Junos Space Network Director Release 3.1R2 Release Notes

6 March 2018

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Introduction

Junos Space Network Director enables unified management of QFX Series switches, QFX Series switches with ELS, Datacenter Fabrics, EX Series Ethernet Switches, Junos Fusion Enterprise and Data Center Fabrics, EX Series switches with ELS, MX Series routers with ELS, Juniper Networks WLC Series Wireless LAN Controllers (WLCs), and VMware vCenter devices in your network. It provides for full network life cycle management by simplifying the discovery, configuration, visualization, monitoring, and administration of large networks containing physical and virtual devices. You can download the software images for Network Director, Junos Space Management Platform, management packs, and the release notes for Network Director Release 3.1R2 by using the appropriate links on the Junos Space—Software Download page.

Release Notes for Junos Space Network Director

These release notes accompany Network Director 3.1R2 Release:

Supported Platforms

Table 1 on page 2 lists the supported platforms for Network Director Release 3.1R2 and the corresponding qualified Junos OS releases, Mobility System Software (MSS) releases, or VMware ESXi releases.

Table 1: Supported Platforms and Software Versions for Network Director

Supported Platforms	Qualified Junos OS, MSS, ESXi Releases, or Device Firmware Version
QFX Series Switches and Datacenter Fabrics	
QFX10008	Junos OS Releases 15.1X53-D30.19, 15.1X53-D33, 15.1X53-D60.4, 15.1X53-D61.7, and 15.1X53-D64.3

Table 1: Supported Platforms and Software Versions for Network Director (continued)

Supported Platforms	Qualified Junos OS, MSS, ESXi Releases, or Device Firmware Version
QFX10002-36Q switches with the following SKU: QFX10002-36Q-DC QFX10002-72Q switches with the following SKU: QFX10002-72Q-DC	Junos OS Release 15.1X53-D61, 15.1X53-D61.7, 15.1X53-D64.3, and 17.2R1.13
QFX5200-32C switches with the following SKUs: QFX5200-32C-AFI QFX5200-32C-AFO QFX5200-32C-DC-AFI QFX5200-32C-DC-AFO	Junos OS Release 15.1X53-D30.5 and 15.1X53-D230.3
QFX5100 switches with the following product SKUs: QFX5100-48S-3AFI QFX5100-24Q-3AFI QFX5100-24Q-3AFO QFX5100-24Q-D-3AFI QFX5100-24Q-D-3AFO QFX5100-48T-AFI QFX5100-48T-AFO QFX5100-48T-DC-AFI QFX5100-48T-DC-AFO	Junos OS Release 14.1X53-D35.3, 14.1X53-D40.8, and 14.1X53-D42.3
QFX5110 switches with the following product SKUs: QFX5110-32Q QFX51100-48S	Junos OS Release 17.2R2.8, 17.3R1.10, and 17.4R1.16
QFX10002 as Layer 3 Fabric spine device QFX5100 as Layer 3 Fabric spine or leaf device QFX5110-32Q as Layer 3 Fabric spine or leaf device QFX5110-48S as Layer 3 Fabric leaf device EX4300 as Layer 3 Fabric leaf device	Junos OS Release 15.1X53-D60, 15.1X53-D61.7, 15.1X53-D64.3, and 17.2R1.13 for QFX10002 Junos OS Release 14.1X53-D35.3, 14.1X53-D40.8, and 14.1X53-D42.3 for QFX5100 Junos OS Release 17.2R2.8, 17.3R1.10, and 17.4R1.16 for QFX5110-32Q Junos OS Release 17.2R2.8, 17.3R1.10, and 17.4R1.16 for QFX5110-48S Junos OS Release 14.1X53-D27, 14.1X53-D40.8, and 14.1X53-D42.3 for EX4300
QFX10002 as Layer 3 Fabric spine device (in an EVPN-VXLAN configuration) QFX5100 as Layer 3 Fabric leaf device (in an EVPN-VXLAN configuration) QFX5110 as Layer 3 Fabric leaf device (in an EVPN-VXLAN configuration) QFX5200-32C-32Q as Layer 3 Fabric spine or leaf device (in an EVPN-VXLAN configuration) EX4300 as Layer 3 Fabric leaf device (in an EVPN-VXLAN configuration)	Junos OS Release 15.1X53-D60, 15.1X53-D61.7, 15.1X53-D64.3, and 17.2R1.13 for QFX10002 Junos OS Release 14.1X53-D35.3, 14.1X53-D40.8, and 14.1X53-D42.3 for QFX5100 Junos OS Release 17.2R2.8, 17.3R1.10, and 17.4R1.16 for QFX5110 Junos OS Release 15.1X53-D210 for QFX5200-32C-32Q Junos OS Release 14.1X53-D27 for EX4300
QFX3500 (non-ELS) QFX3600 (non-ELS)	Junos OS Releases 12.3X50-D35 and 12.3X50-D40

