

Working with Execution Specifications

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The activation bars represent real model elements - Behavior and Action Execution Specifications. This benefits of using UML Execution Specifications are:

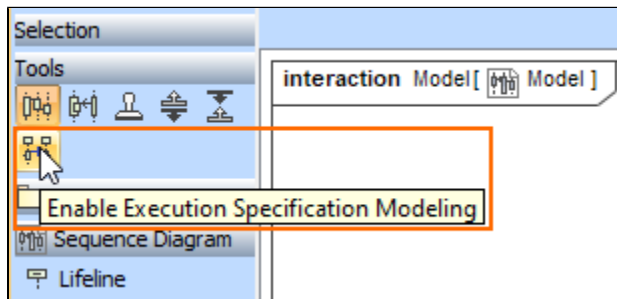
- Navigation. By double-clicking the activation bars (Behavior Execution Specifications) you can navigate from a sequence diagram to other behavior diagrams.
- Time and Duration Constraints can be attached to Behavior and Action Execution Specifications.

This method of modeling is optional. By default, the modeling approach where activation bars represent lifelines is used.

To switch to the new mode with activation bars representing UML Execution Specifications

- In the Sequence diagram palette, click the **Enable Execution Specification Modeling** button.

 This action enables the new modeling mode for each Sequence diagram individually.



- When you switch to this modeling approach, you **will not be able** to return to previous modeling method.

After you have enabled the Execution Specification Modeling, the activation bars in Sequence diagram represent:

- If you open the Sequence Diagram with the activation bars representing UML Execution Specifications with the modeling tool version 19.0, such diagram will be read-only.
- Behavior Execution Specification
- Action Execution Specification

You can refactor one Execution Specification to another at any time.

Setting behaviors or actions on the Execution Specifications

From the Containment tree, you can drag the Behavior or Action on the Execution Specification.

When you drag the behavior:

- If the activation bar represents Behavior Execution Specification, the dropped behavior is set for the **behavior** property of the Behavior Execution Specification.
- If the activation bar represents Action Execution Specification, the Action Execution Specification is converted to the Behavior Execution Specification and then the dropped behavior is set for the **behavior** property of the Behavior Execution Specification.

When you drag the action:

- If the activation bar represents Action Execution Specification, the dropped action is set for the **action** property of the Action Execution Specification.
- If the activation bar represents Behavior Execution Specification, the Behavior Execution Specification is converted to the Action Execution Specification and then dropped action is set for the **action** property of the Action Execution Specification.

Once the behavior or action is set for the Execution Specification, you can easily navigate to the diagrams of the set behavior or action.

To navigate to the behavior diagram

- Double-click the Behavior Execution Specification.

To navigate to the activity diagram

- Double-click the Action Execution Specification.

Setting the Behavior Execution Specification behavior by adding an operation for the message

When you have an operation with a method, you can add that operation to the message and the method is set as a behavior of the Behavior Execution Specification at the end of the message.

To set an operation with a method

1. In the Sequence diagram, draw a message between Behavior Execution Specifications.
2. In the Containment tree, select an operation with a method and drag it to the message.
3. Open the Specification window of the Behavior Execution Specification which is at the end of the message. In the Behavior property cell, the operation method is set as a behavior.



- If you change the operation to a different one that has a different method, that method will overwrite the behavior of the Behavior Execution Specification.

Drawing the Time and Duration constraints

If you change the operation to a different one that has no method, the previously set method will remain as a behavior of the Behavior

When you draw new Time constraints in a Sequence diagram (from the diagram palette):

- If you click near the top of the activation bar, the constrainedElement will be set to the Execution Specification of that bar, and *firstEvent=true*.
- If you click near the bottom of the activation bar, the constrainedElement will be set to the Execution Specification of that bar, and *firstEvent=false*.

When you draw new Duration constraints in a Sequence diagram (from the diagram palette):

- If you click near the top of the activation bar, the constrainedElement[i] will be set to the Execution Specification of that bar, and *firstEvent[i]=true*.
- If you click near the bottom of the activation bar, the constrainedElement[i] will be set to the Execution Specification of that bar, and *firstEvent[i]=false*.

Related pages

- [Creating diagrams](#)