

# Working with Operational Structure diagram

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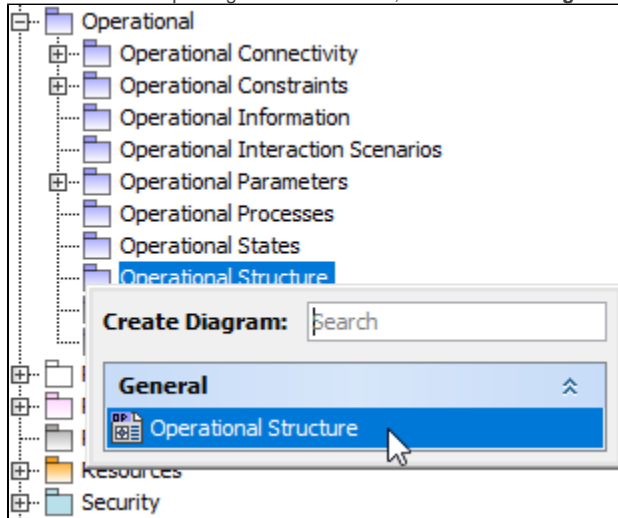
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## Creating a diagram

To create an Operational Structure diagram

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1. In the Containment Tree, select the Operational Structure and do one of the following:
  - From the selected package's shortcut menu, select **Create Diagram > Operational Structure**.



- In the modeling tool's main menu, click **Create Diagram**, search for **Operational Structure** and select it.
2. Name a diagram or leave it with the default name.

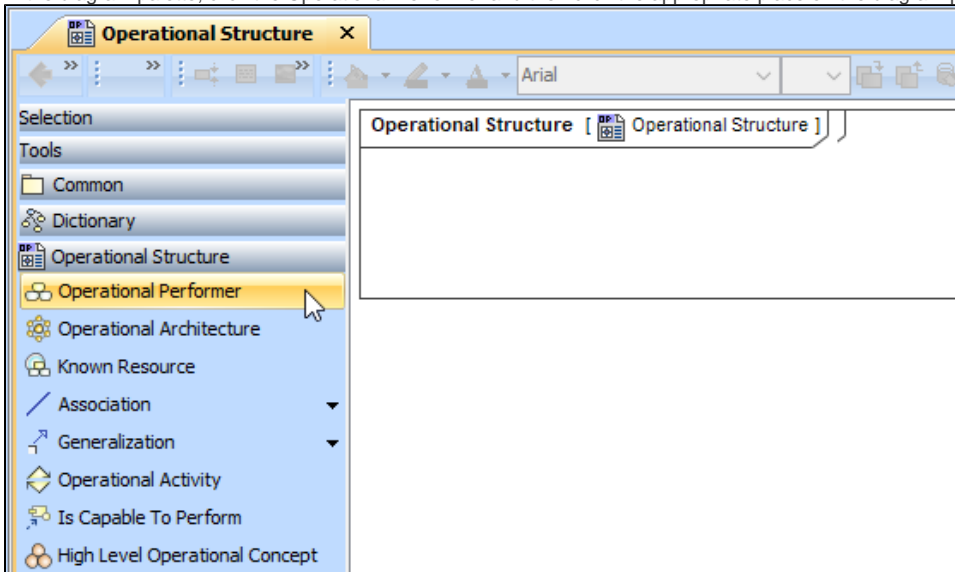
## Creating an element

When the diagram is created, you can start creating the appropriate elements. An example is described using Operational Performer element, but the same is valid for other structural elements.

To create an Operational Performer in a diagram

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1. In the diagram palette, click the Operational Performer and then click the appropriate place on the diagram pane.

