unwanted back loops are eliminated.

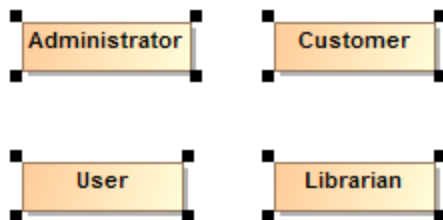
In earlier versions



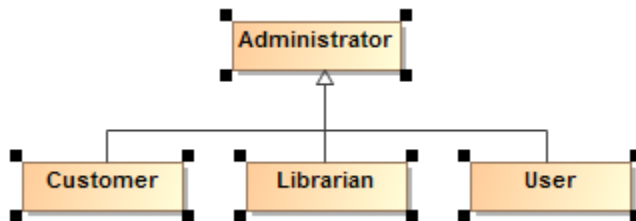
In 18.1



- Symbols, created by dragging a group of elements from the Model Browser, are now arranged on the diagram pane as follows:
 - In a grid, if there are no paths.



- In the Quick Diagram Layout, if there are paths among shapes.



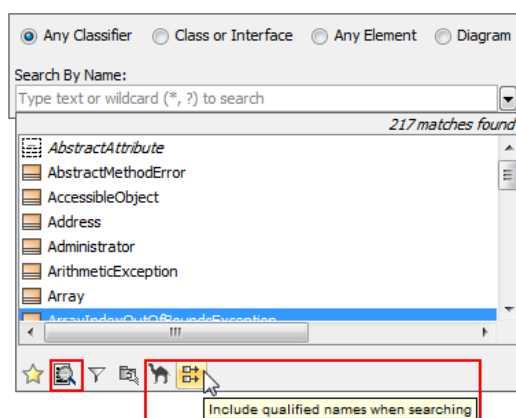
Appropriate layouts are applied for displaying parts on a structured classifier shape, if the **Layout Parts** check box is previously selected in the **Display Parts** dialog.

Simplified search options

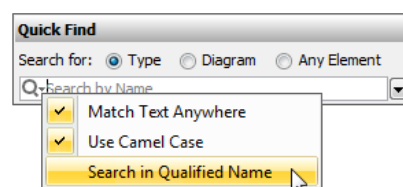
Changing search options in the Quick Find and Element Selection dialogs as well as in autocompletion lists is now easier and more efficient due to the following changes:

- Search phrase specific options, such as one for turning on/off matching anywhere, are now available on a separate menu. In earlier versions, those options resided together with scope filter options.

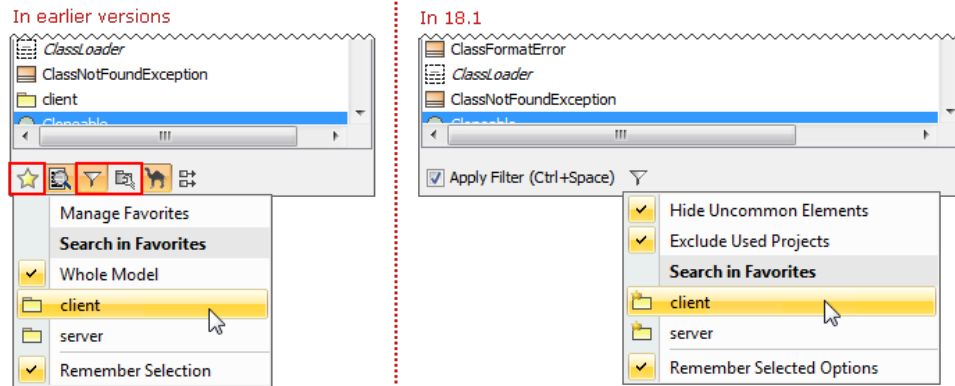
In earlier versions



In 18.1



- Filter options are now available on the button menu and can be applied on the search scope or removed from it with a single click.



- Options are now commands with meaningful names, but not buttons as in earlier versions. It's now easier to find a desired option.

More efficient synchronization

Keep your model valid and synchronized with your changes! The new synchronizations are introduced and the main element properties are now synchronized. In addition, the solving of the broken synchronization has been enhanced.

