

# NetSpeed Crux

## *Release Notes*

**Version: CRUX-18.10**

**Revision: 0.0**

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# NetSpeed Crux 18.10 Release Notes

## About This Document

This document lists the release notes for NetSpeed Crux. Using NetSpeed NocStudio, users can define NoC architectures, describe specifications and requirements, optimize the NoC design and finally generate the NoC IP files such as RTL, testbench, synthesis scripts, NoC IP documentation etc.

## Audience

This document is intended for users of NocStudio:

- NoC Designers
- NoC Architects
- SoC Architects

## Prerequisite

Before proceeding, you should generally understand:

- Basics of NetSpeed Crux IP Technology

## Related Documents

The following documents can be used as a reference to this document.

- NetSpeed NocStudio User Manual

## Customer Support

For technical support about this product, please contact [support@netspeedsystems.com](mailto:support@netspeedsystems.com)

For general information about NetSpeed products refer to: [www.netspeedsystems.com](http://www.netspeedsystems.com)

## Revision History

Revision	Date	Updates
0.0	Nov 02, 2018	Initial Release

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## 1 Deliverables

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- NetSpeed NocStudio Package and one of the license options:
  - N7 version supporting 8 layers and 256 bridges
  - N6 version supporting 4 layers and 128 bridges
  - N5 version supporting 4 layers and 60 bridges
  - N4 version supporting 2 layers and 32 bridges
  - N3 version supporting 1 layers and 12 bridges
- NocStudio executable with interactive GUI.
- Verification checkers to be used in the DV environment.
- Sanity Test Bench.
- Documentation
  - a. NocStudio User Manual: The User Guide describes how to set up a system using NocStudio and how to use it to generate NetSpeed IP.
  - b. IP Integration Spec: The Integration Manual describes how to integrate a configured network into a larger subsystem.
  - c. Technical Reference Manual: The Technical Reference Manual describes how the functionality of the various NoC elements, the features and functions available, and how to dynamically change the functions using the programmer's mode.

## 2 Installation

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- NocStudio uses FlexLM based licensing.
  - Linux CentOS 5.5 or higher
  - For node-locked license file, copy over the license file under NocStudio installation directory and renamed it as “license.dat”. If the license file resides in a separated folder, please set environment variable LM\_LICENSE\_FILE with the proper path.
  - For floating licensing scheme, please download and extract netspeed.flexlmpkg.tar.gz for 32- or 64-bit license daemon and follow FlexLM documentation.

NOTE: Please use a Linux machine to unpack release tarball set. Unpack Linux tarball set on Windows machines may cause problems with symbolic links.

- The release makes use of Qt libraries covered under LGPL:
  - <http://qt-project.org/downloads>

## 3 Feature Update: Design Methodology

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### 3.1 RTL GROUPING VISIBLE IN GUI

In the new release, the users can view the RTL Groups created, in the GUI. This feature enables the users to highlighting the rtl groups using the highlight command.

Syntax:

*highlight -rtl\_group <name\_of\_the\_group> -color <color>*

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## 4 Feature Updates: System Interconnect

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None

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## 5 Feature Updates: Streaming Protocol

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None

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## 6 EDA Tool Compatibility

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- Cadence EDA tools were used for verification and synthesis of this product.
  - Incisive RTL Simulator 15.22-s018
  - Genus RTL Synthesis 16.22-s033\_1
  - HAL Linting tool 15.20-s027
  - Conformal 16.20-s240
- Compatibility testing has been done with VCS vcs-mx/L-2016.06 and Synopsys Design Compiler L-2016.03-SP5.
- Please contact NetSpeed support team ([support@netspeedsystems.com](mailto:support@netspeedsystems.com)) for additional platform and tool compatibility details.

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## 7 Errata: System Interconnect

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### 7.1 MESH PROPERTY CHANGED TO DEFAULT PROPERTY

In the process of enabling or disabling the presence of registers globally at all the routers in the NoC, the mesh property, *router\_registers\_enabled* has been changed to default property (*prop\_default*).

Replace *mesh\_prop router\_registers\_enabled* with *prop\_default router\_registers\_enabled* in the config file before running NocStudio.

### 7.2 RUNNING PARTIAL TRAFFIC FLOWS WITHIN A PROFILE

During performance simulation, running partial traffic flows within a profile eases system level debug. In 1810, this feature is only supported when rate scale != 1.

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## 8 Errata: Streaming Protocol

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None

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## 9 Changes to Commands and Properties

Please refer to NocStudio Help → User Manual Supplement for details.

### 9.1 COMMAND CHANGES

Command Name	Comment
color_no_credit_blames	New command to color channels in the GUI based on no_credit blocked cause blame after performance simulation
reset_hide_warning	New command to reset all warnings hidden by the hide_warning command

### 9.2 MESH PROPERTY CHANGES

Command Name	Comment
router_registers_enabled	<b>Deprecated.</b> This property has been replaced by prop_default router_registers_enabled

### 9.3 HOST PROPERTY CHANGES

None

### 9.4 BRIDGE PROPERTY CHANGES

None

### 9.5 INTERFACE PROPERTY CHANGES

None

### 9.6 LINK PROPERTY CHANGES

None

### 9.7 ROUTER PROPERTY CHANGES

Command Name	Comment
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registers_enabled	New property to control the presence of registers per router
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## 9.8 VC PROPERTY CHANGES

None

## 9.9 DEFAULT PROPERTY CHANGES

Property Name	Comment
router_registers_enabled	New property to set the default value of the router property registers_enabled to enable or disable presence of registers at a router. This property replaced mesh property router_registers_enabled.
no_credit_blame_tracking	New property to enable or disable tracking of the cause of no_credit blocked causes at TX interfaces during NocStudio performance simulation
floorplan_view_snapping	New property to enable or disable the automatic snapping of hosts and bridges at a fixed granularity when they are drawn or moved in the floorplan view
floorplan_view_snapping_granularity	New property to control the granularity of snapping of hosts and bridges at a fixed granularity when they are drawn or moved in the floorplan view

## 10 Hot Fixes

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None



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