Sample projects

On this page

The State Machine simulation sample projects are available in the built-in **Small Tests** samples, in *<modeling_tool_installation_directory>\samples\simulation\SmallTestSamples.mdzip* 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

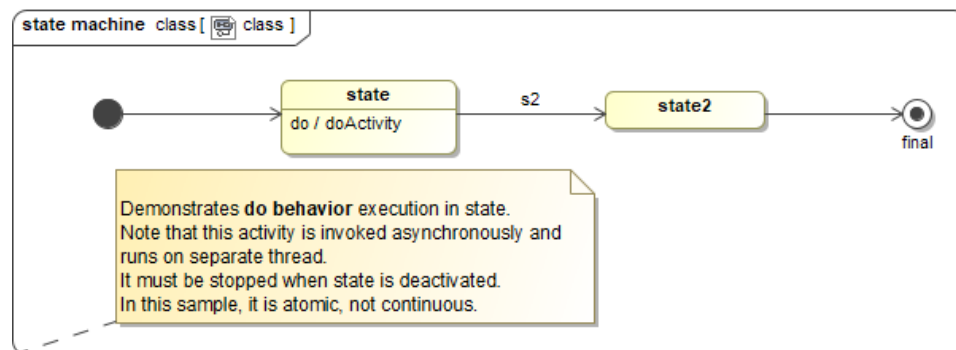Double-click the content diagram below to see the tests.

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.

  state machine class [🖥 class]

  state
  do / doActivity

  s2

  state2

  final

  Demonstrates **do behavior** execution in state.
  Note that this activity is invoked asynchronously and runs on separate thread.
  It must be stopped when state is deactivated.
  In this sample, it is atomic, not continuous.

  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.
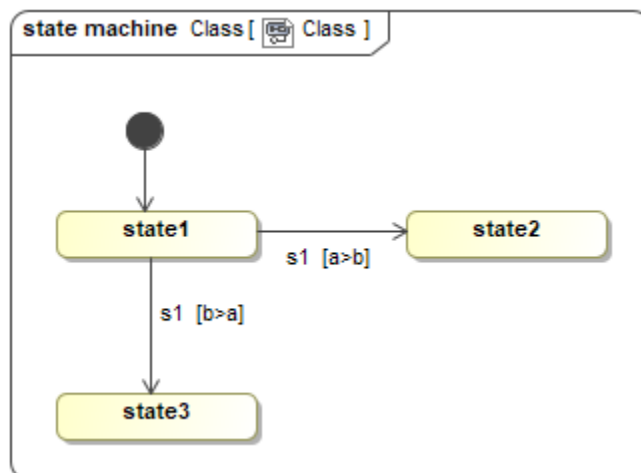
The Guard sample.