Table 1: Supported Platforms and Software Versions for Network Director (continued)

Supported Platforms	Qualified Junos OS, MSS, ESXi Releases, or Device Firmware Version
QFX3500 with ELS (standalone and Virtual Chassis) QFX3600 with ELS (standalone and Virtual Chassis) QFX5100-48S with ELS (standalone and Virtual Chassis) QFX5100-24Q with ELS (standalone and Virtual Chassis) QFX5100-96S with ELS (standalone and Virtual Chassis)	Junos OS Releases 13.2X51-D30, 14.1X53-D15, 14.1X53-D27, 14.1X53-D40, and 14.1X53-D40.8
Virtual Chassis Fabric	Junos OS Release 13.2X51-D20, 14.1X53-D15, 14.1X53-D27, 14.1X53-D40
Virtual Chassis Fabric (QFX5110)	Junos OS Release 17.2R2.8, 17.3R2.10, and 17.4R1.16
QFabric systems (QFX3000-G and QFX3000-M)	Junos OS Releases 14.1X53-D15, 14.1X53-D17, and 13.2X52-D20
EX Series Switches	
EX2200 and EX2200-C (standalone and Virtual Chassis) and EX3200 EX3300 (standalone and Virtual Chassis) EX4200 (standalone and Virtual Chassis) EX4500 (standalone and Virtual Chassis) EX4550 (standalone and Virtual Chassis) Mixed EX4200, EX4500, and EX4550 Virtual Chassis EX6200 EX8200 (standalone and Virtual Chassis)	Junos OS Releases 12.2, 12.3, 13.2X50-D10, 13.2X50-D15, 13.2X51-D15, 13.2X51-D20, 13.2X51-D30, 14.1X53-D15, 14.1X53-D25, 15.1R1, 14.1X53-D40.8, 14.1X53-D35, and 14.1X53-D42.3 (For all the EX Series switches)
EX Series Switches with ELS	
EX2300 and EX3400	Junos OS Release 15.1X53-D50, 15.1X53-D51, 15.1X53-D52, 15.1X53-D55.5, and 15.1X53-D56
EX2300-48T EX2300-48P	Junos OS Release 15.1X53-D55
EX3400-24P EX3400-24T EX3400-48P EX3400-48T	Junos OS Release 15.1X53-D55 and 15.1X53-D56
EX4600 (standalone and Virtual Chassis)	Junos OS Releases 13.2X51-D25, 14.1X53-D10, 14.1X53-D16, 14.1X53-D25, 14.1X53-D27, 14.1X53-D35, 14.1X53-D40.8, and 14.1X53-D42
EX4300 (standalone)	Junos OS Release 13.2X51-D15, 13.2X51-D20, 13.2X51-D30, 14.1X53-D27, 14.1X53-D40.8 and 14.1X53-D42.3

Table 1: Supported Platforms and Software Versions for Network Director (continued)

Supported Platforms	Qualified Junos OS, MSS, ESXi Releases, or Device Firmware Version
EX4300 Virtual Chassis	Junos OS Release 13.2X51-D15, 13.2X51-D20, 13.2X51-D30, 14.1X53-D27, 14.1X53-D40.8 and 14.1X53-D42.3 NOTE: The master switch in EX4300 Virtual Chassis must be running Junos OS Release 13.2X51-D20 or later for auto Virtual Chassis Resync to work. If this is not the case, the role changes and the addition or deletion of members will not reflect in Network Director.
EX9200 (standalone and Virtual Chassis)	Junos OS Releases 16.1R1, 17.1R1.8, and 17.2R1.13
Mixed EX4600 and EX4300 Virtual Chassis	Junos OS Releases 14.1X53-D25 and 14.1X53-D35.3 (For all the EX Series switches)
MX Series Routers	
MX 240, 480, 960 (ELS)	Junos OS Release 13.2R2.4, 14.1R4, 14.2R2, and 15.1R1
MX 80, 104, 240, 480, 960, 2010, and 2020 (non-ELS)	Junos OS Release 14.1R4 and 15.1R1
Cloud Analytics Engine	
CentOS	CentOS Release 6.6
Ubuntu	Ubuntu Release 14.04
Cloud Infrastructure Providers	
VMware vCenter Server VMware Host	VMware ESXi versions 5.0, 5.1, 5.5, 6.0, and 6.2
OpenStack	Supported Releases—Kilo Liberty, Mitaka, and Newton Ensure that the APIs listed in Table 2 on page 6 are running.
VMware NSX	Versions 4.1, 6.1, and 6.2
NSX-V	Version 6.1 and 6.2
Juniper Networks Management Pack	
VMware vRealize Operations (vROps) Management Pack Release 1.1	VROps Versions 6.0, 6.0.1, and 6.1
VMware vRealize Operations (vROps) Management Pack Release 2.0	VROps Versions 6.2, 6.3, 6.4, and 6.5
DHCP and File Server (FTP and TFTP)	
CentOS	CentOS Release 6.6