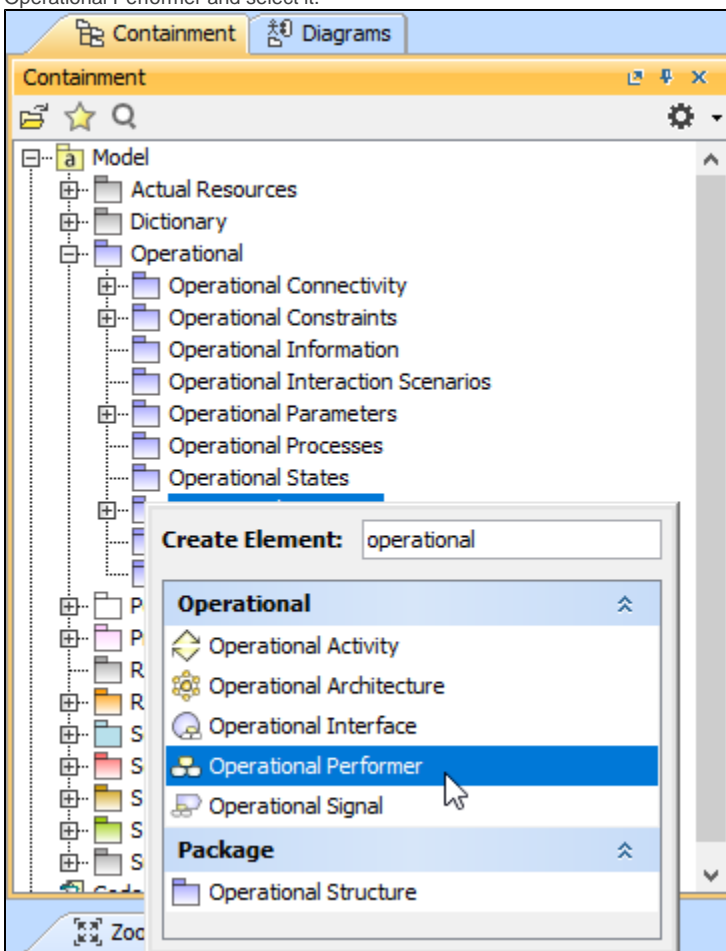


2. Name the element.

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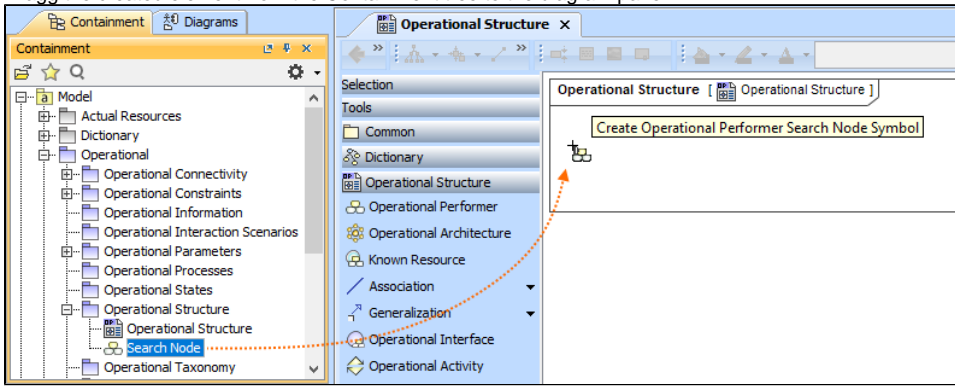
To create an Operational Performer in a Containment tree

1. In the Containment tree, right click the Operational Structure package and from the shortcut menu, select **Create Element**. Search for the Operational Performer and select it.



2. Name the element.

3. Drag the created element from the Containment tree to the diagram pane.



 The structure of each Operational Performer can be modeled using the [Operational Internal Connectivity diagram](#).

To create the elements from other resources (e.g. Word, Excel, HTML)

1. Copy a list in your resource.
2. In a diagram, press Ctrl+V and from the **Paste Special** dialog, choose **Element**.
3. From the **Select Type** dialog, choose Operational Performer (or other appropriate element).

 For more information about creating the elements from other resources, see [Creating elements from other resources](#).

## Connecting the Operational Performers

When you have Operational Performer created, you can start connecting them using the Composition and Aggregation relationships.

