

Steps of the Extract Structure Wizard

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In this page you can read about each step of the **Extract Structure Wizard** in details, understand option boxes and buttons.

Opening the Extract Structure Wizard

To open the **Extract Structure Wizard**

1. In the SysML Internal Block Diagram or a structure compartment, right-click a Part Properties that you want to extract.
2. From the shortcut menu, select **Refactor > Extract**.
The **Extract Structure Wizard** opens.

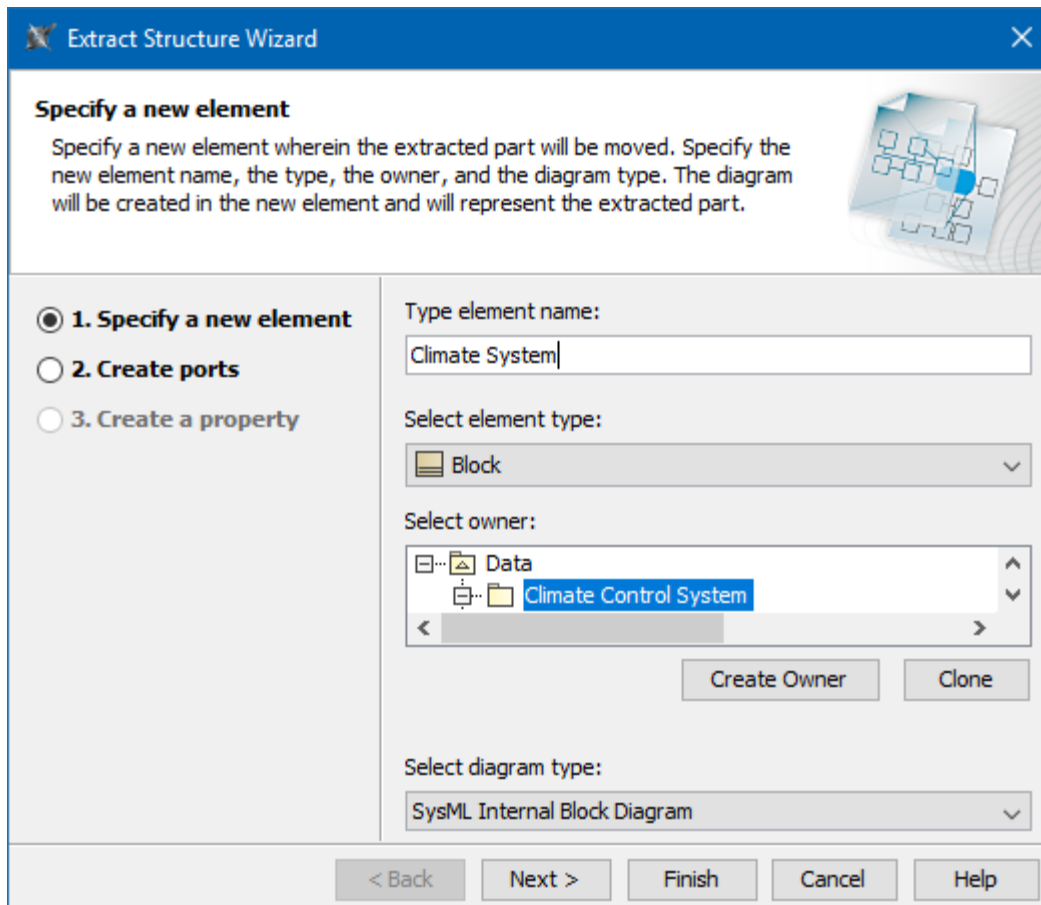
The Extract Structure Wizard steps

The Extract Structure Wizard consists of three steps:

- [Step #1. Specification of a new element](#)
- [Step #2. Creation of ports](#)
- [Step #3. Creation of a property](#)

Step #1. Specification of a new element

In this step, you can specify a diagram into which the extracted part will be moved and an owner wherein this new diagram will be created. You can also define the type of the newly created classifier element that will own the diagram. The Block and the SysML Internal Block Diagram type are selected by default. The name of the SysML Internal Block Diagram will be the same as the specified name of the classifier element.



The screenshot shows the 'Extract Structure Wizard' dialog box. The title bar is blue with the wizard icon and the text 'Extract Structure Wizard'. The main area has a light gray background. At the top, there's a section titled 'Specify a new element' with a description: 'Specify a new element wherein the extracted part will be moved. Specify the new element name, the type, the owner, and the diagram type. The diagram will be created in the new element and will represent the extracted part.' To the right of this text is a small icon showing a diagram with a highlighted part. Below the description, there are three radio buttons for step selection: '1. Specify a new element' (selected), '2. Create ports', and '3. Create a property'. To the right of these are three input fields: 'Type element name:' with the text 'Climate System', 'Select element type:' with a dropdown menu showing 'Block', and 'Select owner:' with a tree view showing 'Data' and 'Climate Control System' (selected). Below the tree view are two buttons: 'Create Owner' and 'Clone'. At the bottom, there's a 'Select diagram type:' dropdown menu showing 'SysML Internal Block Diagram'. At the very bottom, there are five buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

Step 1 in the Extract Structure Wizard: Specify a new element.

Dialog boxes	Description
Type element name	Type the name of the new element, that is, classifier, wherein the extracted part will be stored.
Select element type	Open the list and select the element type. The default element type is a class. By using the customized plugins, you can add custom elements to the element type list.
Select owner	In the model tree, select a package, profile, or model as an owner of the newly created element. You may also: <ul style="list-style-type: none"> • Create a new owner. Click the Create Owner button, select an element type, and specify its properties. • Clone an existing package, profile, or model. In the model tree, select an owner, click the Clone button, and specify properties of the cloned element.
Select diagram type	Open the list and select the diagram type for the extracted part. The default diagram type is a composite structure diagram. By using the customized plugins, you can add custom diagrams to the diagram type list.

