# Creating new diagram type

The Customize Diagram Wizard contains the following steps for creating a new diagram type or modifying a chosen one.

- Step 1: Specify diagram type and icon
- Step 2: Specify used projects

- Step 3: Specify Toolbars
  Step 4: Specify Toolbar Buttons
  Step 5: Specify Symbol Properties
- Step 6: Specify Smart Manipulators

All Custom Diagrams are based on standard UML diagrams (like Class, Use Case, Sequence, and other).

## Step 1: Specify diagram type and icon

To create your own diagram, first specify the following properties

- Diagram type name (for example, Robustness Diagram).
- · Base Diagram Type standard UML diagram to be extended. All configurations, semantics, and other settings will be inherited from this diagram type.
- Abbreviation a short form of the diagram name. It will be used in Diagram Frames header or Diagram shapes in Content diagrams.
- Category creates your specific category in the Diagrams menu or in the Create Diagram command list. You can store all your customized diagrams in this category. If you leave this field empty, the customized diagrams will be added to the Custom Diagrams category.
- Help ID help web page.
- Icons several icons for your custom diagram representation in MagicDraw GUI.

## 💽 Customize Diagram Wizard

Specify basic diagram type information In order to create or edit a diagram type, specify the following: its name, diagram type on which it will be based, abbreviation (used for system purposes only), category to which the new diagram will belong, and customized diagram type icons.							
I. Specify diagram type and icon	Type:	Robustness Diagram					
② 2. Specify used projects	Base Diagram Type:	Class Diagram 👻					
③ 3. Specify toolbars	Abbreviation:	Robustness					
④ 4. Specify toolbar buttons	Category:	Specific Diagrams Library					
<ul> <li>5. Specify symbols properties</li> <li>6. Specify smart manipulators</li> </ul>							
< Back Next > Finish Cancel Help							

### Step 2: Specify used projects

Custom Diagrams are oriented to a new specific domain, technology or platform, and are often based on a custom profile.

Select the required used projects or profiles.

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💽 Customize Diagram Wizard					
Specify used projects Select projects to use by the custom of stereotypes which will be applied on the stereotypes whic	diagram type. Use the Diagram Stereotype button to choose he custom diagram type.				
1. Specify diagram type and icon	Projects that will be used in the new diagram type:				
② 2. Specify used projects	C UML_Standard_Profile.mdzip				
③ 3. Specify toolbars					
O 4. Specify toolbar buttons					
5. Specify symbols properties					
6. Specify smart manipulators					
	Add Remove Diagram Stereotype				
	< Back Next > Finish Cancel Help				
Do not remove the UML Standard Profile, which is selected by default, from the list. It must be used by any custom diagram type.					

The custom diagram could use stereotyped elements. Profiles defining these stereotypes must be used by the custom diagram. The selected used projects or profiles load when a user creates a custom diagram in a project. You can choose a stereotype for the diagram by clicking the **Diagram Stereotype** button.

## **Step 3: Specify Toolbars**

Every diagram differs by the elements used in them. In the Specify toolbars step, you can group standard or custom elements.

You can:

- Create your own custom diagram toolbar.
- Create your own toolbar, name it, and select an icon.
  Choose standard toolbars that will be visible in your diagram.
  Select existing toolbars inherited from the base diagram type.
- Arrange the order of toolbars by using "Up" and "Down" buttons.
- Select which toolbars will expand or collapse by default (use the Open check box).

💽 Customize Diagram Wizard			X	Ŋ		
	new or add predefined diagram toolbars to a diagram ange toolbar properties or remove toolbars.	type. Also,				
1. Specify diagram type and icon	Toolbar	Open	Add Toolbar	×	New Toolbar	
② 2. Specify used projects	Common		Edit		Common (from Any Diagram)	
③ 3. Specify toolbars	Robustness Diagram				Information Flows (from Any Diagram)	
4. Specify toolbar buttons			Remove		Common (from Class Diagram)	
<ul> <li>5. Specify symbols properties</li> </ul>			Up	*	Class Diagram (from Class Diagram)	
<ul> <li>6. Specify smart manipulators</li> </ul>					Common (from Static Diagram)	
0 6. Specify smart manipulators			Down	*	Class Diagram (from Static Diagram)	
				85	Use Case Diagram (from Static Diagram)	
				2	Composite Structure Diagram (from Static Diagram)	
				B	Package Diagram (from Static Diagram)	
				믭	Object Diagram (from Static Diagram)	
				<b>a</b>	Component Diagram (from Static Diagram)	
				6	Deployment Diagram (from Static Diagram)	
					Profile Diagram (from Static Diagram)	
					Information Flows (from Static Diagram)	
< Back Next > Finish Cancel Help						

## Step 4: Specify Toolbar Buttons

Select standard or stereotyped elements for your custom diagram toolbars.

