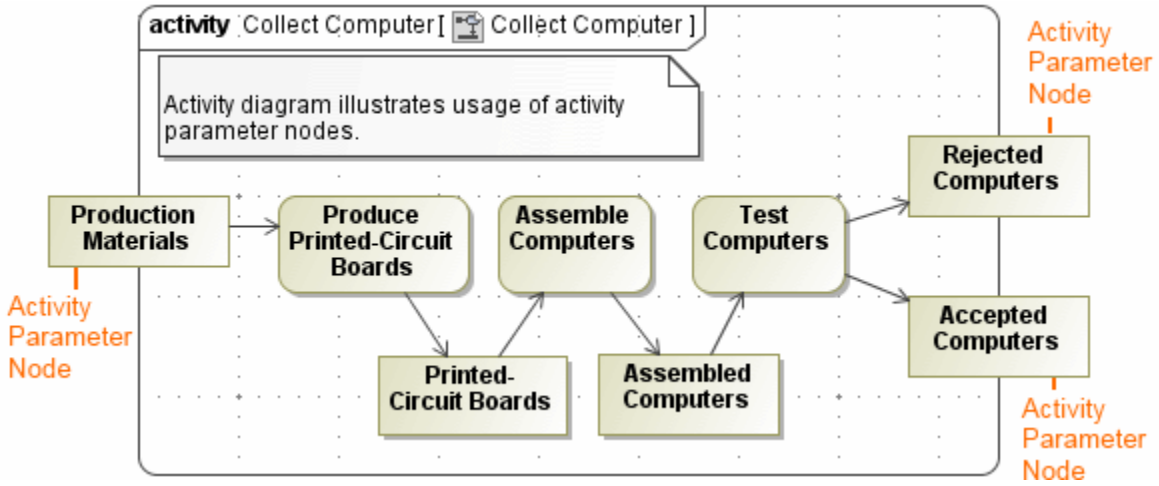
Activity Parameter Node

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Description

Activity Parameter Nodes are object nodes at the beginning and end of the flows that are used to accept inputs and provide outputs from activities.



Creating an Activity Parameter Node

To create an Activity Parameter Node

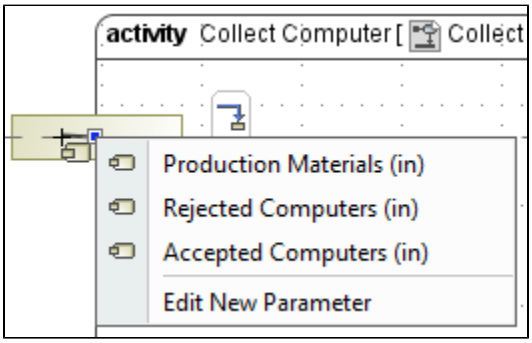
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1. In the Activity diagram palette, click the arrow next to the **Object Node** button to expand the list, then select **Activity Parameter Node**.
2. Click the Activity diagram frame. The Activity Parameter Node is created, and its shortcut menu opens.
3. Select **Edit New Parameter** to specify the parameter. The **Parameter** dialog opens.
4. Specify the parameter, and click **Close.**

The parameter for the Activity Parameter Node is created automatically.
The parameter name, type, and multiplicity are synchronized with the pin or Object Node from which/to which the Object Flow was created. The direction of the parameter is set according to the Object Flow direction, otherwise you can set it manually by simply right-clicking the activity parameter, and selecting the preferred direction.

When creating an Activity Parameter Node on a diagram frame, click on the diagram frame to open the menu. In the menu, the following Activity Parameter Nodes are listed:

- parameters that are not displayed on the diagram frame.
- parameters that are owned by the same activity as the activity diagram.
- parameters that have assigned parameters that are also owned by the same activity.



If a parameter with an *inout* direction is selected for the Activity Parameter Node creation, then two Activity Parameter Nodes are created on the diagram frame.

> You can also create an Activity Parameter Node by drawing an Object Flow directly to or from the Activity diagram frame.

Specifying Activity Parameter Node type

After the Activity Parameter Node is created, you can specify it's type. Use one of the following way:

- Using the **Specify Type** button.
- Using the Specification window.

To specify Activity Parameter Node type by using the **Specify Type** button

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1. Select the Activity Parameter Node shape.
2. Click T on the smart manipulator toolbar.
3. Do one of the following:
   - Select an existing element from the **Select Type** menu.
   - Create new type:
     a. Type a name.
     b. Press Enter.
     c. In the **Create <type name> As** dialog, select element kind.

   The type is specified for a Activity Parameter Node.

To specify Activity Parameter Node type by using the Specification window

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1. Right-click the Activity Parameter Node and select the **Specification** command.
2. In the Specification window, select the **Type** property value cell.
3. Do one of the following:
   - Select an existing element from the list.
   - Click ... and in the **Select Element** dialog do the following:
     - Select an existing elements from the **Tree** or **List** tab.
     - create new element by switching on the **Creation Mode** and clicking the **Create** button.
4. Click **Close**.
   The type is specified for a Activity Parameter Node.