- The following elements are now synchronized:
 - Attribute of Signal is synchronized with Pin of Send Signal or Pin of Accept Event Action.
 - Attribute of Signal is synchronized with Argument of Message.
 - Parameter of Behavior is synchronized with Parameter of Signal Reception.
- The following element properties are now synchronized:
 - If Pin has no flows connected, Pin direction is converted according to direction specified in Parameter. The same works in the opposite scenario when direction of Parameter changes.
 - Pin multiplicity is synchronized according to Parameter multiplicity.
- When a new Activity Parameter Node is created in an Activity, the Activity Parameter Node symbol is automatically represented on the Activity diagram frame.
- When solving the broken synchronization, you can choose the direction of the synchronization. For example, when fixing the synchronization between Parameters (Activity) and Pins (Call Behavior Action) you can select to synchronize in one of the following directions:
 - Pins (Call Behavior Action) by Parameters (Activity)
 - Parameters (Activity) by Pins (Call Behavior Action)

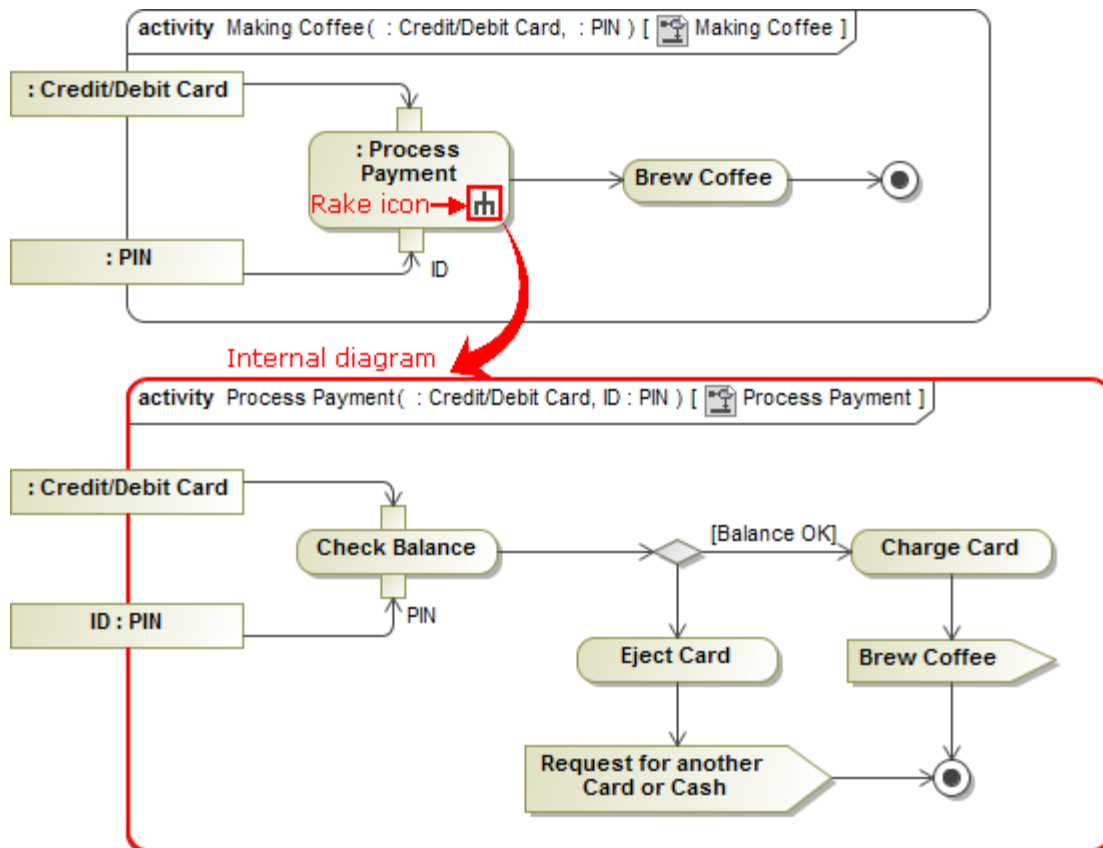
Informative Rake icon

Follow and double-click the symbol with the rake icon for faster navigation in the model! The decomposition of model elements can be represented by the rake icon which indicates a reference to a more elaborated diagram.