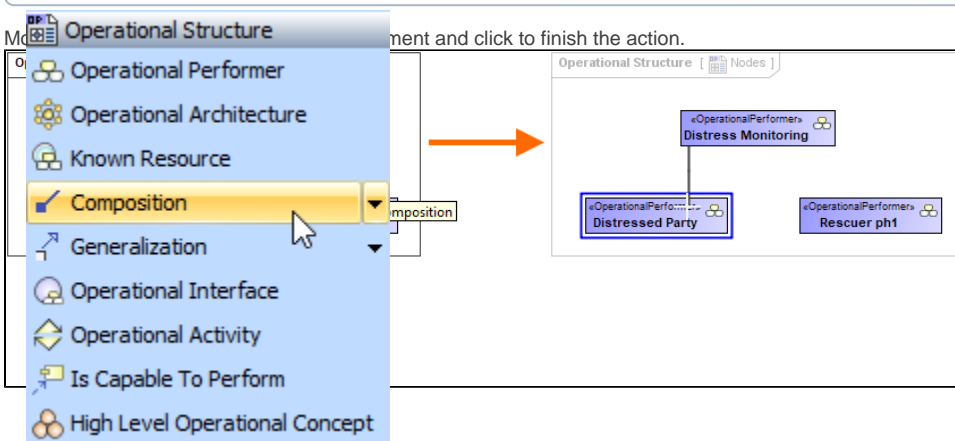
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To connect the elements with the Composition relationship

1. Select an element, which will be the Composition End.
2. From the Smart Manipulator, which appears after you select the element, choose **Directed Composition**.

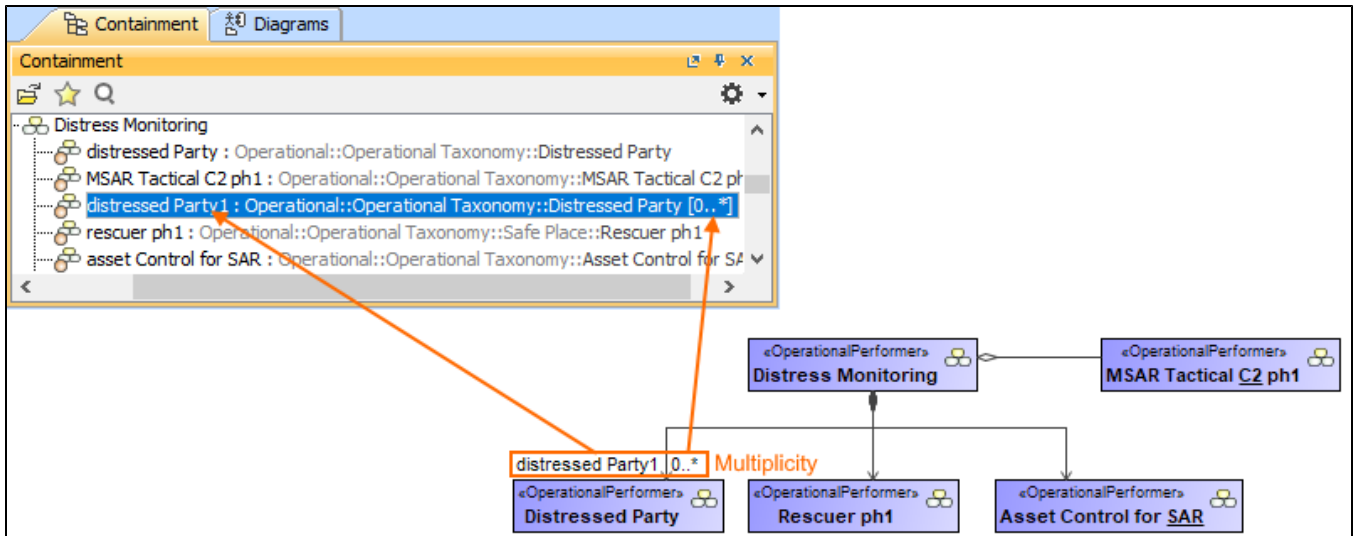
 You can also select the Composition relationship from the diagram palette.

