Built-in clock

The built-in clock generates simulation time continuously during a model simulation. You can use the clock ratio option in Magic Model Analyst to increase or decrease the amount of simulation time. The clock ratio specifies the ratio between actual time and simulation time in the same interval. You can set a ratio of the built-in clock for model simulation. The value you enter for the clock ratio tag definition of a Simulation Config allows you to scale a ratio up or down (see the following figure). For further information about stereotypes of the simulation configuration, see SimulationConfig stereotype.

«SimulationConfig» 🛠 🛠
«Simulation Config» UI = 🚧 x-v-a plot
autoStart = true
clock ratio = "200"
executionTarget = 🖃 motion Analysis
fireValueChangeEvent = false
silent = true

«SimulationConfig» 🛠 Run Analysis x
«Simulation Config»
UI = 📈 x plot
autoStart = true
clock ratio = "200"
executionTarget = 🖃 motion Analysis
fireValueChangeEvent = false
silent = true

The Simulation Configuration with the specified clock ratio.

For example, if a clock ratio is 10, it means that 10 seconds current time is equivalent to one-second simulation time in the built-in clock. Therefore, the simulation clock is 10 times slower than the actual clock.

A Note

• The current version of Magic Model Analyst allows you to pause or resume the built-in clock.

• When you pause running simulation by either clicking the **Suspend** button or using breakpoints, Magic Model Analyst will stop the built-in clock **Related pages**

- operation and all running sessions temporarily. You can continue all of the activities by clicking the **Resume** button.
- Internal simulation clockModel-based clock