Watch pane

On this page

With the **Watch** pane, you can easily monitor selected properties and their expressions with runtime values while debugging. The **Watch** pane displays a flat list of selected runtime values during model simulation.
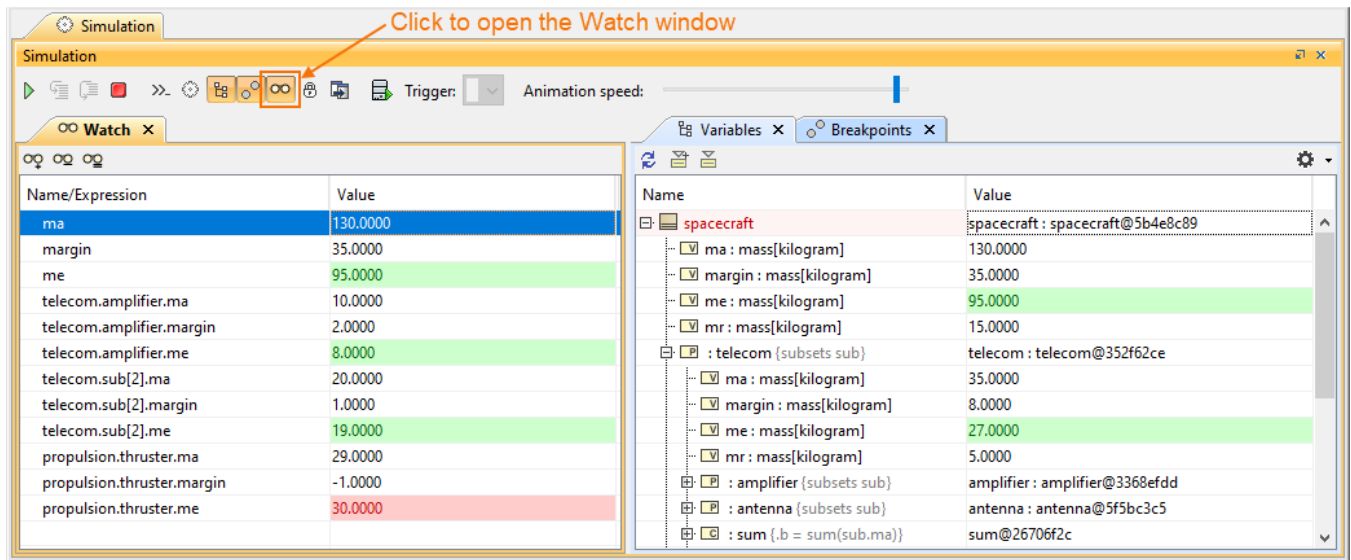
The Watch pane with expressions and their selected runtime values during model simulation.

For any projects with the default Simulation window settings, the **Watch** window will be opened by default in the same group as the **Variables** and **Breakp oints** as the last pane. If the user saves the project, the **Watch** window properties will be kept according to the recent settings like the other panes. Also, you can manually open it by clicking [OO icon] in the **Simulation** toolbar. This pane contains two columns:

- **Name/Expression** that can be edited. When you add a Watch item, it will be shown in this column.
- **Value** is editable if it represents value property, but not an expression. When you add a Watch item, its value will be in this column. The **Value** column will be highlighted in red or green the same as in the **Variables** pane.

> ⚠ **Note**
>
> - If the **Simulation** toolbar is locked (in Monte-Carlo and Trade Study simulation), the **Watch** pane will be disabled to maximize the performance.
>
> - When adding items at runtime, the value is evaluated and updated for all property changes and state changes on each clock tick. However, if
You can add Watch items to the **Watch** pane using the following:
>   you add properties before runtime, the value is not be evaluated until the simulation runs.
> - Variables pane
> - Cohifthesadddeditem is not found, the value is displayed as "Not found!" in red unless you correct or remove the selected property.
> - Watch pane
> - Inflhe added item has no value, the value is displayed with <blank>.
> - SelectPropertiesConfig stereotype
> - Interfitle@locdadtParanexiticDidgnaith <blank>/0 value, the value is displayed with []/[0].

