

Sample projects

On this page

- [Do Activity in State](#)
- [Guard](#)
- [History](#)
- [Regions](#)
- [Timing Events](#)

The State Machine simulation sample projects are available in the built-in **Small Tests** samples, in `<modeling_tool_installation_directory>\samples\simulation\SmallTestSamples.mzip` or from the Welcome screen under the **Simulation** group of the modeling tool. In this topic, the focus is on the **State Tests** section for the State Machine simulation sample projects as follows:

Content Diagram

Model [Intro]

Small Tests


In this sample, you will find various tests that are designed to demonstrate how spe model execution. Tests are grouped by categories.

Activity Tests

Purpose - demonstrates how Activities can be used in model execution. You can review these tests:

- Accept Event Action
- Call Operation
- Decision
- Opaque
- Probability
- Structured Activity Node
- Object Node
- Send Signal to Target
- Dummy Actions

Double-click the content diagram below to see the tests.




Intro to Activity Tests

State Tests

Purpose - demonstrates how State can be used in model execution. You can review these tests:

- Do Activity in State
- Guard
- History
- Regions
- Timing Events

Double-click the content diagram below to see the tests.

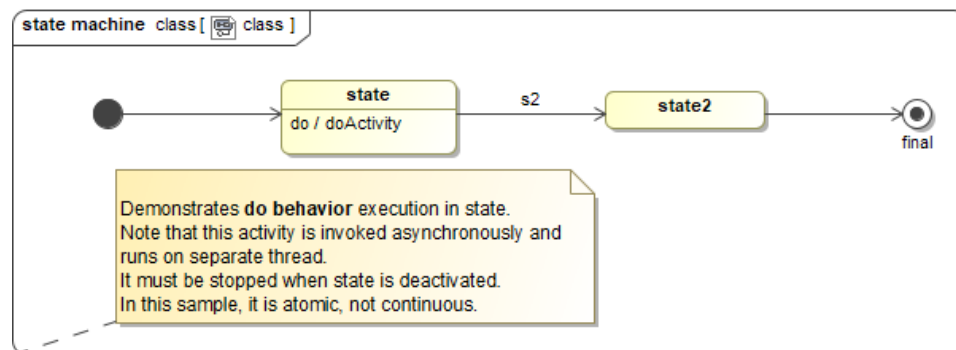


Intro to State Tests

The State Tests section of the Small Tests samples.

• Do Activity in State

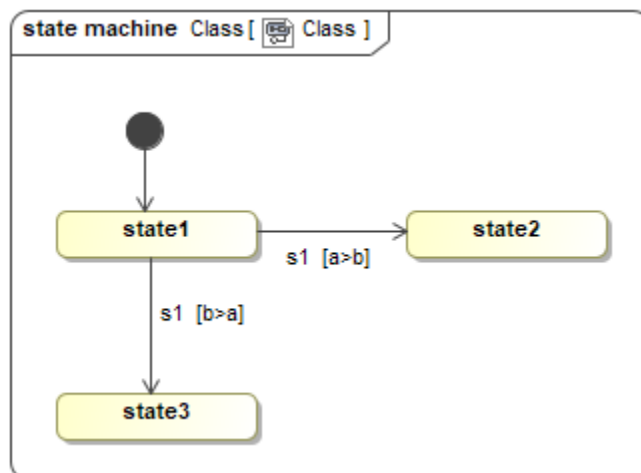
This test is designed to demonstrate how to use the Do Behavior in model execution. Run the **TestState_DoActivity** simulation configuration to see how it works.



The Do Activity in State sample.