The rake icon automatically appears on:


- Call Behavior actions that can refer to another Activity diagram.
- Interaction Uses that can refer to another Sequence diagram.
- Packages that can refer to another Package diagrams.
- Parts that can refer to another Internal Block diagram.
- Use cases can be realized by other behavior diagrams such as Activity, State Machine and Sequence. The rake icon is not shown by default on the element.

The rake icon is not shown by default on the element. To show it, set the **Show Rake Icon** property value to *true* in the **Symbol Properties** dialog.



Composite Instances creation in Instance Tables

The Instance Table UI was improved to allow easy and fast creation of composite instances. Just click the Create Instance Specification button  in the slot value cell and create an instance of the slot type instantly or choose from available subtypes.

1. Click 

2. Select subtype

Select Classifier:
 Search by Name
 4 matches found
 Blocks under wheels
 Brakes
 Drag a weight on the floor
 Reverse power

Element usage traceability

The traceability of the Class, Signal, and Instance elements is much easier now! There are two ways to inspect those element usages in your model:

- For the Class and Signal elements:

- On the left of the Class or Signal Specification window, click **Usage In**.
 - From shortcut menu of the Class or Signal, choose **Go To > Usage In**.
- For the Instance element:
 - On the left of the Classifier Specification window, click **Instances**.
 - From shortcut menu of the Classifier, choose **Go To > Instances**.

Class usage traceability

You can now trace the Class, when it is used as:

- Representer of the partition
- Part
- Representer of the lifeline
- Type for instances
- State activity
- Action

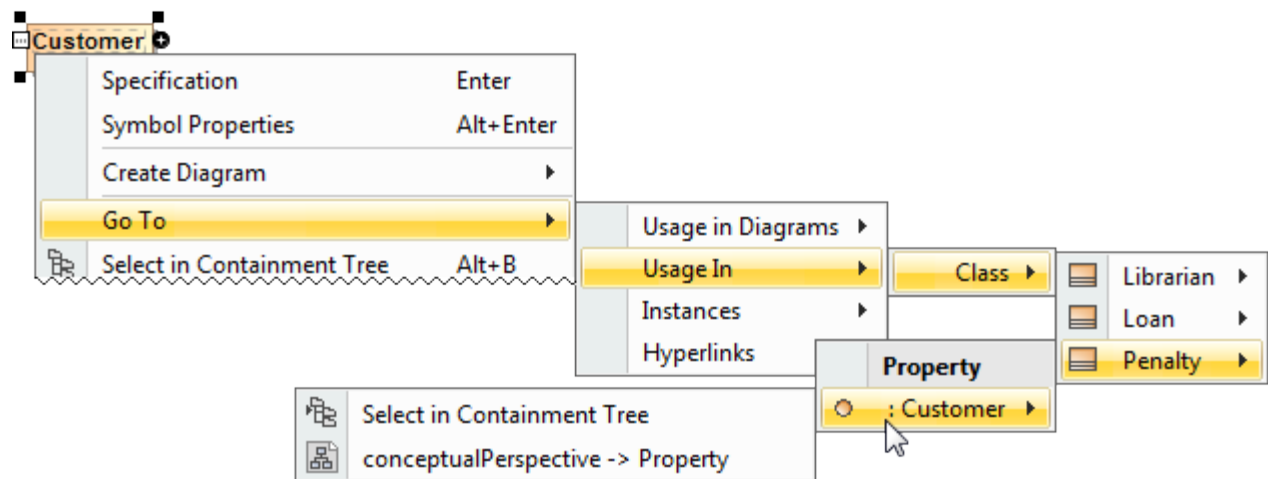
Specification of Class Customer

Class usage
The table shows all usages of the Class. Click the Open Specification button to start modifying properties of selected item.

Usage In

Owner	As	Name	Diagrams
Class			
Librarian...	Property	: Library System::C...	
Loan [Li...	Property	: Library System::C...	conceptualPerspective
Penalty ...	Property	: Library System::C...	conceptualPerspective

