

# Reactis V2017.2

Released December 22, 2017



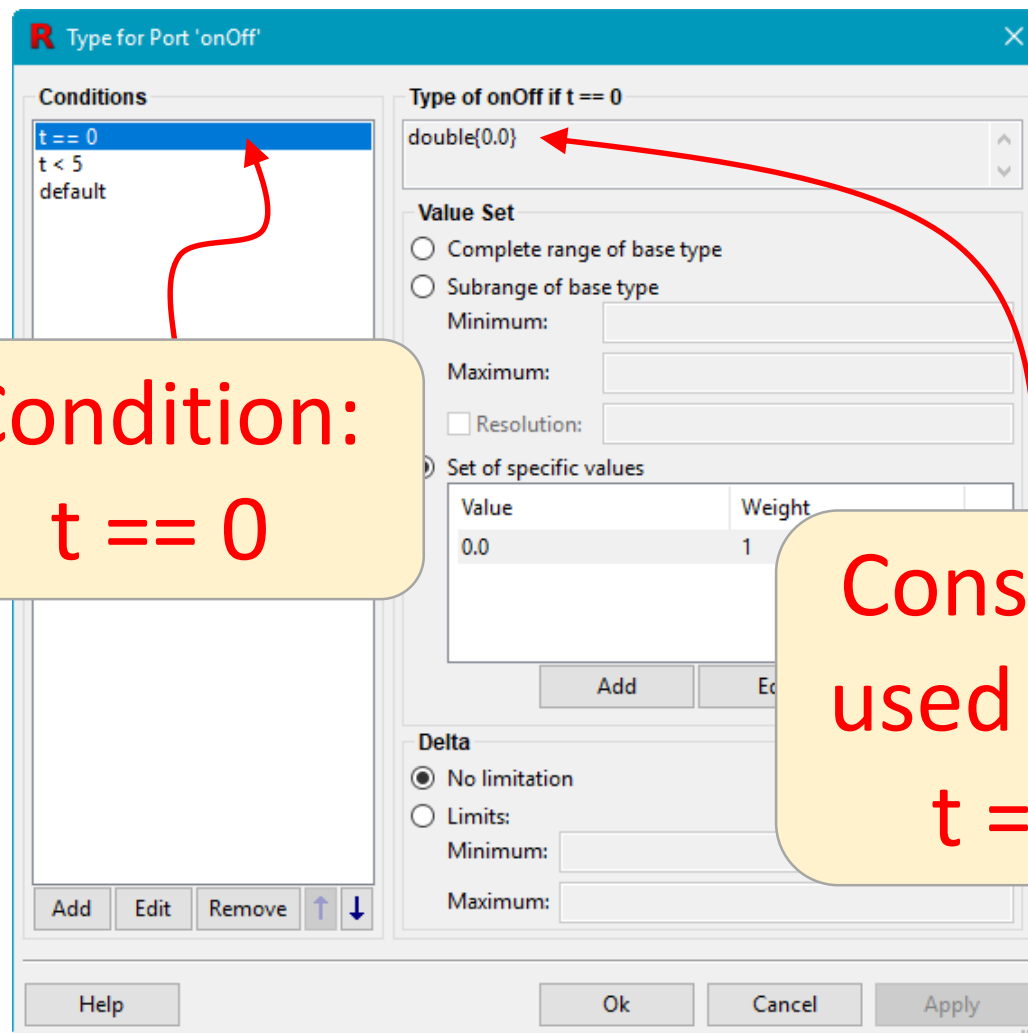
# Tester Optimizations

- Generated test suites achieve same level of coverage with fewer tests and overall steps.
- For some models, test suite size reduced by 90%.