- **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.
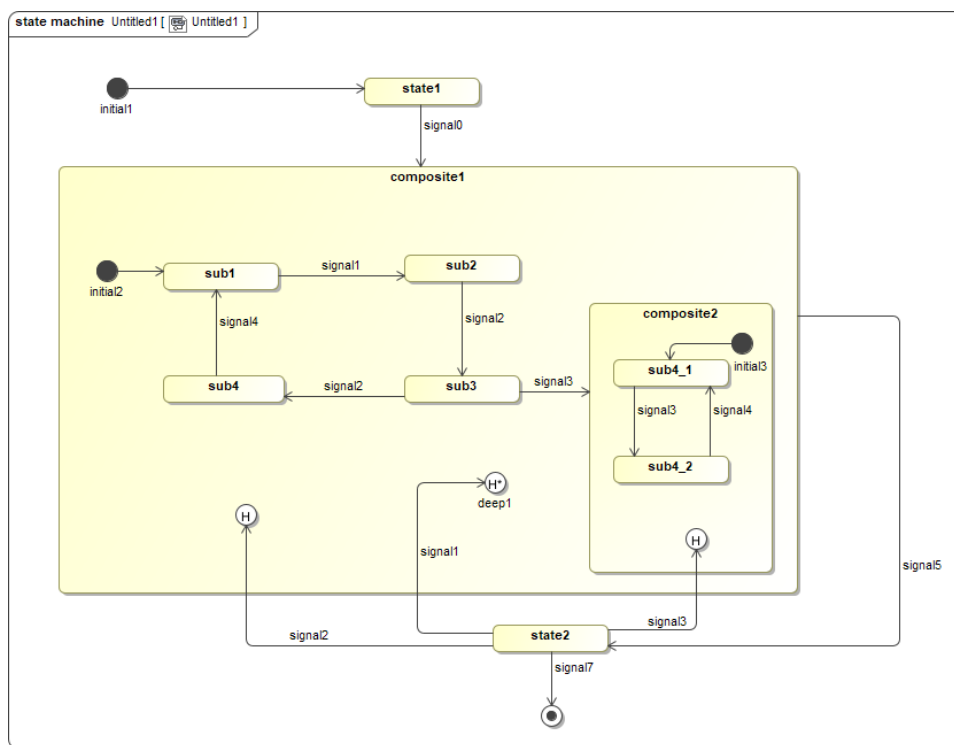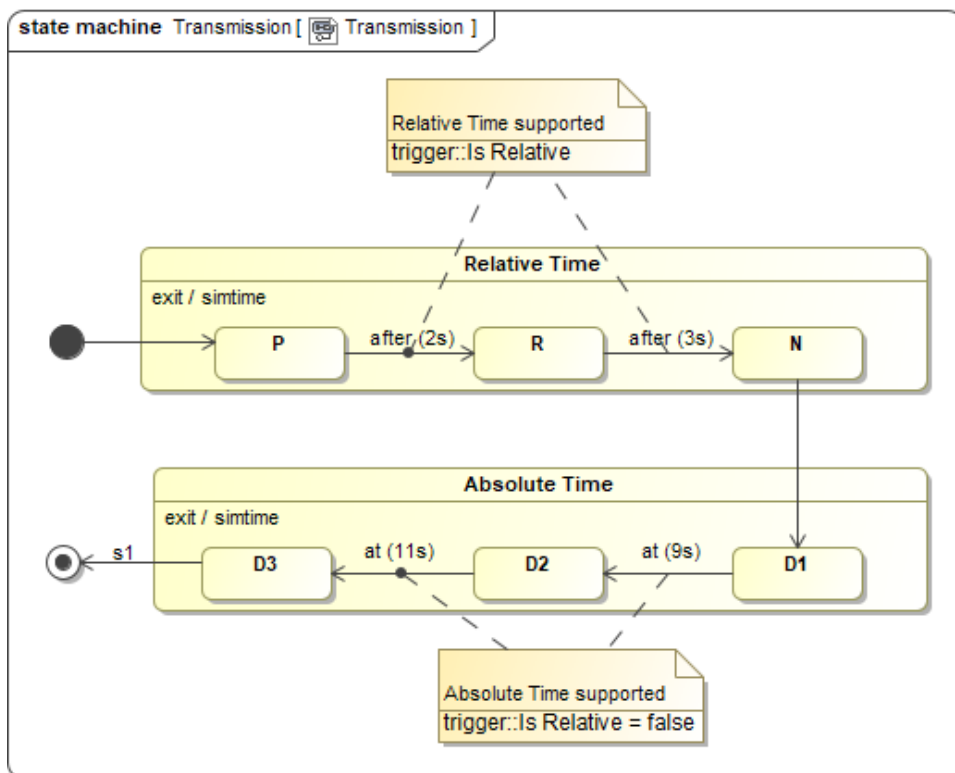

The History sample.

- **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.

state machine regions [regions]
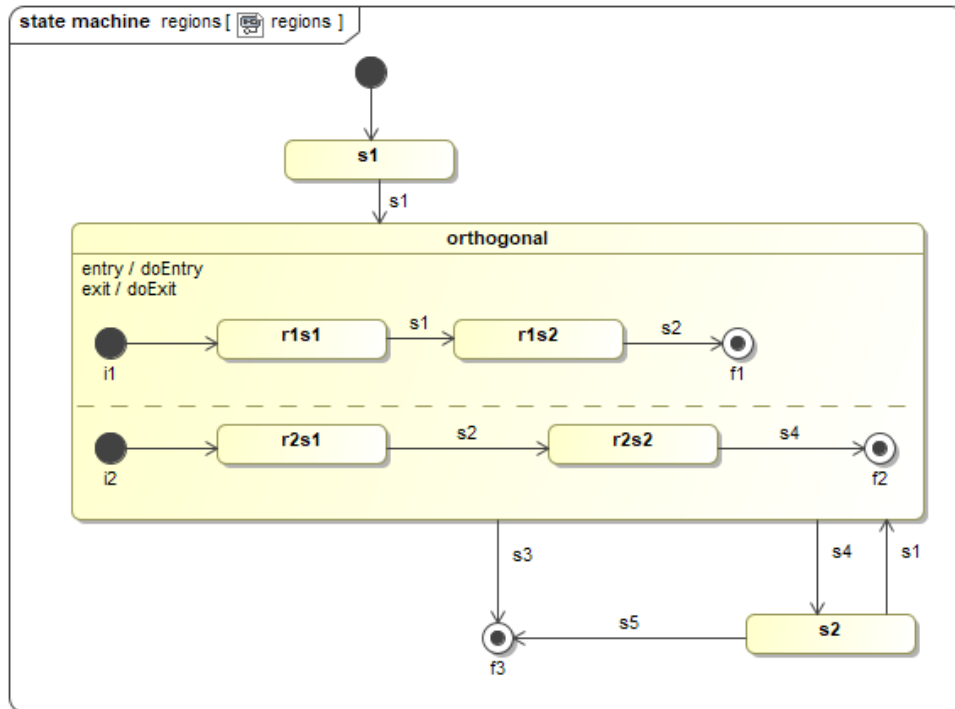
The Regions sample.

- **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.

state machine Transmission [Transmission]

The Timing Events sample.