

Simulation time and simulation clock

When you simulate a model related to time (such as a transition with a time trigger), Magic Model Analyst will obtain the simulation time from a simulation clock. The simulation time is the amount of time spent simulating a model. Magic Model Analyst also uses the simulation time in the timestamp of a signal instance in a SimulationLog (see [Simulation log](#)), in a time series chart (see [Time Series Chart](#)), and on messages of a generated Sequence diagram.

There are three types of simulation clocks in Magic Model Analyst:

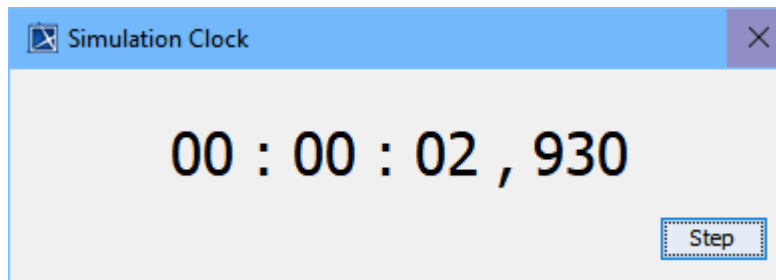
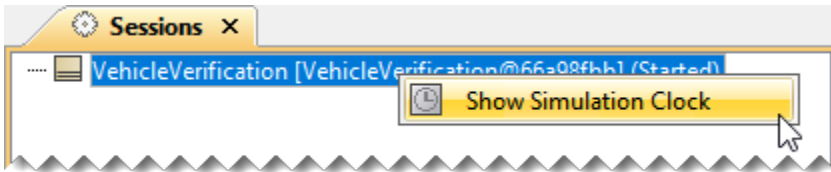
- Built-in clock. This is the default simulation clock.
- Internal simulation clock. This clock is designed to precisely control the simulation time. Its implementation is based on UML run-to-completion semantics and internal completion events.
- Model-based clock. You can select the model-based clock by making a property as the time value tag definition of a Simulation Config. See [Model-based Clock](#) for further details on the model-based clock.

Note

Nanosecond and microsecond are only supported in the internal simulation clock and model-based clock.

To open the Simulation Clock

- Right-click a session in the [Simulation Sessions](#) pane and select **Show Simulation Clock**.




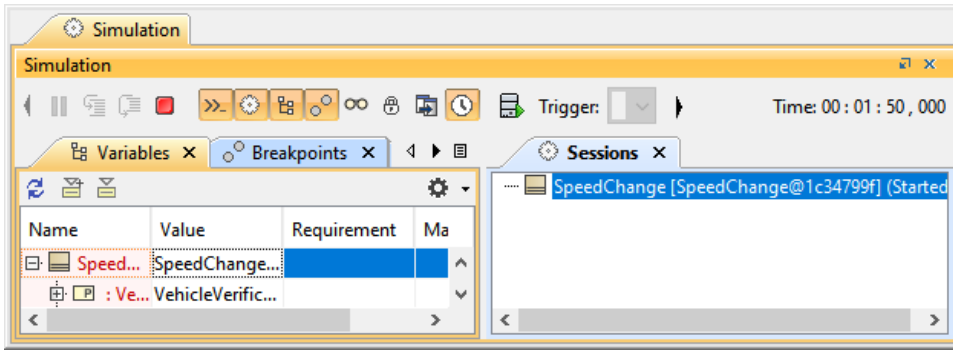
The Simulation Clock dialog with the Step button.

Note

The **Step** button in the **Simulation Clock** dialog is available only for the internal simulation clock to allow manually increasing and ticking the internal simulation clock.

To show or hide the Simulation Time

- Click  in the toolbar of the **Simulation** window.



By default, the Simulation time is always displayed.

Related pages

- [Built-in clock](#)
- [Internal simulation clock](#)
- [Model-based clock](#)
- [Understanding simulation sessions](#)