Adding Watch items using the Variables pane

To add Watch items using the **Variables** pane
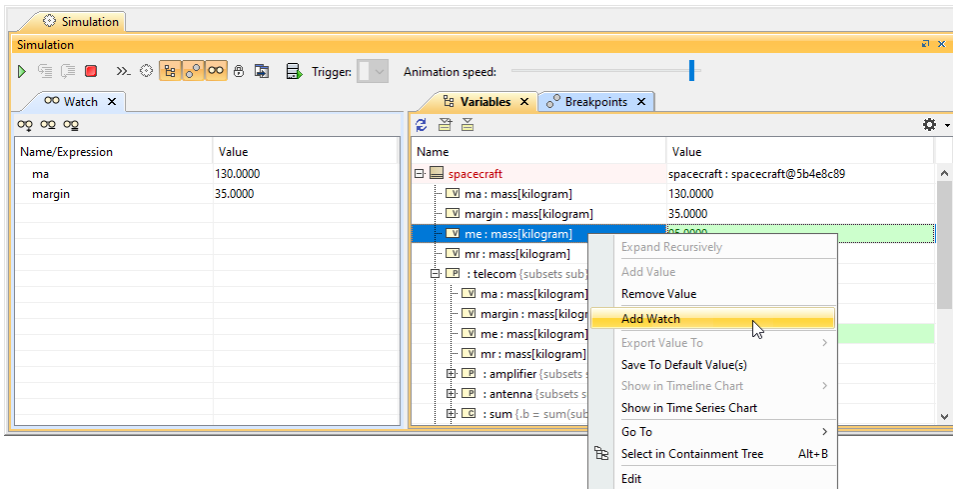
- In the **Variables** pane, right-click the property you want to add and select **Add Watch**.

Adding Watch items using the Console pane

To add Watch items using the **Console** pane

1. In the input box (>>) of the **Console** pane, type properties and expressions you want to add to the **Watch** pane.
2. In the **Console** pane toolbar click ![icon]. The properties and expressions in the input box (>>) are added to the **Watch** pane. Also, the simulation automatically saves the selected language in the list box.
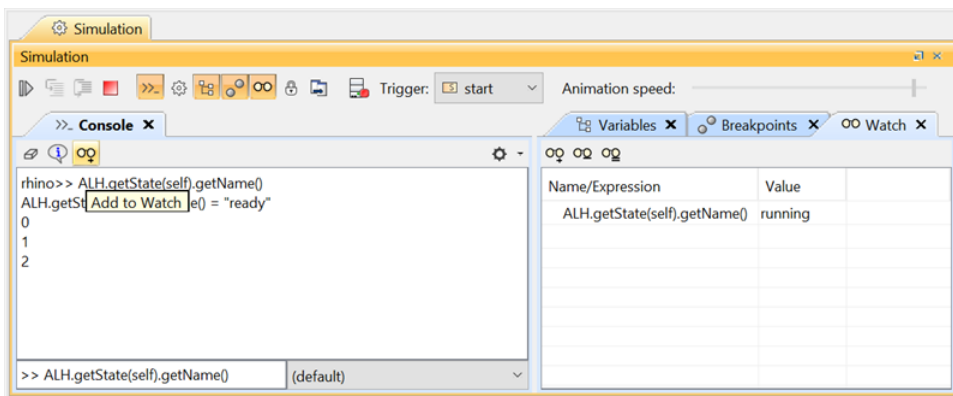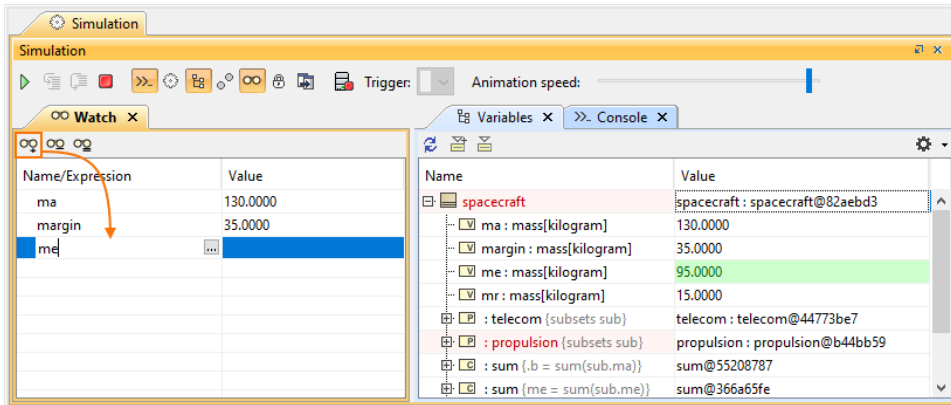