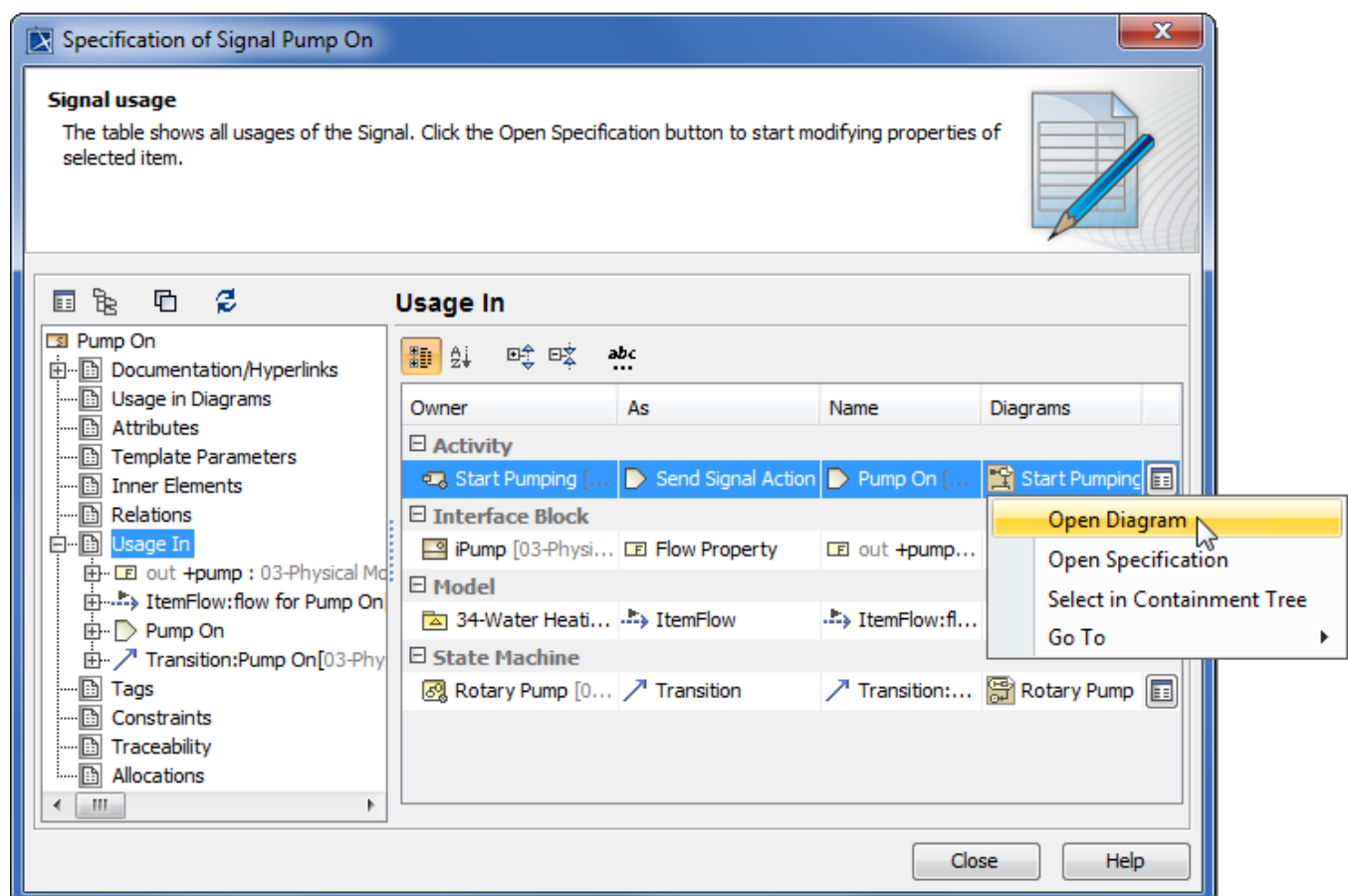
Buttons: Close, Back, Forward, Help

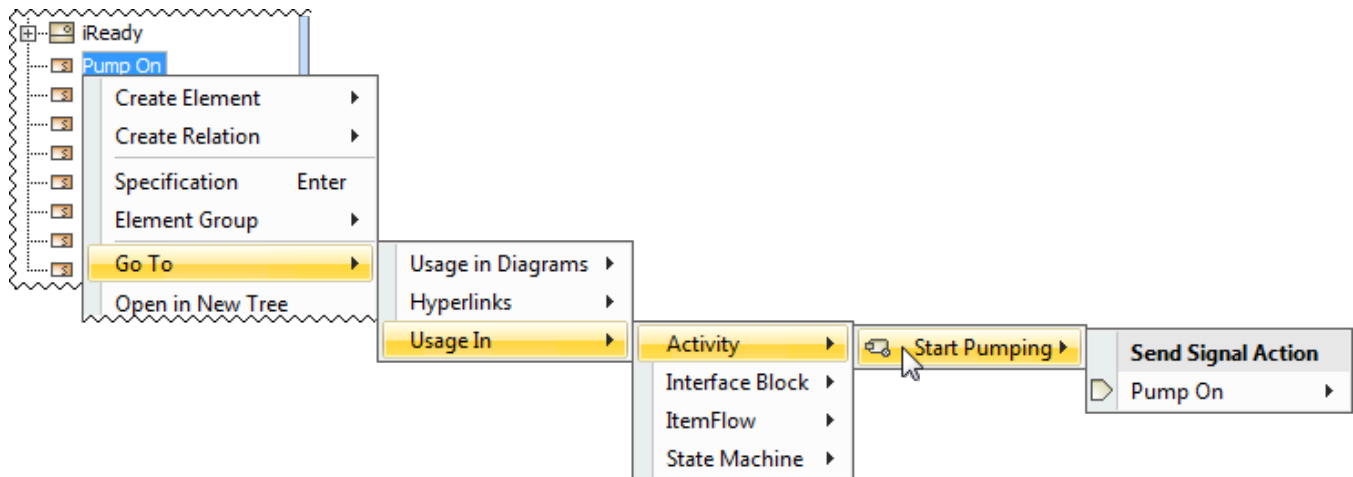


Signal usage traceability

You can trace the Signal, when it is used:

- In Trigger on Transitions or Accept Event Actions
- As Item Property type
- As Flow Property type
- In Send Signal Action or Broadcast Action
- In Sequence message





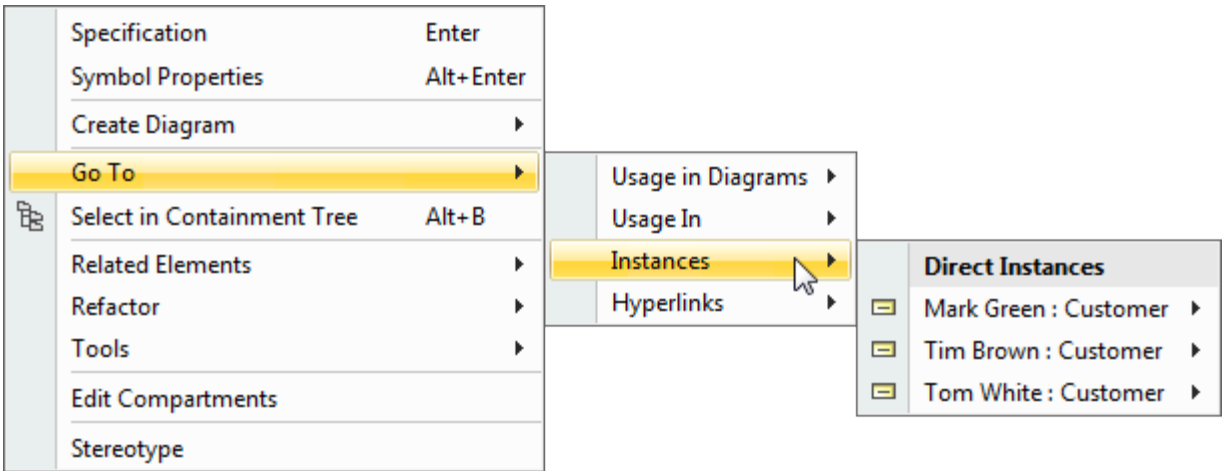
Instance usage traceability

Trace all direct and indirect Instances of your Classifier.

The screenshot shows the 'Specification of Class Customer' dialog box. The 'Class Instances' section at the top explains that the Instance node contains a list of all direct and indirect Instances of the Class. The 'Instances' tab is active, displaying a table of direct instances. The table has three columns: Name, Classifier, and Diagrams. The instances listed are Tom White, Mark Green, and Tim Brown, all of type Customer [Library System], each associated with an 'Object Diagram for Library System'.