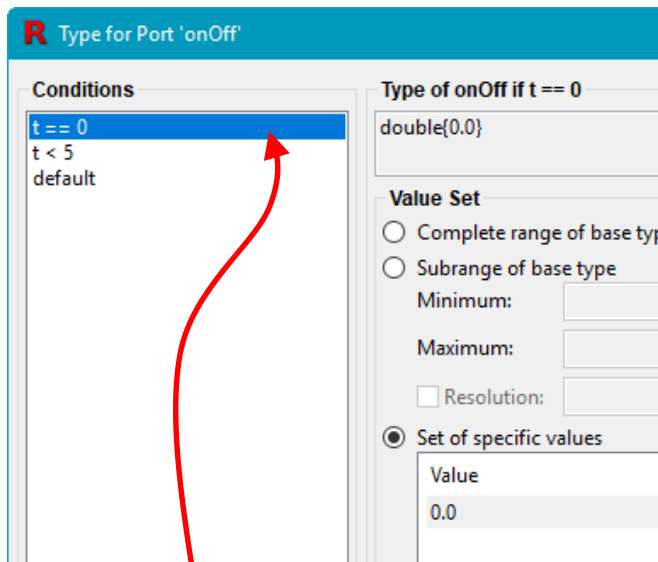
# Conditional Input Constraints

Top-level input constraints that depend on the simulation time ( $t$ ):

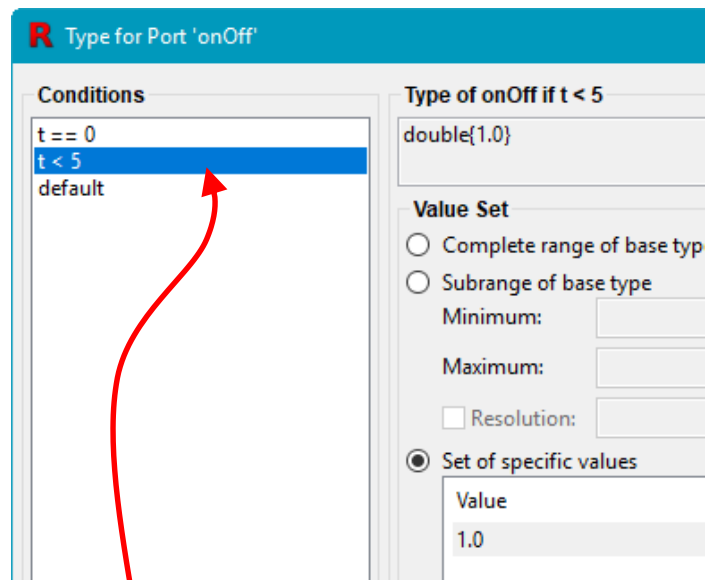
- set an initial value for an input, or
- hold an input constant for some number of steps and then let it vary.