Adding Watch items using the Watch pane

To add Watch items using the **Watch** pane

1. Do one of the following:
   - In the Watch pane toolbar, click ![icon].
   - In the Watch pane, click the first blank row.

2. Type the property or expression you want to add.

> ⚠️ **Note**
>
> - You can add a name of a property without using the root object because the context of the **Watch** pane is the main root context.
>
> - A name of *Type* can also be used, if the name of a property does not exist, e.g., *spacecraft.telecom.ma* = *35*.
>
> - *Multiplicity* used will be shown as a flat list of an array of strings, e.g., *Trade-Study.MaxEfficiency.x = [0.4761, 0.4761,…, 0.4237]*.
>
> - You can specify an index of *Multiplicity* starting at 1, e.g., *Trade-Study.MaxEfficiency.x[1] = 0.4761*.

Adding Watch items using the SelectPropertiesConfig stereotype

To use the «SelectPropertiesConfig» stereotype as a predefined list of properties and add it to a Simulation Configuration

1. Create a Simulation Configuration diagram.
2. Add a «SelectPropertiesConfig» and «SimulationConfig» to the diagram.
3. Set *Name*, *Represents* (=object), and *Value* (=properties) of the «SelectPropertiesConfig».
4. Set *Watch Properties* (=«SelectPropertiesConfig») of the «SimulationConfig».

> ⚠️ **Note**
>
> The *Watch Properties* will be shown in **Expert & All** view mode.

5. When running the «SimulationConfig», the **Watch** pane will append the properties populated from «SelectPropertiesConfig». If some properties already exist, they will not be added to the **Watch** pane.
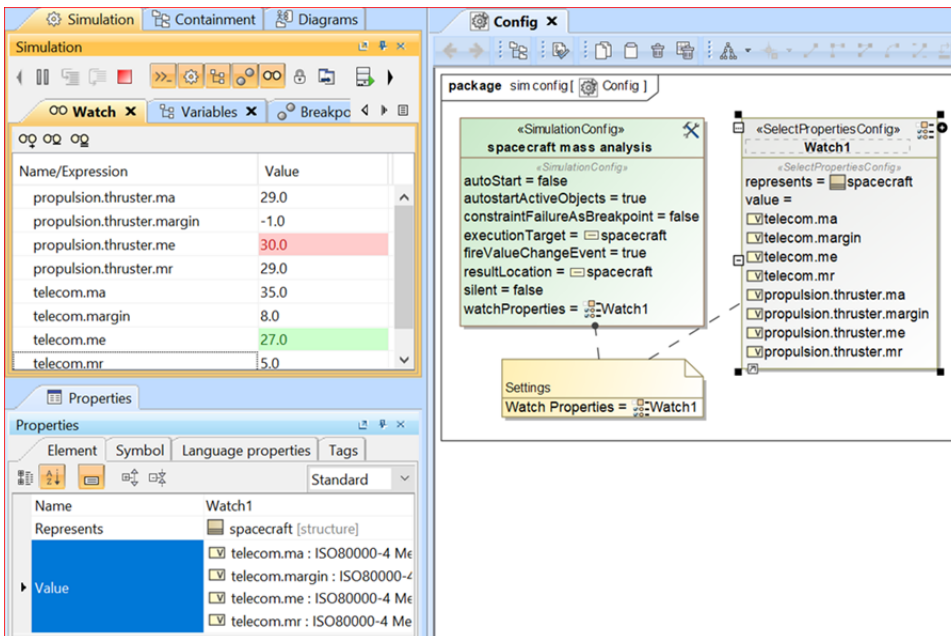