Setting the direction of an Activity Parameter Node

To set the direction of an Activity Parameter Node

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1. Right-click the Activity Parameter Node on the diagram, and select **Specification**.
2. In the **Parameter** property group, click to expand the **Direction** options drop-down menu.
3. Select the preferred direction, and click **Close**.

Displaying Activity Parameter Nodes

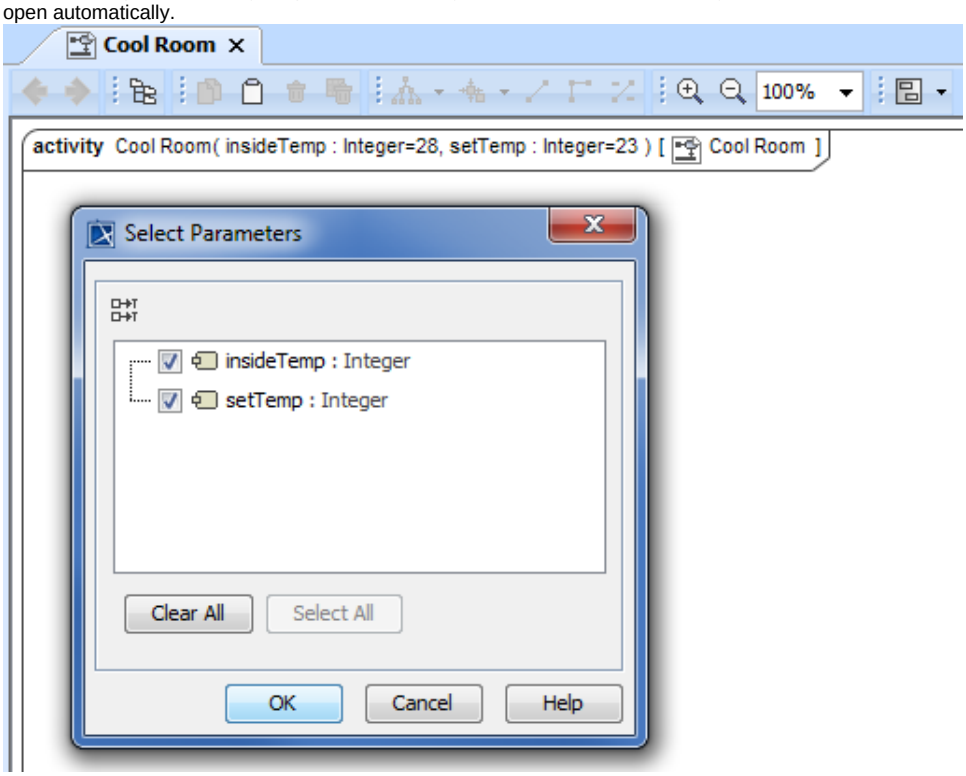
You can display Activity Parameter Nodes on the frame of the Activity diagram when you are:

- Creating a new Activity diagram.
- Modifying a pre-existing Activity diagram.

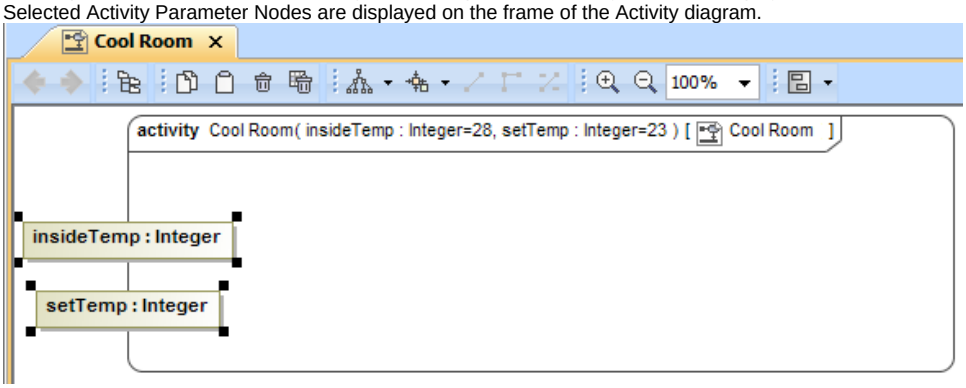
To display an Activity Parameter Nodes when creating a new Activity diagram

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1. When creating a new Activity diagram for an Activity element that contains Activity Parameter Nodes, the **Select Parameters** dialog will open automatically.



2. In the opened **Select Parameters** dialog, select the parameters that you want to display, and click **OK**. Selected Activity Parameter Nodes are displayed on the frame of the Activity diagram.