3. Move the mouse over the element and click to finish the action.



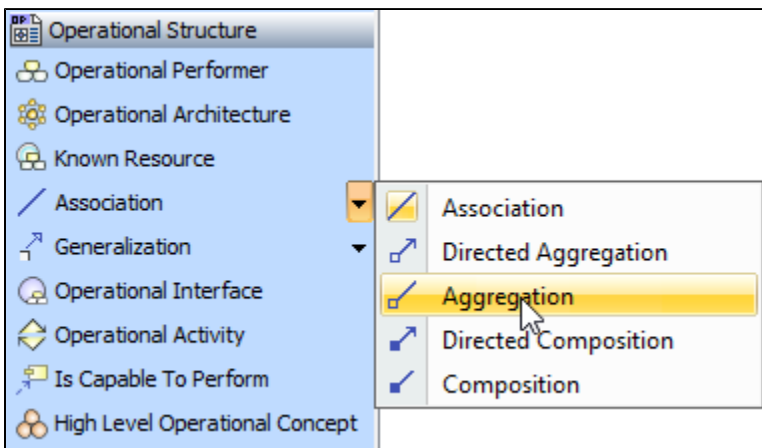
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Once the Composition relationship is created, in the Containment tree, you can see the Composite element and note the Operational Roles (Part Properties) displayed within the namespace of the Composite element and how the element type and multiplicity is shown.

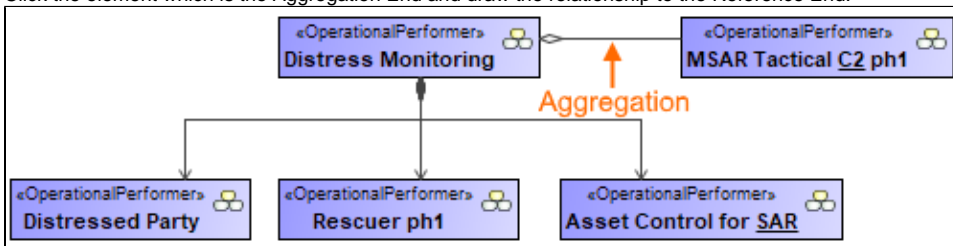


To connect the elements with the Aggregation relationship

1. Select an element, which will be the Composition End.
2. In the diagram palette, click the black arrow near the **Association** and choose **Aggregation**.