Adding Watch items using an Internal Block or Parametric Diagram

You can add all kinds of properties (value, part, constraint), constraint parameters, and ports to the Watch pane directly from an Internal Block or Parametric Diagram.

⚠️ You can only use this method if the Internal Block or Parametric Diagram context is the same as the simulation context, or if the diagram context is the first level of the simulation context structure.

To add Watch items using an Internal Block or Parametric Diagram

1. Run the simulation.
2. In an Internal Block or Parametric Diagram, right-click a property, constraint parameter, or port and select **Simulation** > **Add to Watch**.
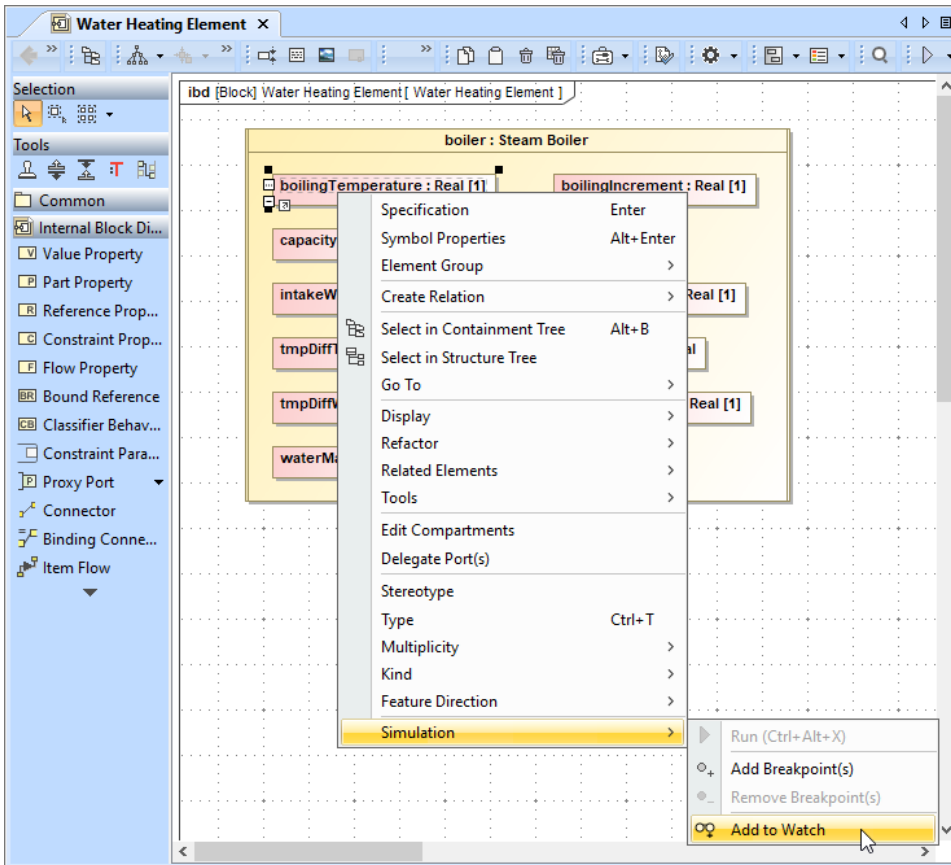
Editing and removing Watch items

You can edit and remove any items by selecting the **Name/Expression** column on the **Watch** pane.

To edit a Watch item

- Click an item to edit and press ENTER.

To remove Watch items from the Watch pane

- Do one of the following:

    - To remove a single Watch item, select the item you want to remove and click [icon].

    - To remove all Watch items, click [icon].