

2021x Refresh1 Version News

Magic Model Analyst

Released on: June 4, 2021

This version of Magic Model Analyst introduces Dymola integration allowing you to run Dymola commands, a possibility to use HTML widgets in UI mockups, a way to terminate streaming Activities by output parameter multiplicity, and new parameters for simulation via command-line. Additionally, performance in large Magic Collaboration Studio projects has been significantly improved.

[Dymola Integration](#)

[Performance Improvements in Large Magic Collaboration Studio Projects](#)

[New Parameters for Simulation via Command-Line](#)

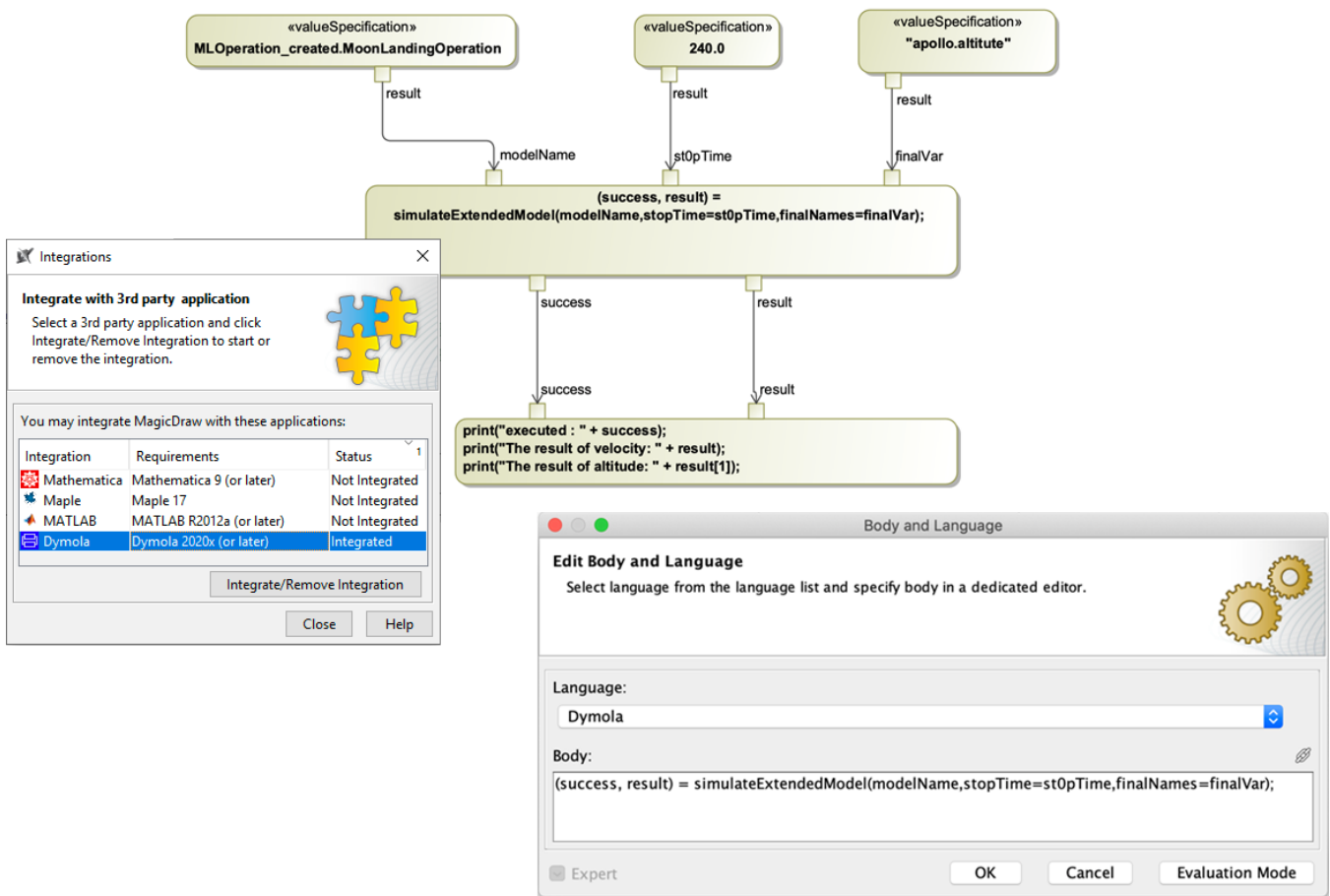
[HTML Widgets in UI Mockups](#)

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Dymola Integration

2021x Refresh1 introduces a new tool-to-tool integration with a locally installed Dymola. When integrated, a remote Dymola command interface is plugged as a new "Dymola" language and can be used anywhere expressions are allowed (OpaqueExpressions, OpaqueActions, etc.). You can also exchange variable values, trigger external Modelica model simulation, manipulate data files, export models to FMU, and run any other Dymola command.

To learn more about available built-in commands, read [Dymola User Guide](#) or type 'help' in the Dymola console.