3. Click the element which is the Aggregation End and draw the relationship to the Reference End.

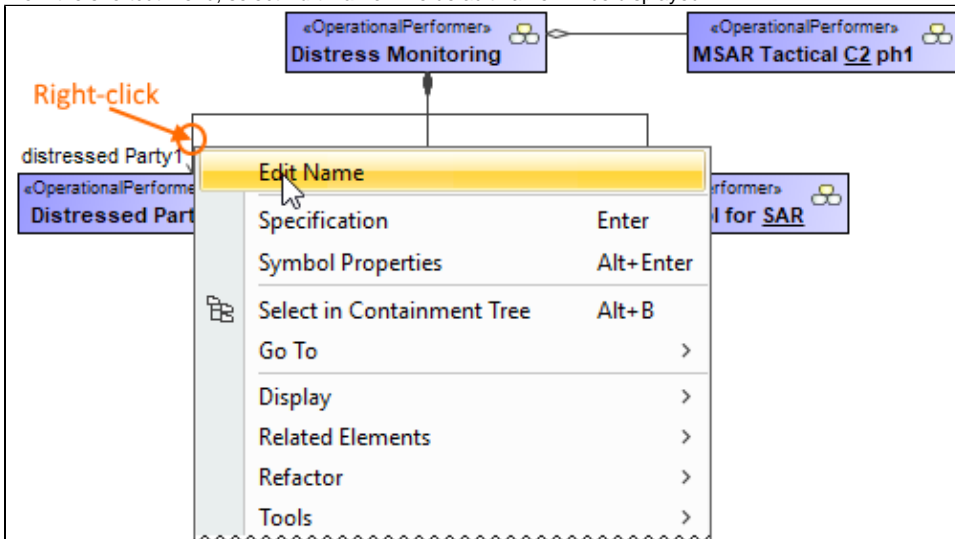


## Changing the role name and specifying multiplicity

To change the role name

1. Right-click the selected Role end of the relationship.

2. From the shortcut menu, select **Edit Name**. The default name will be displayed.



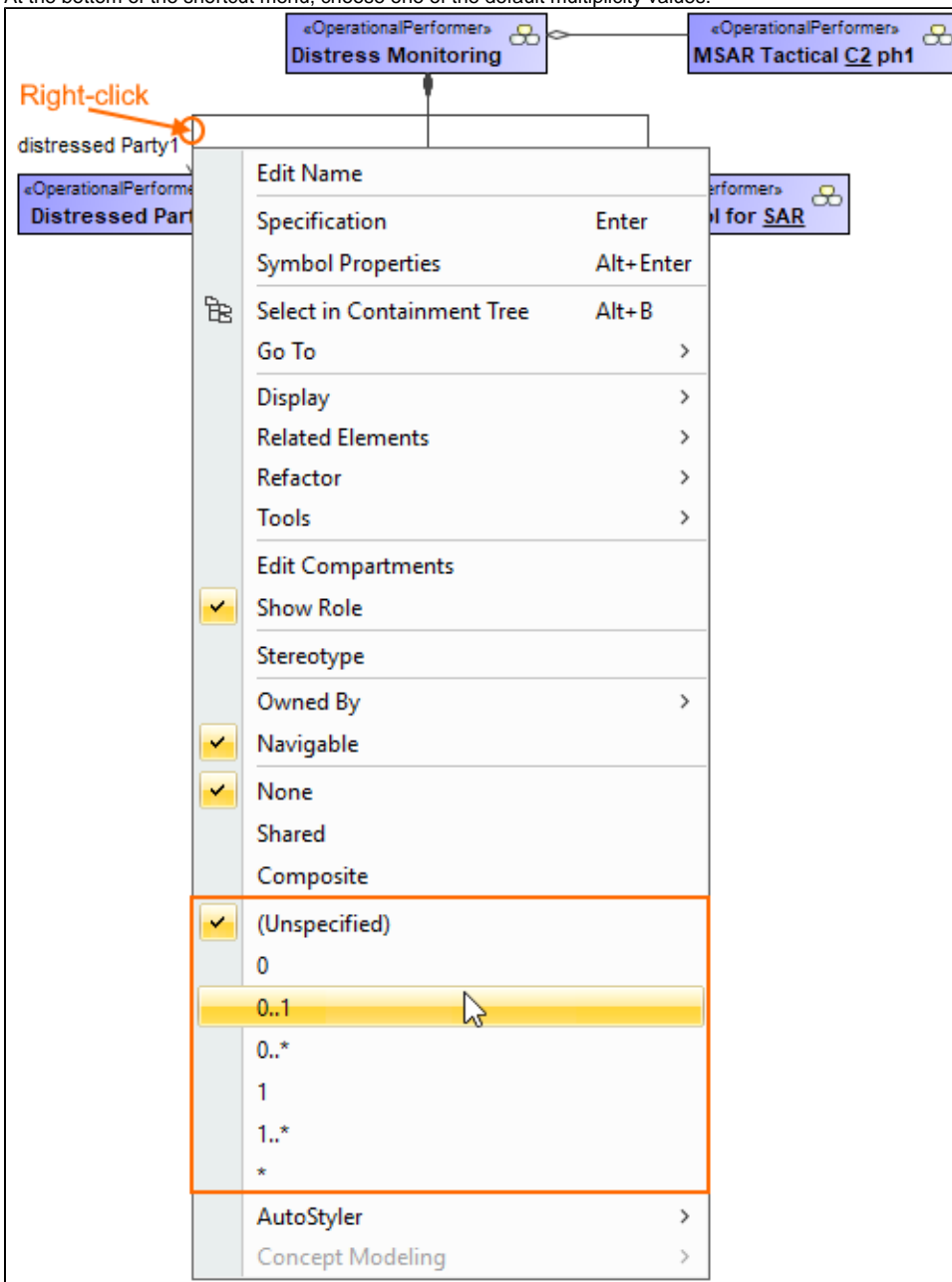
You can edit the default name on the diagram, in the Containment tree, or in the role's [Specification window](#).

