



*Plexxi Release Notes*  
*Release 3.1.0*

*March 31, 2017*



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## Introduction

This document contains information about the Plexxi 3.1.0 release, which delivers software updates for Plexxi Switch and Plexxi Control.

## Software Versions Included

The following versions of software updates are included:

- Plexxi Switch 3.1.0
- Plexxi Control 3.1.0

## Supported Hardware

Plexxi release 3.1.0 is supported on the following Plexxi switches:

- Switch 1x (PX-S1X)
- Switch 2 (PX-S2)
- Switch 2s (PX-S2S)
- Switch 2p (PX-S2P)
- Switch 2sp (PX-S2SP)
- Switch 2e (PX-S2E)
- Switch 3eq (PX-S3EQ)

## New in this Release

New features:

- Plexxi Control UI: Hop Count option is added to VLAN affinities.
- Plexxi Control UI: Ability to create a custom traffic matrix separate from the Fit window.
- Plexxi Control UI: Grid layout support for Network view.
- Support for /31 subnets.
- Experimental: LLDP Transmit capability
- New Plexxi switch Bash commands: px-adduser and px-lspart

Limited functionality:

- 1:1 Static Network Address Translation (NAT).

Documentation:

- A new Plexxi Control installation, upgrade, and administration document.
- Fixed In-Band Management issue in Switch Admin/CLI Guide
- Added a section to the *Plexxi Control Install/Admin Guide* and the *Switch Admin/CLI Guide* to avoid an issue where the SSL login fails after changing the IP address of the Plexxi Control server/VM.



## Related Documentation

The following additional documentation supports this release.

- *Plexxi Compatibility Matrix, Version 5 or greater.* The *Plexxi Compatibility Matrix* contains version-specific software and hardware support information as well as cable and transceiver support information.
- *Plexxi Control Installation, Upgrade and Administration Guide, Release 3.1.0*
- *Plexxi Switch Administrator Guide using Linux and Plexxi CLI, Release 3.1.0*
- *Plexxi Control Online Help* is available while logged into the Plexxi Control UI

Except for the online help, this documentation is available on the Resources > Technical Publications page of <http://www.plexxi.com>.

## Contacting Plexxi Support

Plexxi Technical Support services are available to answer your questions and to make sure that your software and hardware continue to operate properly.

You can contact Plexxi Support at:

[support@plexxi.com](mailto:support@plexxi.com)

1.888.415.9809 (US/Canada toll-free)

+1 603-782-0702 (US/International)

[www.plexxi.com/support](http://www.plexxi.com/support)

## Plexxi Control UI: Hop Count Option added to VLAN Affinities


VLAN affinities provide the ability to calculate isolated topologies for all devices connected to the same VLAN or set of VLANs. All communication between these devices is placed onto this calculated topology and isolated from all other traffic.

In the Plexxi Control UI, when adding or editing VLAN affinities, a new Hop Count option, **Hop Count Sensitive**, is added. When this option is selected, the topology that is calculated using this affinity is assigned the least number of hops.

Refer to the following topics within the Plexxi Control Online Help:

- [VLAN Affinities > VLAN Affinities](#)
- [VLAN Affinities > Create a VLAN Affinity](#)
- [VLAN Affinities > Edit a VLAN Affinity](#)

## Plexxi Control UI: Ability to Create a Custom Traffic Matrix Separate from a Fit

In the Plexxi Control UI, you can create a custom traffic matrix by clicking the Operations icon  in the toolbar and selecting Custom Traffic Matrix. This enables you to create custom traffic matrices and perform fits using these matrixes at a later time.

For further information, refer to the following topics within the Plexxi Control Online Help:

- [Fit > How to... > Create a Custom Traffic Matrix](#)
- [Fit > How to... > Configure and Perform a Fit](#)

## Plexxi Control UI: Grid layout support for Network view

The Plexxi Control UI provides the ability to layout the Networks view in a grid form. This is performed using the Redraw/Settings window in which you can configure the size and layout of the network graphics and text that are presented in the Networks View.

For further information, refer to the following topic within the Plexxi Control Online Help:

- [Views, Tabs and Panels > Networks View > Configuring the Size and Layout of Network Graphics in the Networks View](#)

## Support for /31 Subnets

With this feature, Plexxi fabrics can be configured to use subnets with only 2 host addresses. This is specifically meant for devices attached to access ports in a point-to-point manner, where the Plexxi switch will have one of the two host addresses, and the attached device has the other. For example, a VLAN can be assigned an IP interface with subnet 10.1.1.0/31. With that assignment, the L3 interface on the switch will have IP address 10.1.1.0 and the attached device must have IP address 10.1.1.1.

When using /31 subnet masks, there is no IP broadcast address.