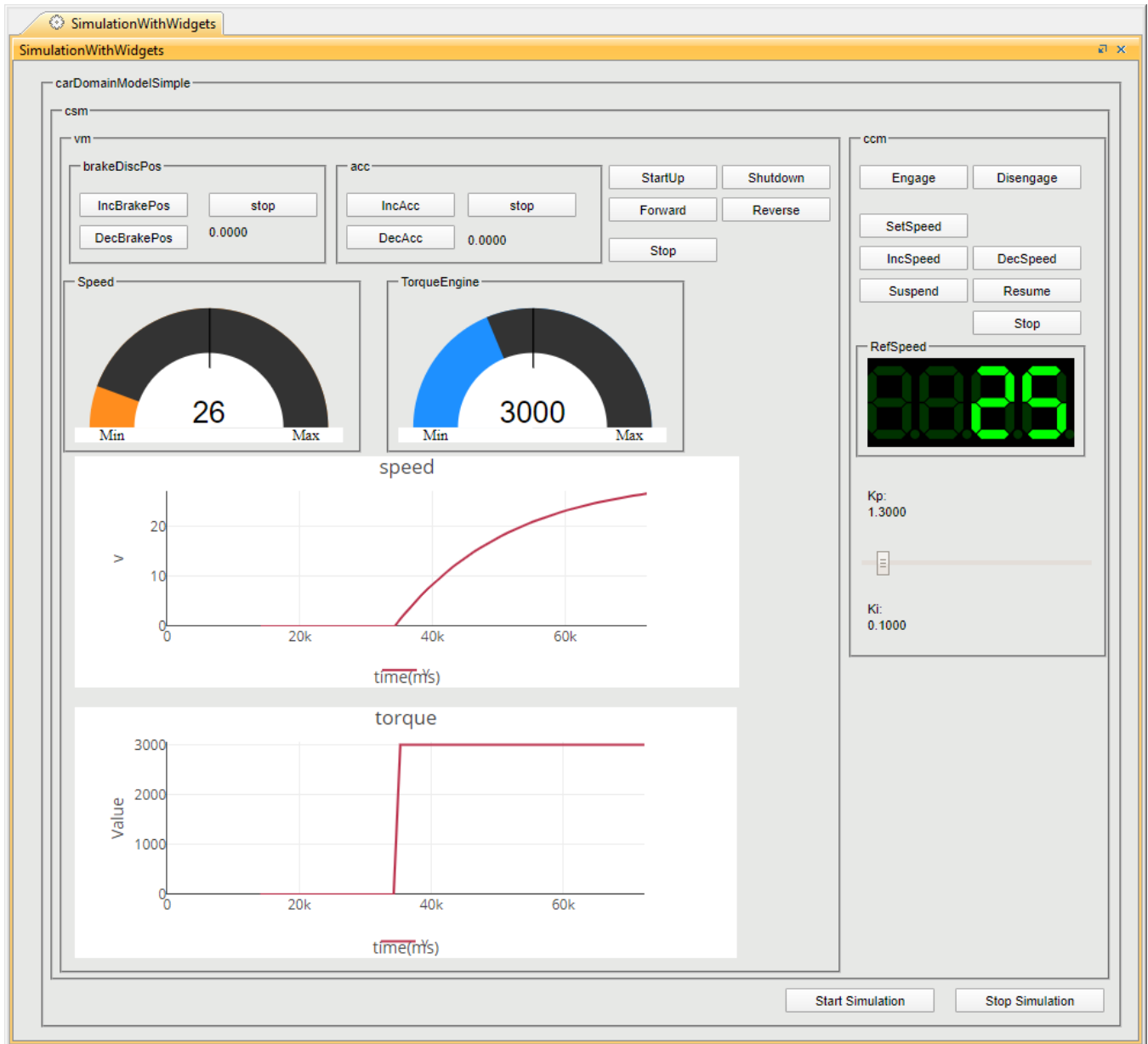
Dymola integration.

[Learn more about Dymola integration >>](#)

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HTML Widgets in UI Mockups

The previous version of Magic Model Analyst introduced a possibility to integrate HTML widgets into diagrams for simulation. If you have enjoyed this new feature, we have good news - now you can use widgets in UI mockups to improve the visual aspect of UI simulations as well.



HTML widgets integrated in a UI mockup.