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To specify multiplicity

1. Right-click the selected Role end of the Composite relationship.

2. At the bottom of the shortcut menu, choose one of the default multiplicity values.



You can always change the multiplicity value on the diagram or in the specification window of the role element.

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## Displaying created structure

If you already have created a structure in the Containment tree, you can display it on the diagram. There are three ways to display the structure:

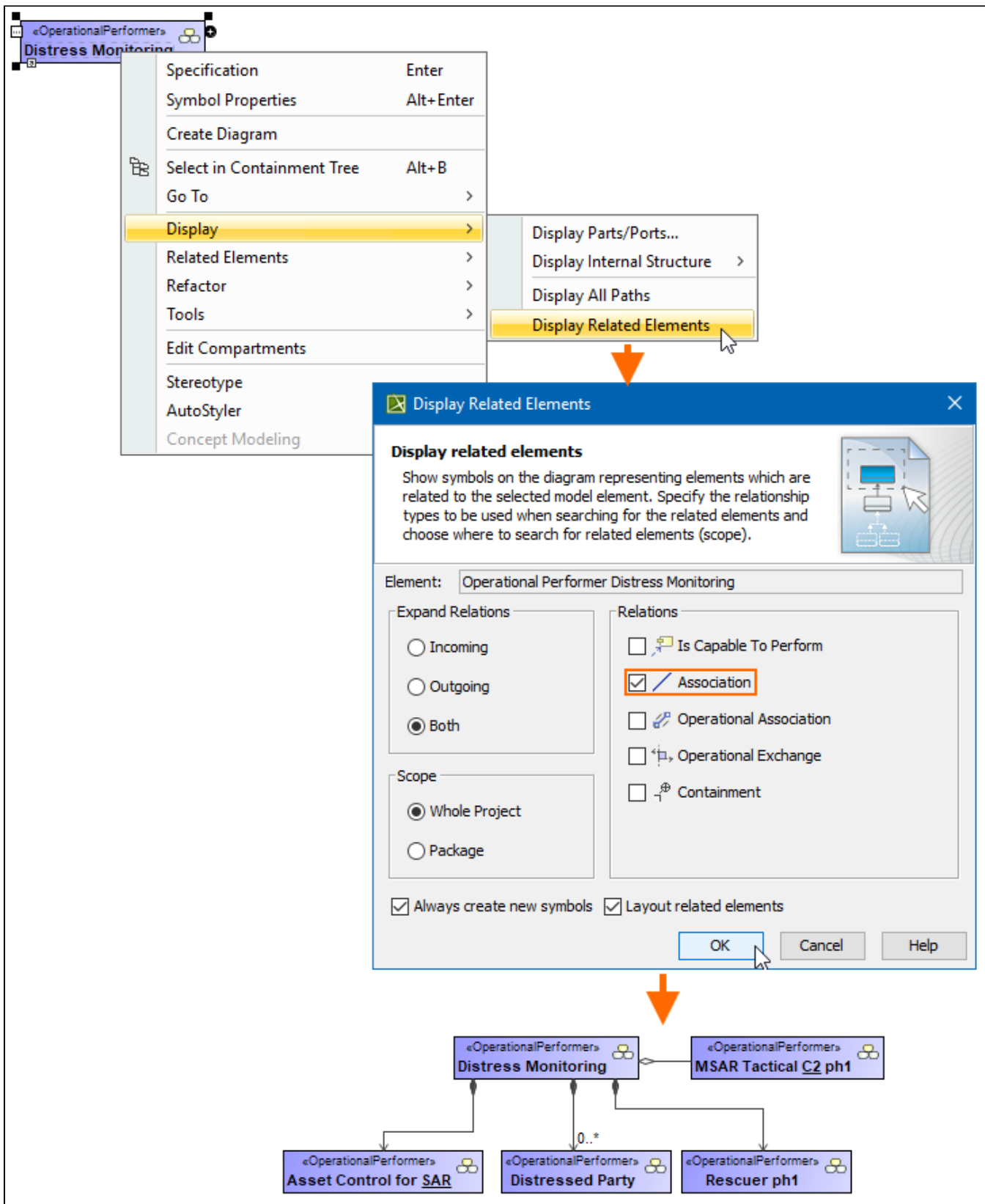
- Relationship (direct) Notation. If you choose using this notation, the structure will be displayed on a diagram pane with the elements connected with relationships.
- Attribute Compartment Notation. If you choose using this notations, the structure will be displayed as the attributes in the Attributes compartment.
- Structure (Nested elements) Notation. If you choose using this notations, the structure will be displayed in the Structure compartment.