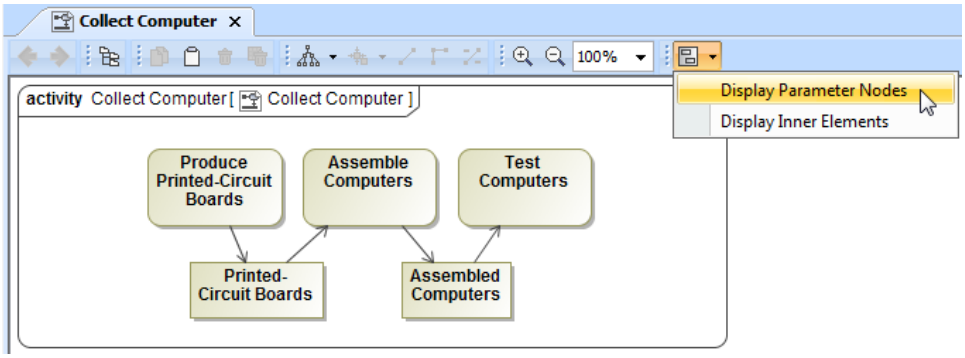
> If you want all Activity Parameter Nodes to be displayed automatically when creating a new Activity diagram, go to **Options** > **Project** on the main menu, and set the **Display All Activity Parameter Nodes in Diagrams** option to *true.*

To display Activity Parameter Nodes on the frame in the pre-existing Activity diagram

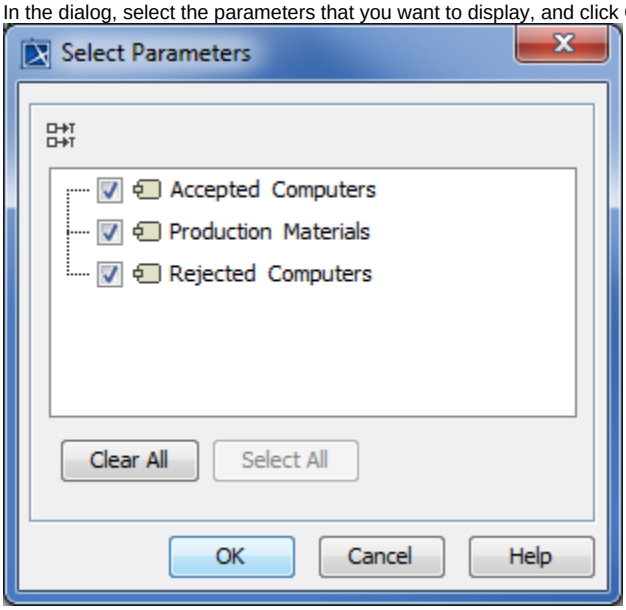
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1. Select the Activity diagram pane.
2. Open the **Select Parameters** dialog by performing one of the following steps:
   - From the shortcut menu, select **Display** > **Display Parameter Nodes**.

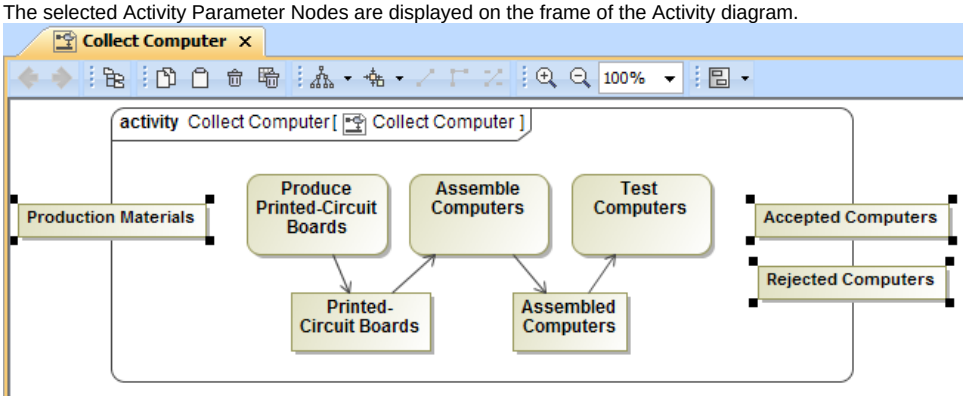
- On the diagram toolbar, click  and select **Display Parameter Nodes.**



3. In the dialog, select the parameters that you want to display, and click **OK**.



The selected Activity Parameter Nodes are displayed on the frame of the Activity diagram.

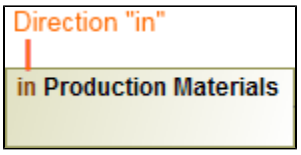


Displaying or hiding the direction of an Activity Parameter Node

To display or hide the direction of an Activity Parameter Node

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1. Right-click the Activity Parameter Node on the diagram, and select **Symbol Properties**.
2. In the **Symbol Properties** dialog, click to select or clear the **Show Direction** check box to display or hide the direction.
3. Click **Close**.



- You can see the direction of the parameter displayed in the **Containment** tree before choosing the parameter name.
- If an Activity Parameter Node is associated with the parameter of an *inout* direction, then the direction to the Activity Parameter Node is set according to the connected flows. If an outgoing flow is connected to the newly created Activity Parameter Node, then this Activity Parameter Node is set as an input node, and the "in" parameter direction is used.

Related pages

- Activity diagram
- Node
- Expansion Region and Expansion Nodes
- Model Elements

Sample model

The model used in the figures of this page is the **Activity diagram** sample model that comes with MagicDraw. To open this sample do one of the following:

- Download *activity diagram.mdzip*.
- Find in modeling tool <*modeling tool installation directory*>*samples**diagrams**activity diagram.mdzip*.