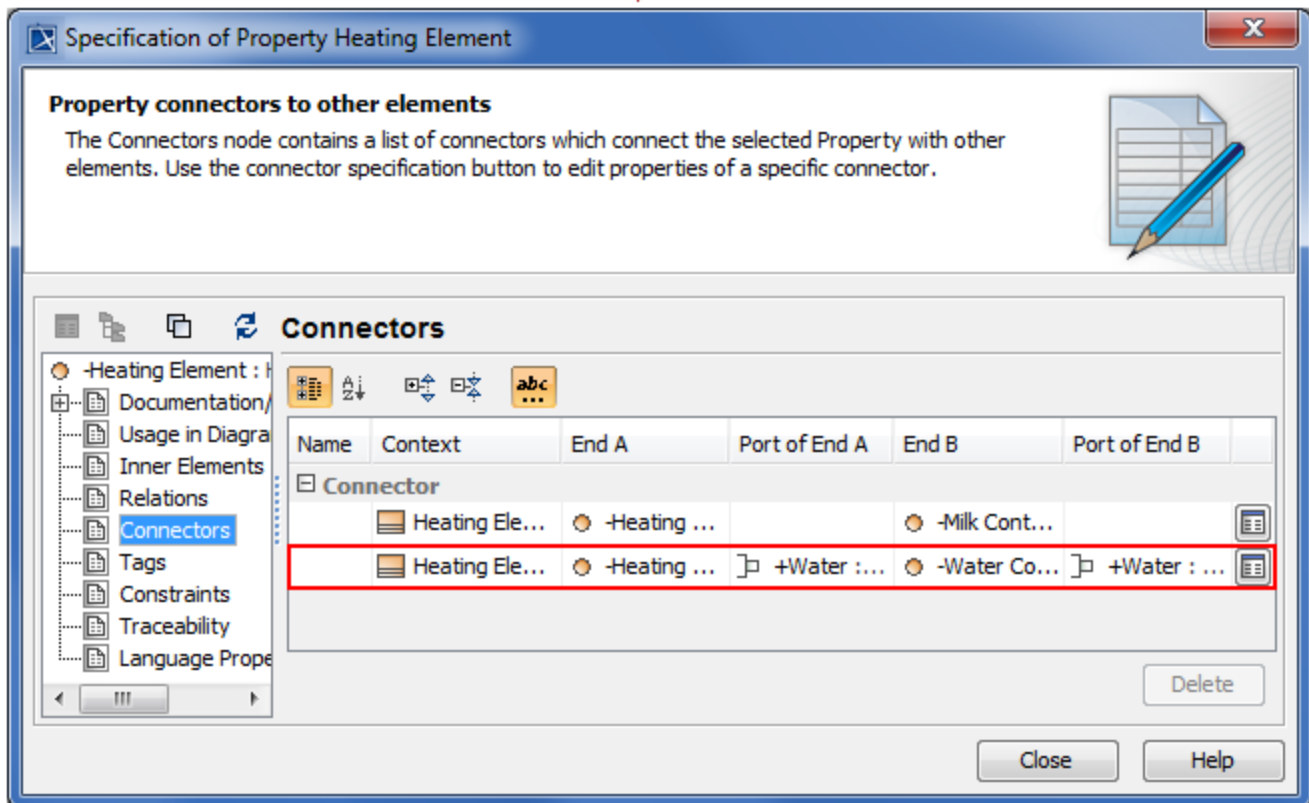
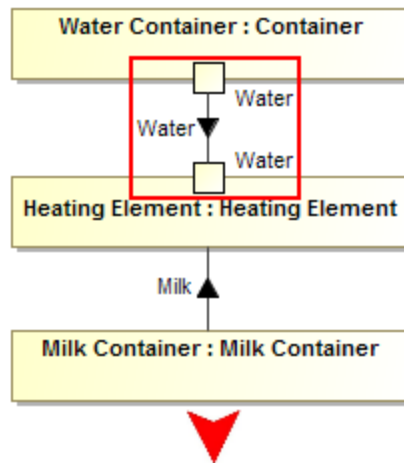
Name	Classifier	Diagrams
Direct Instances		
Tom White	Customer [Library System]	Object Diagram for Library System
Mark Green	Customer [Library System]	Object Diagram for Library System
Tim Brown	Customer [Library System]	Object Diagram for Library System

The left sidebar of the dialog box shows a tree view of the class hierarchy, with 'Instances' selected. The bottom of the dialog box has 'Close' and 'Help' buttons.



