

SIMSCRIPT III 5.1 Release Notes

10/01/2019

Release 5.1 – supported platforms:

- a) SIMSCRIPT III Professional for 64-bit Windows 7/10 and Visual Studio 2010 (requires Visual Studio 2010-2013)
- b) SIMSCRIPT III Professional for 64-bit Windows 7/10 and Visual Studio 2015. Requires Visual Studio 2015-2019 (Enterprise, Professional or Community editions).
- c) SIMSCRIPT III Standard for 64-bit Windows 7/10 (Visual Studio not required)
- d) SIMSCRIPT III Trial / Student for 64-bit Windows 7/10 (Visual Studio not required)
- e) SIMSCRIPT III for 64-bit RedHat Enterprise Linux 7.x (CentOS 7)

Update for release 5.1:

- 1) SimEclipse now comes with an integrated debugger. Capabilities include:
 - a) Execution control (start, step in, step over, step return).
 - b) Setting and managing multiple breakpoints.
 - c) Displaying data and values of expressions or variables. For example, to “hover” over a variable or attribute expression to inspect its current value.
 - d) Investigating the stack when stopped at a breakpoint or runtime error.
 - e) Creating and manage ‘watch expressions’ to monitor your variables and attributes as the simulation progresses.
 - f) Most all of the features providing by the existing “command line” version of the SIMSCRIPT III debugger are incorporated into SimEclipse.
- 2) New feature of SimEclipse ‘Open Implementation’: select the name of a routine or method and jump to the heading for its implementation.
- 3) The SIMSCRIPT III Professional edition now supports not only Visual Studio 2015, but also Visual Studio 2017 and 2019.
- 4) The “priority order” language statement can now be used in conjunction with the “single event set” option (command line: -h). The “break ties” statement can also be used.

Changes for release 5:

- a) A powerful new development environment for SIMSCRIPT III is now available called “SimEclipse”. SimEclipse is based on the Eclipse development environment and includes:
- Smart editor with “on-the-fly” highlighting of both syntax and semantics errors, content assist (content aware proposals), fast navigation to element definitions, outline of element definitions, and more.
 - Wizards for importing projects, creating subsystems, systems, graphics.
 - Navigator / class browser
 - A ‘class hierarchy’ view allowing super-sub class relationships to be investigated
 - A ‘call hierarchy’ view to look at caller/callee relationships.
 - Full integration with the SIMSCRIPT III compiler/linker/librarian with optional automatic “build on save”.
 - Integrated SIMSCRIPT graphics editors for constructing icons, presentation graphs and forms.
 - See SimEclipse manual (SimscripIII_SimEclipse_Manual.doc) under the “\$SIMHOME/help” folder for the complete list of new features.
- b) The “examples” folder has been reformatted. There are now two sections: ‘workspaces’ and ‘command-line’.
- workspaces: The “workspaces” folder contains several SimEclipse workspace project folders, with each in turn containing several example projects that are ready-to-load from a fresh installation. One of these workspace folders can be selected from the SimEclipse startup dialog. SimEclipse can then be used to open, build and run the example projects in the workspace. Here the following workspace folders can be selected in SimEclipse:
 - business_rules --- Demonstrates SIMSCRIPT III business rule processing
 - database --- Examples exploring ODBC database connectivity.
 - demos-2d --- Full featured SIMSCRIPT III graphics 2d demos.
 - demos-3d --- Full featured SIMSCRIPT III graphics 3d demos.
 - intro --- Simple text-based SIMSCRIPT III programs
 - mod2sim --- Legacy programs converted from MODSIM to SIMSCRIPT III
 - powerball --- A simple simulation of a lottery.

These programs can be compiled and run using SimEclipse as follows:

- a) Start SimEclipse using the desktop short cut or by typing “SimEclipse” into a SIMSCRIPT III command line window.
- b) Through the “Select a workspace” dialog, browse to, and select one of the above folders. (OR use the “File/Switch Workspaces...” menu).

c) Right-click on a project and choose “Open project”. The project should “build” automatically.

d) Right-click the opened project and choose “Run as/SIMSCRIPT Application” to run the example program.

- command-line: The “command-line” folder contains examples (both graphical and non-graphical) that can be compiled and run from the SIMSCRIPT III command line prompt. Each folder contains a “build.bat” script for windows and a “build” script for Linux that will build the program. The command line projects do NOT contain the ‘executable’, temp and ‘source’ folders.

c) The smart building capability of “simc” was updated so that changes to the implementation file will not require dependent modules to be recompiled.

d) Use of the **STA.A** attribute will no longer result in a deprecation warning.

e) Some updates were made to the SIMSCRIPT III student/trial version involving its limitations with respect to the “Standard” (full) version:

- Increased the maximum number of process notices created in the life of a simulation to 20000.
- Only count process notice creation, not reactivation of an existing notice.

f) A new installer is available for the “SIMSCRIPT III Professional” product to better support later versions of Microsoft Visual Studio. Users of Visual Studio 2015, 2017 (or later versions) should install “SIMSCRIPT III Professional for Visual Studio 2015”. Users of Visual Studio 2010, 2012, or 2013 should install “SIMSCRIPT III Professional for Visual Studio 2010”.

g) A new 64-bit version of the SIMSCRIPT III standard and trial editions are now available. They do not require Microsoft Visual Studio.

h) All installers for SIMSCRIPT III Release 5 products must be run on a 64-bit platform. *In 64-bit SIMSCRIPT III, the INTEGER and POINTER modes are both 64-bit values. A new mode called 'INTEGER4' can be used to specifically define a 32-bit integer. 32-bit pointers are no longer supported.*

```
**** 64-bit SIMSCRIPT ***
define PTR as a pointer variable      ''64-bit
define I64 as an integer variable    ''64-bit integer
define I32 as an integer4 variable   ''32-bit integer
```

i) Graphical components are updated to Java JRE 1.8.0 (build 161).

j) Red Hat 7.x (CentOS 7) is now supported.

Contact:

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