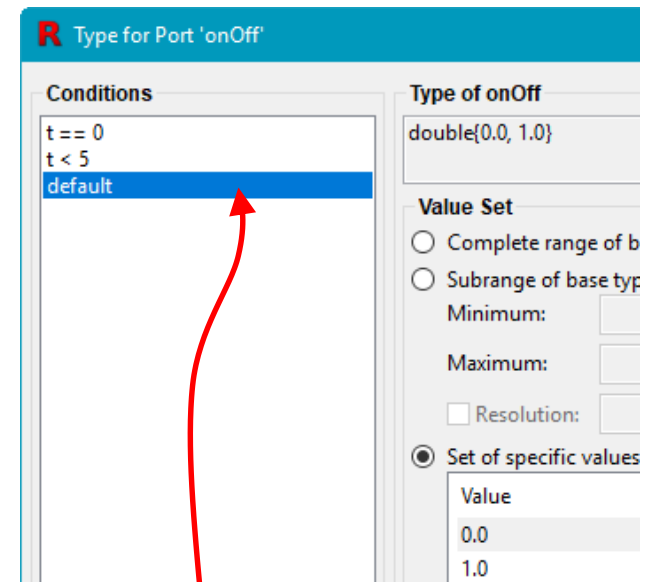
# Conditional Input Constraints



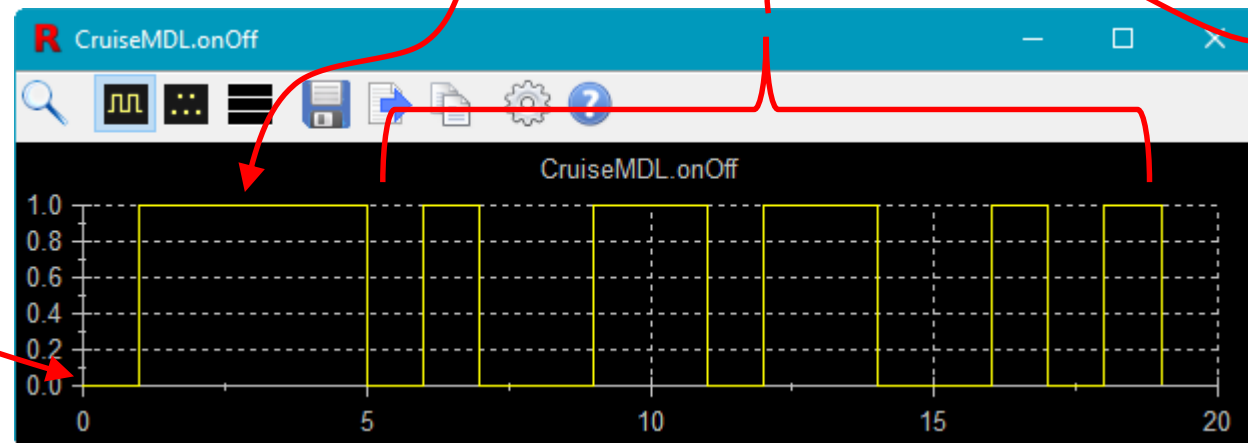
At time 0, onOff = 0



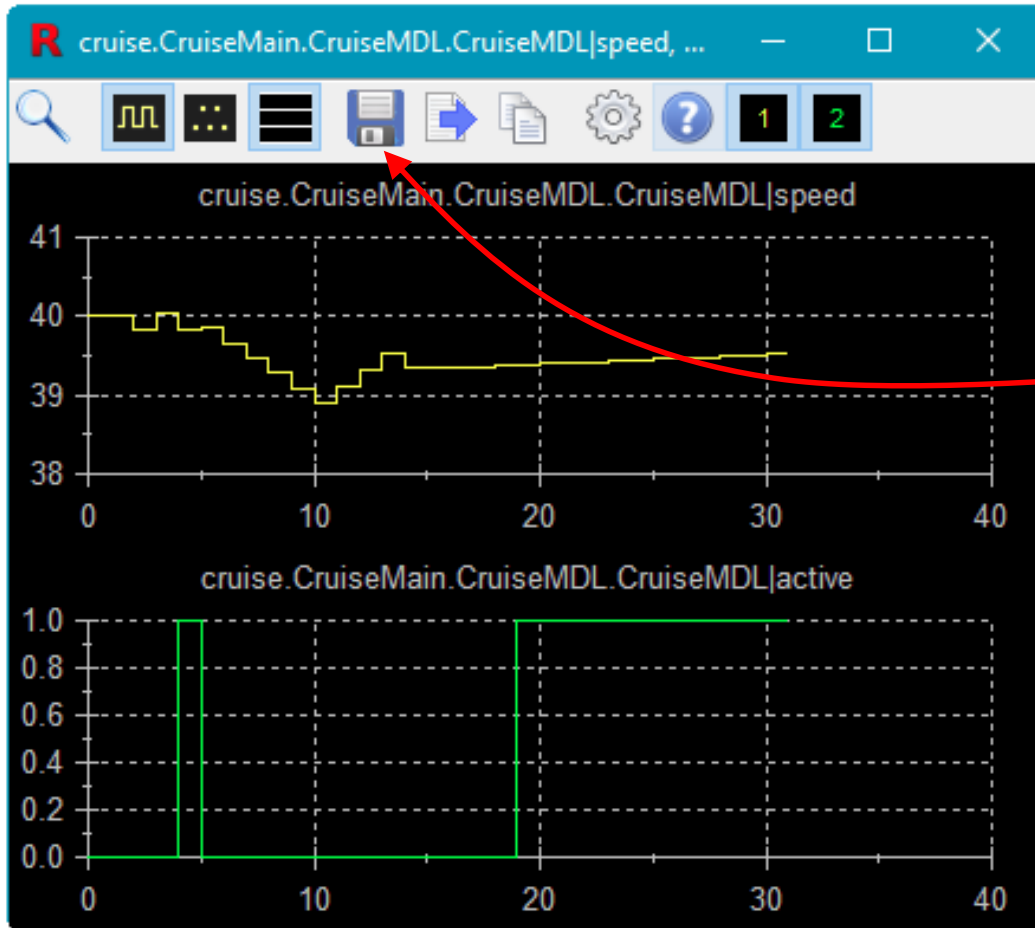
Then, when  $t < 5$ , onOff = 1



When  $t \geq 5$ , onOff is 0 or 1



# Scope Enhancements



- Each signal in scope can have own y-axis.
- Scope can be saved to a *Signal Group* to store collection of signals along with settings for displaying them.

# Newly Supported Simulink Features

- **MATLAB R2017b.**
- **Permute Dimensions block.**

# Test Execution Report

List targets covered by each step in a test.

## Test 8

46 steps, 0 warnings, 0 errors, 0 differences

### Targets Covered by Test

Step	Targets Covered
	<b>cruise.CruiseMain.CruiseMDL.Mode:</b> <b>MC/DC:</b> Transition 9:F <b>Decision:</b> Transition 9:F <b>Condition:</b> Transition 9:deactivate==1.0:F
32	<b>cruise.CruiseMain.CruiseMDL.SpdCheck:</b> <b>MC/DC:</b> Transition 10:F <b>Decision:</b> Transition 12:T, Transition 14:F, Transition 10:F <b>Condition:</b> Transition 12:speed>dSpeed:T, Transition 14:diff(>)>1.0:F, Transition 10:!active:F <b>State:</b> diff <b>Condition Action:</b> Transition 12, Transition 11
46	<b>cruise.CruiseMain.CruiseMDL.DeactivateActivate:</b> <b>MC/DC:</b> Transition 12:F <b>Decision:</b> Transition 12:F <b>Condition:</b> Transition 12:!active:F

# API Improvements

- rsSimImportSuite recognizes flag “-M” to only import a suite if inputs and outputs match the current model. If the flag is not given, Reactis will adjust the imported data by leaving out input data from the test suite not used in the model and adding random values for data required by the model but not available in the test data.
- Added rsGUI API function to start Reactis GUI from the MATLAB command line.
- Added rsRsiRange, rsRsiSet, rsRsiDelta functions to simplify setting type constraints via the API.
- Added rsRsiIfThenElse function to support setting conditional input constraints.