• Guard

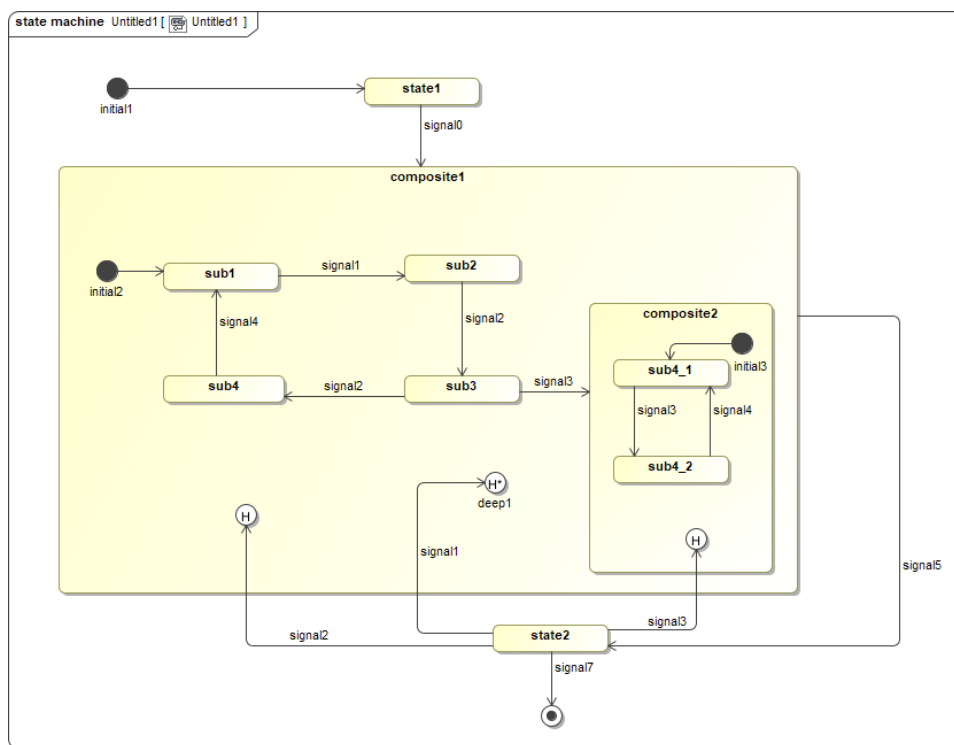
This test is designed to demonstrate how to use Guards on Transitions in model execution. Run the **TestState_Guard** simulation configuration to see how it works.



The Guard sample.

History

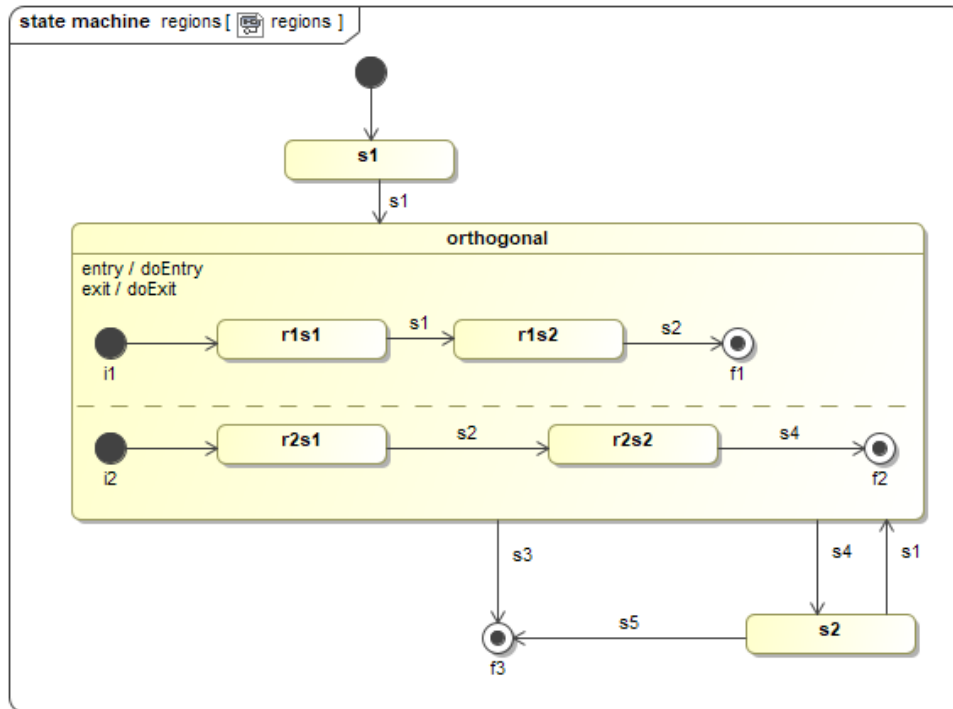
This test is designed to demonstrate how to use the Composite State with Shallow History and Deep History in model execution. Click the **Run** button on the diagram toolbar to see how it works.