After you have specified the new element name, type, owner of the diagram, and the type of the new diagram, do one of the following:

- Click **Next** , if you want to specify ports and to define a referencing element. The next wizard step opens.
- Click **Finish**. The selected part of a composite structure diagram is extracted to a new diagram that is specified in this step. Instead of the extracted part, the selected element type is created in the SysML Internal Block Diagram referencing to the newly created diagram. The second and the third wizard steps are skipped, that is, the default options are taken.

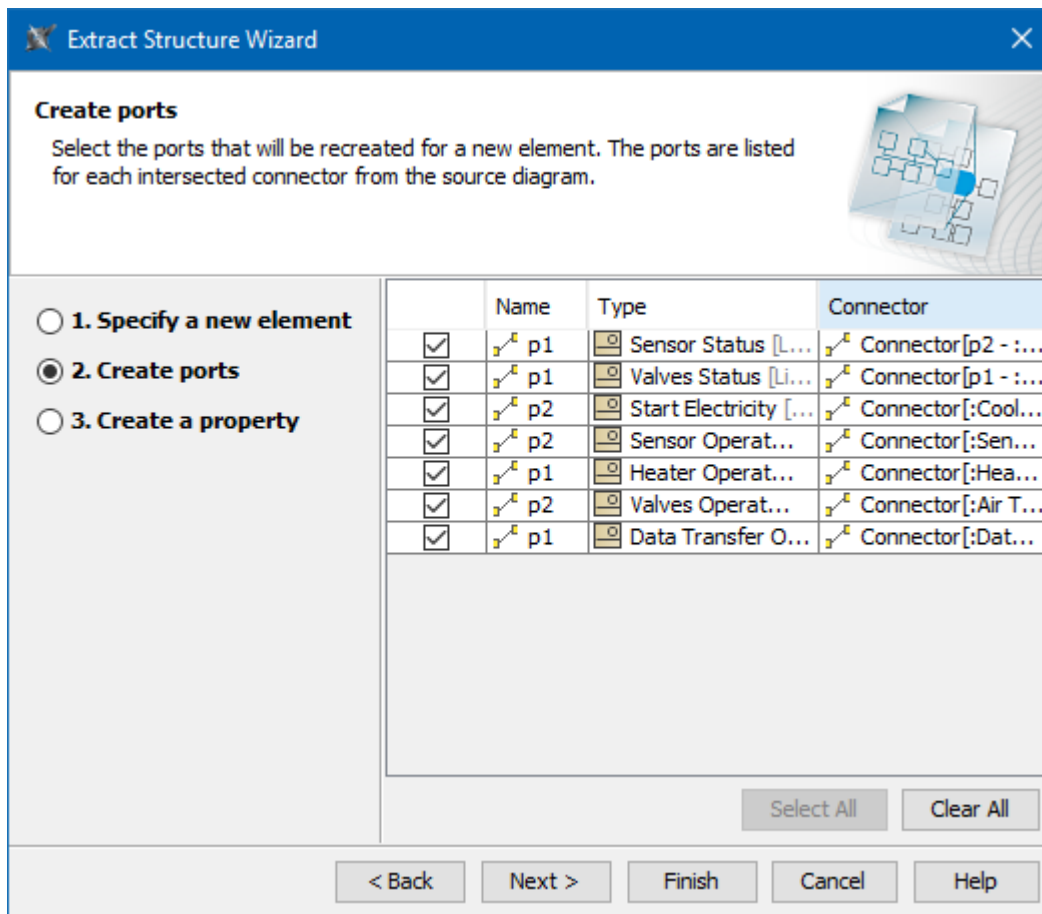
Step #2. Creation of ports

In this step, there are listed the port(s) that will be created for the:

- intersected connector(s)
- incoming connector(s)
- outgoing connector(s)



The **Create ports** list is empty unless there are intersected, incoming and/or outgoing connector(s) selected in the source SysML Internal Block Diagram.



Step 2 in the Extract Structure Wizard: Create ports.

After you have selected the ports, do one of the following:

- Click **Back** to return to the first step.
- Click **Next**, if you want to define a property (that is, referencing element). The next wizard step opens.
- Click **Finish**. The selected part of the SysML Internal Block Diagram is extracted to a new diagram. The third wizard step is skipped, that is, the default options are taken.

Step #3. Creation of a property

A property is created as the result of the extraction. The property is created under the classifier that was specified in the first wizard step. The symbol of the property is created in the source SysML Internal Block Diagram and represents the elements moved to the target diagram during the extraction.

Extract Structure Wizard

Create a property

Specify the property that will be created in the source diagram, as opposed to the extracted part. The property has the reference to the extracted part. Type the name of the property, select the visibility, and the aggregation.

☐ 1. Specify a new element
☐ 2. Create ports
☒ 3. Create a property

Type property name:

Select visibility:

Select aggregation:

☐ Create new property as association end

Step 3 in the Extract Structure Wizard: Create a property.

After you have selected the parameters, do one of the following:

- Click **Back** to return to the previous step.
- Click **Finish**. The selected part of a SysML Internal Block Diagram is extracted to a new diagram.



Example

As example, how to extract structure and what results to expect, read [Extract Structure Wizard](#)

Sample model

The model used in the figures of this page is the **climate control system** sample model. To open this sample do one of the following:

- Download [climate control system.mdzip](#).
- Find in modeling tool *<modeling tool installation directory>\samples\SysML\climate control system.mdzip*.