💽 Customize Diagram Wizard		X	Ŋ				
① 1. Specify diagram type and icon	Toolbar: Robustnesss Diagram 👻						
② 2. Specify used projects	Toolbar	Add	*	New Button			
③ 3. Specify toolbars		Edit	*	New Group	_		
④ 4. Specify toolbar buttons		Remove		Common	•		
5. Specify symbols properties				Class Diagram			
6. Specify smart manipulators		UD I	2	Use Case Diagram	•	£	Actor
<u> </u>			1	Component Diagram	!	0	Use Case
			ð	Deployment Diagram	!		Package 16
				Composite Structure Diagram	<u>*</u>		System Boundary
				Profiling Mechanism Information Flows	!	ń	Subsystem
			₽ B			$\mathbb{Z}_1$	Include
		l		Profile Diagram	<u> </u>	$\mathbb{Z}_{E}^{n}$	Extend
						$\mathbf{e'}_{E}$	Extend
						,4 <sup>0</sup>	Interface Realization
						1	Association
						~	Generalization
						¥	Generalization
	< Back Next > Finish C	ancel Help					

Click Add and select standard UML elements or click Add and then New Button to create your own buttons to create customized or stereotyped elements.

Customize the following properties when creating a new button:

- Model element type
- Custom icon for a button
- Shortcut that activates the button

- Tooltip description
- Stereotype(s) to apply to the created element
- Symbol style selected symbol properties will be used only when the element is created using this button Default values for some primitive model element properties (like isAbstract = true or similar) •
- •

Edit Button		×				
General Symbol	Properties Stereotypes Element I	4 ▶ 🗉				
Model Element Type:	Model Element Type: Abstraction					
Description:	n					
Shortcut:						
Lower DPI (16x16)	High DPI (SVG)					
2. 2. 2.	A					
File URL	File URL					
Remove         Remove           "Lower DPI" icon is used for lower resolution displays.         "High DPI" icon is used for high resolution displays.           It is recommended to use a scalable 24x24 SVG icon as "High DPI".						
🔲 List as element	Opposite					
	OK Cancel	Help				

- List as element select this check box to add the button as a command in the Create Element command list.
- Opposite this check box is only available for relationship buttons. Select it to add the opposite relationship button.

#### **Step 5: Specify Symbol Properties**

This step allows you to customize the style for any element appearing in your custom diagram (e.g. a class dropped in your diagram should be suppressed and red).

You can change the appearance of standard symbols, symbols of stereotyped elements, and the custom diagram itself. The customized element style will be used only in the appropriate custom diagram type.

#### **Step 6: Specify Smart Manipulators**

Smart manipulators are special buttons that appear in the pop-up window when a shape or path is selected on a diagram.

User		
-userName : String{readOnly} - password : String		Smart
+getUserName() : String{query} +getPassword() : String{query} +setPassword( newPassword : String )		manipulator buttons
+User( userName : String, password : String )		
	Anchor	

Example of smart manipulator

You can configure the kind of relationship suggested when a custom shape or path is selected on a diagram.

There are three main sub-steps:

- Create a new configuration (or modify an existing one). Select the element to customize. The smart manipulators configuration can be related to:

   Element, displayed as [Element name]
  - Element + stereotype(s)
  - Symbol, displayed as {Symbol name}
  - Symbol + stereotype(s)
  - Stereotype(s), displayed as «Stereotype name»
- 2. Select suggested relationships for the selected configuration.
- 3. Select target elements for the selected relationship.

If several configuration settings could be applied to the same selected element on the diagram, only one configuration will be used according to this priority:

#	Configuration	Comment
1	Symbol + stereotype(s)	When stereotype(s) for symbol applied
2	Stereotype	
3	Symbol	
4	Element + stereotype(s)	When stereotype(s) for element applied
5	Element	

If several configurations are created for a few stereotypes (for example, Stereotype1 and Stereotype2) in the same diagram, when both stereotypes are applied to one symbol on that diagram pane, the first configuration (in this case, Stereotype1) is used, unless you specify a symbol+ stereotype(s) configuration.

#### Inheritance of configurations

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All diagrams inherit their configurations from a base diagram (example: in this hierarchy: Any diagram > Static diagram > Class diagram > Generic DDL diagram).

If you add a new configuration to a class diagram (for example, Symbol A + stereotype B), the configuration will be used in the generic DDL diagram, as the class diagram is its base diagram. Any static diagrams will not have such configurations.

To change the configuration from the base diagram type

• From the **Configurations** list, select the configuration by the element type and choose the **Specify own configuration** button. This overwrites the inherited configuration.