The History sample.

Regions

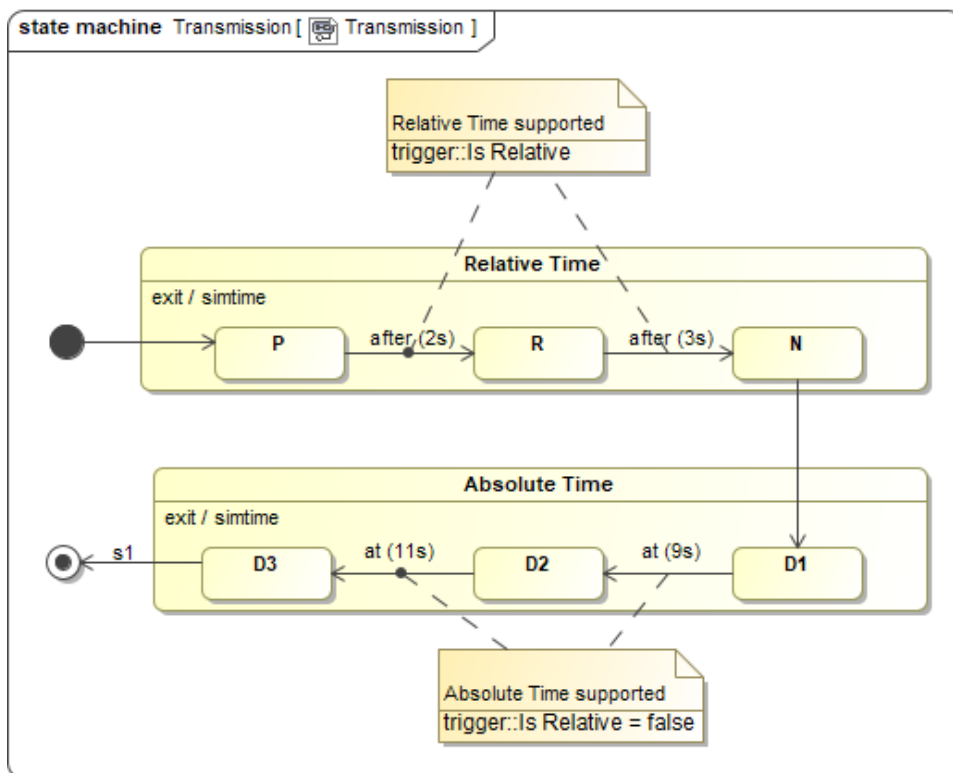
This test is designed to demonstrate how to use the Orthogonal State with Parallel Regions and Entry and Exit Activities in model execution. The Entry Activity is executed immediately after the State Machine is activated before any States in the inner regions. Next, all Initial States in the regions are activated simultaneously. The **Regions** sample demonstrates that multiple active States are executed at the same time. The Event list in the Simulation Console contains Triggers of all outgoing Transitions of all active States. If one of the parent States' outgoing Transitions is triggered, the Exit Activity will be executed before the State Machine is deactivated. Click the **Run with Context** button on the diagram toolbar to see how it works.



The Regions sample.

• Timing Events

This test is designed to demonstrate how to use timing Events in model execution. Both relative time and absolute time are supported (Is **Relative=true/false**). Click the **Run** button on the diagram toolbar to see how it works.



The Timing Events sample.