To display a created structure on a diagram (Relationship Notation)

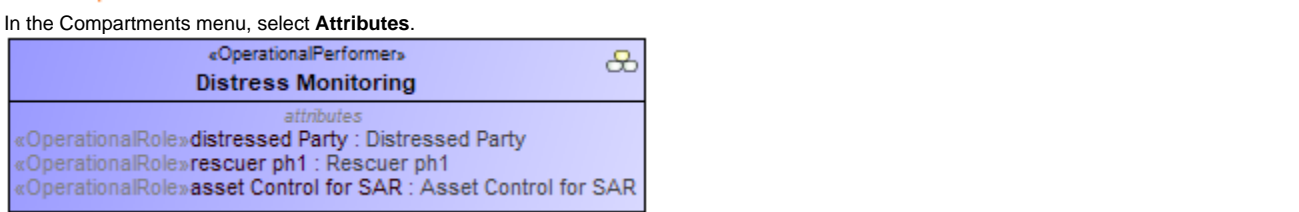
1. Drag the selected element with the part properties on to the diagram.
2. Right-click that element, and from its shortcut menu, select **Display** > **Display Related Elements**.
3. In the **Display Related Elements** dialog, select **Association**.


If Operational Performers were related using the Operational Association relationship, select the **Operational Association** also.

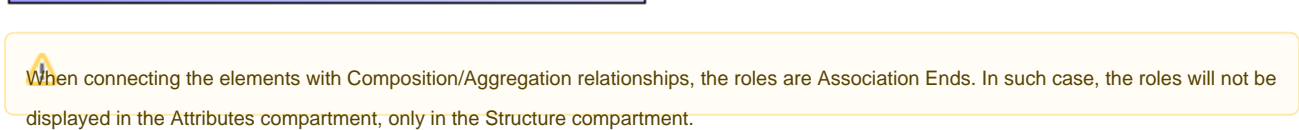
4. Click **OK**.



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- The diagram shows a use case titled «Operational Performer» with the name "Distress Monitoring". It is represented by a rectangle with a light blue fill. To the left of the rectangle is a small square icon with a lightning bolt, indicating a system boundary. To the right is a small circle icon with a plus sign, indicating a use case. Below the rectangle, the word "Compartments" is written in orange, with an arrow pointing to the top-left corner of the rectangle.



- |   |
|---|
| «OperationalPerformer»<br><b>Distress Monitoring</b>   |
| <i>attributes</i><br>«OperationalRole»distressed Party : Distressed Party<br>«OperationalRole»rescuer ph1 : Rescuer ph1<br>«OperationalRole»asset Control for SAR : Asset Control for SAR |



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- The screenshot shows the 'Display Parts/Ports' dialog box. The left pane lists elements under 'Distress Monitoring':
- ☐ MSAR Tactical C2 ph1 : MSAR Tactical C2 ph1
  - ☐ MSAR Tactical C2 ph11 : MSAR Tactical C2 ph1
  - ☒ asset Control for SAR : Asset Control for SAR
  - ☒ distressed Party : Distressed Party
  - ☐ distressed Party1 : Distressed Party [0..\*]
  - ☒ rescuer ph1 : Rescuer ph1
- The right pane, 'Select Properties', shows 'Operational Role' selected. Below it are buttons: 'Select All', 'Clear All', and 'Options'.
- An orange arrow points from the 'Display' menu item to the dialog box. Another orange arrow points from the 'asset Control for SAR : Asset Control for SAR' element in the tree to its corresponding element in the diagram on the right.



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#### **Related pages**

- [Displaying related elements](#)
- [Displaying parts and ports](#)
- [Compartments](#)
- [Smart manipulation](#)