## Experimental: Support for LLDP Transmit

**IMPORTANT:** LLDP Transmit is an experimental feature in the 3.1.0 release.

In Release 3.1.0, to support Plexxi integration with Nutanix, LLDP frames can now be transmitted out an access port. When LLDP is enabled, the Plexxi Switch will send LLDP frames with the following information out access ports:

- **chassis ID** - the system MAC address of this Plexxi Switch
- **System Name** - the fully qualified domain name of this Plexxi Switch
- **System Description** - the Plexxi Fabric name and UUID this Switch is part of
- System Capability Information:
  - **Capabilities:** bridge, router, cvlan, svlan
  - **Enabled Capabilities:** bridge, router, cvlan, svlan
- Management IP Information:
  - **IP Address** - the IP address of this switches Management Interface
  - **Interface Index** - the IfIndex of the port this LLDP frame was sent out of

This information can be used by receiving systems to determine which switch and port they are connected to.

## New Plexxi Switch Bash Commands

New Plexxi switch Bash commands, `px-adduser` and `px-lspart`, are available at the Bash prompt on Plexxi switches. A brief description of these commands is provided below.

**IMPORTANT:** Man pages are available for the Plexxi `px-` utilities/commands.

Refer to the following document for detailed information:

- *Plexxi Switch Administrator Guide using Linux and Plexxi CLI, Release 3.1.0*

### **px-adduser - Add a User**

The `px-adduser` tool enables you to easily create accounts that adhere to Plexxi switch user roles. It is accessible in the switch Bash environment; it is not available from the `px-shell` CLI.

### **px-lspart - Display Install Partition Information**

The `px-lspart` utility lists the installed software version for each of the install partitions (A and B). It also indicates which partition is currently running, and which is currently the default boot partition.

## 1:1 Static Network Address Translation (NAT)

New Plexxi CLI commands are available to configure 1:1 static NAT for a limited use case. If you need to use NAT, contact Plexxi Support for further information.



## Documentation

### **New Plexxi Control Installation, Upgrade and Administration Guide**

A new Plexxi Control installation, upgrade, and administration document supports releases 2.3.x, 2.4.x, 3.0.x, and 3.1.0. The document is:

- *Plexxi Control Installation, Upgrade and Administration Guide, Releases 2.3.x, 2.4.x, 3.0.x, 3.1.0*

### **Updated In-Band Management in the Switch Admin/CLI Guide**

Fixed issue found in the In-Band Management chapter in the document: *Plexxi Switch Administrator Guide using Linux and Plexxi CLI*.

### **SSL Login Fails After Changing the IP Address of the Plexxi Control Server/VM.**

To avoid an issue where the SSL login fails after changing the IP address of the Plexxi Control server/VM, added the following section to the following document:

- *Plexxi Control Installation, Upgrade and Administration Guide, Release 3.1.0*

Note: This is also listed as issue PXCTL-2582 in the Release Notes section, "Issues Fixed in this Release".

### **Changing the Hostname of your Plexxi Control Server/VM**

If you change the hostname of your Plexxi Control server, you will either need to regenerate the self-signed SSL certificate to match the new hostname or obtain and import a new signed SSL certificate that uses the new hostname.

To regenerate the self-signed SSL certificate after changing the hostname, run the command "sudo regenerate-plexxicontrol-cert" and follow the prompts to generate and install the certificate and restart your Plexxi Control/tomcat application server.

If you are using an officially signed SSL certificate, follow your process for obtaining a new signed certificate from your certificate vendor, then use the Plexxi Control certificate import helper script to install your new SSL certificate. Run the import helper script using the command "sudo plexxicontrol-cert-helper" and following the prompts to import your certificate(s) and server key.

## Issues Fixed in this Release

Issue ID	Description
PXCTL-301	Fixed an issue where MAC attachments associated a native VLAN with a Physical Port.
PXCTL-2322	Fixed an issue where the Plexxi Control UI performance was affected by a large number of alarms.
PXCTL-2582	<p>To avoid an issue where the SSL login fails after changing the IP address of the Plexxi Control server/VM, added the following section to the following document:  <i>Plexxi Control Installation, Upgrade and Administration Guide, Release 3.1.0</i></p> <p><b>Changing the Hostname of your Plexxi Control Server/VM</b></p> <p>If you change the hostname of your Plexxi Control server, you will either need to regenerate the self-signed SSL certificate to match the new hostname or obtain and import a new signed SSL certificate that uses the new hostname.</p> <p>To regenerate the self-signed SSL certificate after changing the hostname, run the command "sudo regenerate-plexxicontrol-cert" and follow the prompts to generate and install the certificate and restart your Plexxi Control/tomcat application server.</p> <p>If you are using an officially signed SSL certificate, follow your process for obtaining a new signed certificate from your certificate vendor, then use the Plexxi Control certificate import helper script to install your new SSL certificate. Run the import helper script using the command "sudo plexxicontrol-cert-helper" and following the prompts to import your certificate(s) and server key.</p>
PXCTL-2588	Fixed an issue where VLANs could not be added to an automatically-created In-Band Management LAG.
PXCTL-2757	Fixed an issue where network links were not cleaned up after a port was disabled.
PXCTL-2760	Fixed an issue where a fitting attempt hung on a fabric. Improved exception handling when failing to register callbacks.
PXPF-1272	Fixed an issue where upon a switch reboot of a Plexxi Switch 1, the management interface is not always initialized.
PXPF-1287	Fixed an issue where, during a Plexxi Switch software installation or upgrade, the default boot partition was toggled even when the installation was not completely successful.
PXPF-1298	Fixed an issue where the Plexxi <code>qsfp config</code> CLI command is run on a Plexxi Switch 1, and the management interface is disabled after switch reboot.
PXSW-1914	Fixed an issue where the Plexxi <code>trace-attachment</code> CLI command returns an incorrect path.