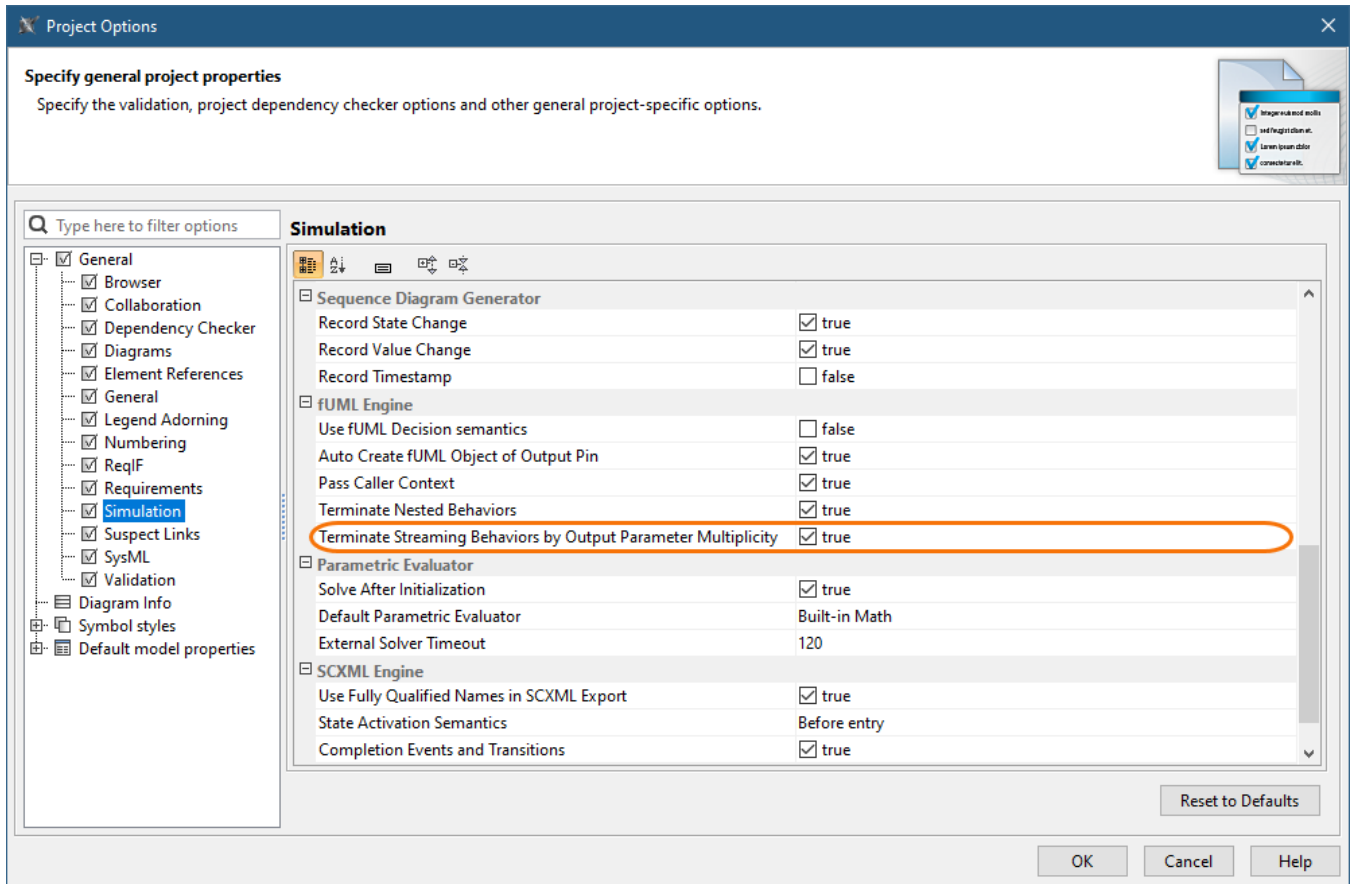
[Learn more about using widgets in UI mockups >>](#)

Performance Improvements in Large Magic Collaboration Studio Projects

Model initialization, simulation performance, and memory usage in large projects have been significantly improved (up to 3-4 times).

Project Option for Terminating Streaming Activities

Now you can terminate the execution of an Activity with streaming output parameters by specifying the output parameter multiplicity. When the **Terminate Streaming Behaviors by Output Parameter Multiplicity** project option (or Simulation Configuration property) is set to *true*, the execution of a streaming Activity will be terminated when the cumulative number of values posted to its output parameters is equal to the parameter multiplicity upper bound.



The highlighted simulation project option allows you to terminate Activities with streaming output parameters by output parameter multiplicity.

New Parameters for Simulation via Command-Line

This version introduces new optional arguments for the "simulate" command. These arguments will allow you to:

- Specify input parameters with their values.
- Specify the properties file with input parameters.
- Specify the properties file defining what output parameters should be obtained after the simulation.
- Specify the properties whose values should be obtained after the simulation.
- Specify the properties file that will store output parameters with their values.

Key Issues Fixed

- Decision Nodes are now evaluated correctly when a decision Input Flow or Decision Input is available.
- State Machine Diagram simulation no longer freezes when an event is sent while in the entry or exit behavior of a state.
- A rare NullPointerException during Monte Carlo analysis has been fixed.
- The NumberFormatException in some trade study configurations has been fixed.
- The clock now supports the ns and s time units.

News of earlier versions

- [Magic Model Analyst 2021x](#)
- [Magic Model Analyst 19.0 LTR SP4](#)
- [Magic Model Analyst 19.0 LTR SP3](#)
- [Magic Model Analyst 19.0 LTR SP2](#)
- [Magic Model Analyst 19.0 LTR SP1](#)
- [Magic Model Analyst 19.0 LTR](#)