Part connections via Ports traceability

Indirect Part connections via Ports are now collected in the **Connectors** property group of the Part's Specification window. Inspect the list of connectors and modify their properties.



Highlighting of validation rule failures in tables

Now the results of validation rule failures are marked in tables.

- In the Generic Tables, the entire row is marked.
- In the Instance Tables, either a cell, or an entire row is marked. A cell is marked in the case of a faulty slot value. The entire row is marked in the case of a faulty instance.

#	Id	Name	Text
1	TWCAT150	Project Categorization	Project Categorization
2	TWCAT150.1	Category Types	Category Types
3	TWCAT150.1	Category Definition	Category shall be understood as a concept which enables visual grouping of projects.
4	TWCAT150.2.1	System Category	user-defined categories are assigned to this category.

Not unique element number has been identified. The identifier Id TWCAT150.1 of the Category Definition element duplicates with: Id TWCAT150.1 of the Category Types Categorization::Requirements::Project Categorization::Category Types

UML support

- Optional Port is now identified by the phrase *via <port name>* in the name string on shapes of the following elements: Call Operation Action, Call Behavior Action, Send Signal Action, Send Object Action, Broadcast Signal Action, and Start Object Behavior Action.
- Body of an Opaque Behavior can now be optionally displayed instead of its name on the State or Transition shape, when this Opaque Behavior is used as Entry/Exit/Do Behavior of State or Effect of Transition.

Other News

Conceptual changes in modules

Starting from this version, module is referred as a used project. Keywords "used project" and "project usage" replace the keyword "module" everywhere in MagicDraw UI.

Miscellaneous

- Easily create a Behavior for the Operation. With the new **Create Method** command on the shortcut menu of the Operation and the Signal Reception, you can create a Behavior (and diagram) faster.
- With the new **Display Inner Elements** command on the shortcut menu of the State Machine diagram, you can display the shapes of State Machine inner elements faster. The same command is available on the shortcut menu of the Composite State symbol, Activity diagram, and Structured Activity Node symbol.
- Activity diagram created under the Activity now instantly displays all inner elements on this diagram. The same is valid when creating a State Machine diagram under the State Machine.
- Any inherited part can now be quickly redefined directly in the Composite Structure diagrams. Select **Refactor > Redefine To**, choose a compatible subtype, and let this job be done for you. A new part redefining the original one will be created and graphically replaced in the diagram with all ports and connectors remaining in their places.
- MagicDraw no longer forces the selection of a Metaclass on a Stereotype creation. You can change the Metaclass later from the stereotype's smart manipulator toolbar.
- Selecting a Stereotype or Metaclass no longer requires using the mouse. Use the Up and Down Arrow keys to walk through the lists, press Ctrl+Spacebar to select a desired item, and then press Enter to apply the selected Stereotype or Metaclass.
- Derived properties created using simple navigation operations are now editable.
- The position of text within a shape can be set to the top, center, or bottom by using a new **Text Vertical Position** property in the **Symbol Properties** dialog.
- Multiplicity value of an association end can now be edited directly on the diagram pane. Just select the multiplicity area and press F2 to switch it to the edit mode. Then press Ctrl+Spacebar or Ctrl+Backspace to see available suggestions and choose one of them or type a new value.
- Standard and custom subtypes of the selected element type can now be optionally included into search results. For example, if you need to search for packages as well as for profiles, models, smart packages, and other custom subtypes of the Package, select the new **Include Subtypes** check box on the **Select Element Type** dialog after you choose the Package as element type.
- Table export to a Microsoft Excel worksheet was improved, and multiline textual values are no longer stripped in the worksheet, if they are stripped in the table - actual, but not displayed data is exported.
- When working with a server project, you can now choose whether to ignore validation rule failures just for you or for all users contributing to that server project.
- Foreign, non-editable projects transferred from other servers can now have domestic, editable branches on the current server.

File format changes

File format reflects changes made in UML metamodel.

Open API changes

UML metamodel related changes

- Removed associations:
 - *parameter* between ValueSpecification and Parameter
 - *parameter* between Pin and Parameter
- Added associations:
 - *syncElement* between two Elements

IntelliJ IDEA project for MagicDraw development

An IntelliJ IDEA project with modules for developing two sample plugins was pre-configured and can be found in *<MagicDraw 18.1 installation directory>/openapi/ide*.