# Test Points

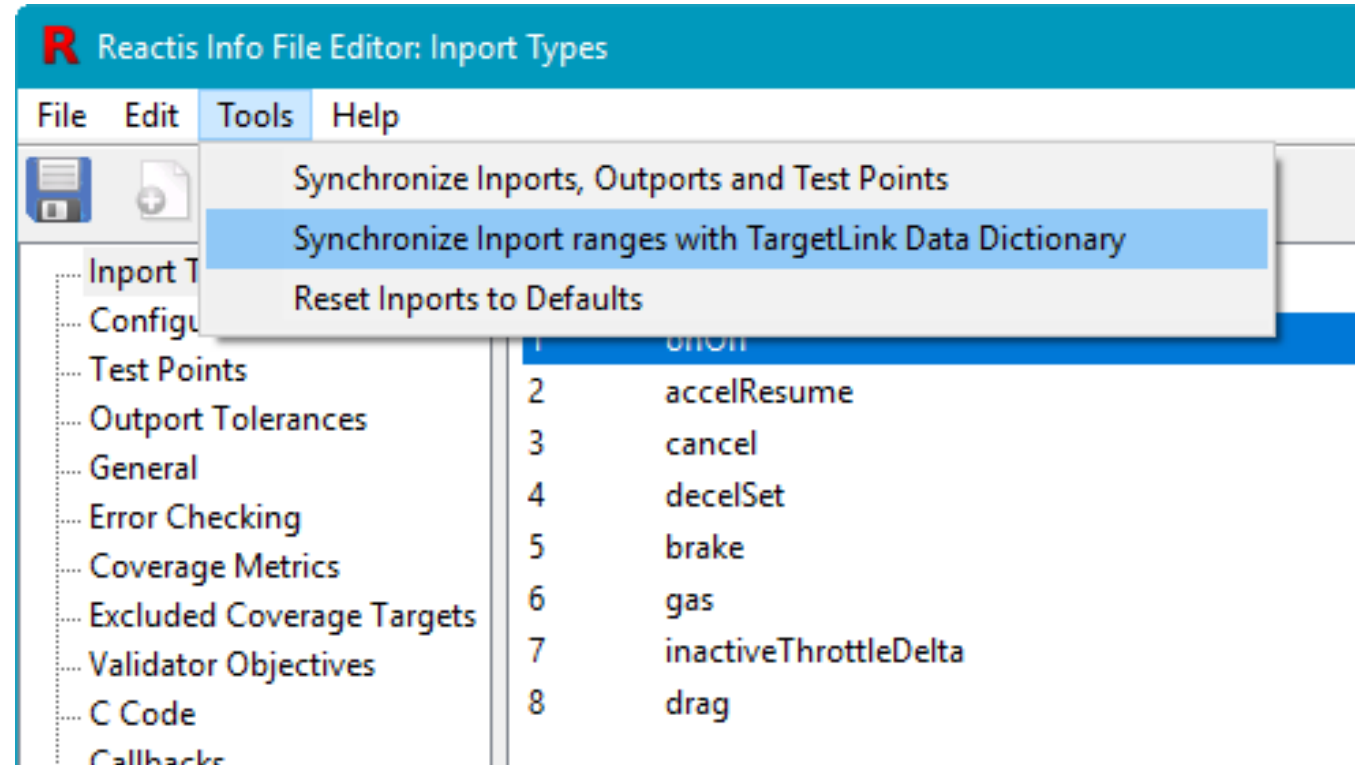
- Test points now break up conditional input branches and multi-block MC/DC groups, allowing coverage tracked for a model to better match coverage of corresponding C code.
- When importing test points, Reactis can import signal ranges set in Simulink.signal objects and automatically create assertions to monitor the ranges during test case generation.
- Added option to use signal name (instead of block name) for imported test points.

# Reactis for EML Plugin

- Support dynamic creation of structure values

# TargetLink Import

Import fixpoint information such as slope and bias as well as ranges from the TargetLink data dictionary.



# Other Enhancements

- Referenced models now inherit import settings from their parent model. This significantly reduces the setup necessary for models using model referencing.
- Variables in the watched variable panel are highlighted when their value changes.
- Coverage tracking can now be disabled for all targets within Validator Diagram Objectives.
- A new option allows you to exclude the “equal” case when tracking relational operator boundary coverage.
- When exporting to CSV, strip out the “(1)(1)” suffix for 1x1 matrices.
- Draw relational operator and constant on Compare To Constant blocks.
- Added option to not show empty subsystems in the hierarchy panel.