Issue ID	Description
PXSW-1938	Fixed an issue where the LACP manager report contained malformed LACP packets.
PXSW-1986	Fixed an issue where a switch crashed due to a Plexxi switch driver failure.
PXSW-2007	Fixed an issue where, with Switch 3eq, decreasing the confluent ring size with configured speeds other than 25 GbE may cause a speed mismatch.
PXSW-2100	Fixed an issue where an unexpected reboot occurred when clearing MACs on a VLAN in P2 MAC/VLAN pairs.
PXSW-2114	In the Plexxi switch CLI, added a note to the "support log-bundle" command output, when completed, to specify where on the disk the file is saved to.
PXSW-2123	In the Plexxi switch CLI, fixed an issue where enabling the debug log level caused a reboot.
PXSW-2150	Fixed an issue where changing the Confluent Ring size stopped user traffic.
PXSW-2156	Fixed an issue where a switch crashed with no auto reboot for recovery.
PXSW-2160	Changed Rapid Mac Movement message logging to clearly identify switches reporting rapid mac movements.
PXSW-2161	Fixed an issue where the snmpd daemon failed to start on a switch running In-Band Management.
PXSW-2192	Fixed an issue where the switch corrupted some packets that contain IP fragments.
PXSW-2194	Fixed an issue where IGMP reports that included an address from the reserved range were not forwarded.
PXTP-191	Fixed issue found in the In-Band Management chapter in the document: <i>Plexxi Switch Administrator Guide using Linux and Plexxi CLI</i> .
PXUI-2763	Fixed an issue where, in the Plexxi Control UI, there was no maximum width in VLAN Group tables.
PXUI-2783	Fixed an issue where, utilization % in the Plexxi Control UI displayed 100%. Added support for all port speeds to UI utilization statistics display.

Issue ID	Description
PXUI-2807	Fixed an issue where virtual routing networks could not be edited.

## Known Issues in this Release

Issue ID	Description
	Multicast traffic over an MLAG is not supported.
PXSW-2501	<p>The following issue exists:</p> <p>When a switch that is on the In-Band Management LAG is rebooted, the LACP configuration is not restored on the In-Band Management LAG.</p>
PXSW-2487	An issue exists where some interfaces may be down after the reboot of a large number of interfaces. In release 3.1.0, we support as many as 2000 IP interfaces.
PXSW-2443	<p>The following MC traffic issue exists:</p> <p>When an MC receiver host moves, MC traffic still gets delivered to the port it was attached to previously until the IGMP JOIN on that port times out.</p>
PXSW-2442	<p>The following MC traffic issue exists when decreasing the confluent ring size:</p> <p>After dropping the confluent ring size from 4 to 2, the previously included ports that are now not part of the LAG, are not removed from the MC group. As a result, line rate MC traffic is seen.</p>
PXSW-2440	<p>The following MC traffic issue exists when increasing the confluent ring size:</p> <p>An access port that was part of an MC group prior to increasing the confluent ring size is removed from the group after the confluent ring size is increased.</p>
PXSW-2165	<p>An issue exists where:</p> <p>If the following User Defined Path conditions exist:</p> <ul style="list-style-type: none"> <li>• the path uses confluent ring ports</li> <li>• the last switch in the path (egress switch) is the Ubervisor switch</li> </ul> <p>And if a Flow Entry has the following characteristics:</p> <ul style="list-style-type: none"> <li>• Path action is selected</li> <li>• The user defined path stated above is selected</li> <li>• The egress ports on the Ubervisor egress switch (last switch in path) are not selected</li> </ul> <p>Broadcast, unknown unicast, and unknown multicast traffic will not be forwarded. Known unicast and known multicast traffic is forwarded as expected.</p> <p>To solve this issue, if the Ubervisor switch is egress switch for a User Defined Path that uses the confluent ring, in Plexxi Control when configuring the Flow Entry, explicitly select the egress ports on the egress (Ubervisor) switch.</p> <p>If the last switch in the path is not an Ubervisor switch, traffic flows as expected.</p>

Issue ID	Description
PXSW-2162	In a Flow Entry created in Plexxi Control that uses the Path action, the Flow Entry might match a flow that does not originate on the source switch defined in the user-defined path.
PXSW-1216	Before increasing the size of the confluent ring usingn the Plexxi Switch CLI, you must remove any configuration from the ports to be added to the confluent ring LAG. This configuration includes L1 Replication, Fabric Link Encapsulation and User Defined Paths.