Table 1: Supported Platforms and Software Versions for Network Director (continued)

Supported Platforms	Qualified Junos OS, MSS, ESXi Releases, or Device Firmware Version
Ubuntu	Ubuntu Release 14.04
WLC Series Wireless LAN Controllers	
WLC8 WLC800 WLC880 WLC2800 WLC200	MSS Releases 7.7, 8.0, 9.0, 9.1, and 9.6.3.2
WLC2	MSS Releases 7.7 and 8.0
JunosV Wireless LAN Controller WLC100	MSS Releases 9.0, 9.1, and 9.6.3.2
WLA Series Wireless LAN Access Points	
WLA321 WLA322 WLA422 WLA432 WLA522 WLA532 WLA620 WLA622 WLA632	MSS Releases 7.7, 8.0, 9.0, 9.1, and 9.6.3.2
Aruba Devices Running Aruba Airwave	
Aruba Airwave	Version 8.0.7
Samsung Devices	
Samsung Access Points	Version 3.1.8.T2

Table 2: API Requirements for OpenStack

Name of the API	OpenStack Based Data center	OpenStack + NSX Based data center
Keystone API v2	Yes	Yes
Nova API v2	Yes	Yes
Neutron API v2	No	Yes
Ceilometer API v2	Yes, if you want to run the VM stats monitoring feature	Yes, if you want to run the VM stats monitoring feature

Junos Space Network Management Platform Requirements

Network Director Release 3.1R2 is supported on the Junos Space Network Management Platform Release 17.1R1. You must download this release of Network Director and Junos Space Network Management Platform from Junos Space Network Management Platform - Download Software page.

Network Director is supported on a Junos Space JA2500 appliance or a Junos Space Virtual Appliance that meets the hardware requirements specified in the Junos Space documentation. Network Director is not supported on a Junos Space instance running on a Juniper Networks NSM3000 appliance.

Junos Space DMI Schema Requirements for Network Director

In most installations, Junos Space automatically matches the DMI schemas to device families. But there might be certain situations where your network uses a device for which Junos Space does not have the latest or supported schema available. In such instances, you must obtain and upload the requisite schema and set it as the default DMI schema for each device family. Set a default DMI schema for each device family to enable Junos Space to apply an appropriate schema to a device family.

If you cannot find the schema equivalent, use the latest schema from the main release or contact the Juniper Support. For example, for an EX4500 switch running Junos OS Release 13.2X51-D20, you must use the Junos OS Release 13.2X51-D20 schema. If this is not available, you can use the latest schema available from the Junos OS Release 13.2X51 releases. Use Table 3 on page 7 as a guideline for the fallback schema that you can obtain and upload in Junos Space before you start working on Network Director Release 3.1R2.

Table 3 on page 7 lists the latest DMI schema that you must obtain and upload in Junos Space before you start working on Network Director Release 3.1R2.

Table 3: DMI Schemas

Device	Name of the DMI Schema	Device Family
QFX10008	JUNOS 15.1X53-D30.19 JUNOS 15.1X53-D32.2 JUNOS 15.1X53-D60.4 JUNOS 15.1X53-D61.7 JUNOS 15.1X53-D64.3	junos-qfx
QFX10002	JUNOS 15.1X53-D32.2 JUNOS 15.1X53-D60.4 JUNOS 15.1X53-D61.7 JUNOS 15.1X53-D64.3 JUNOS 17.2R1.13	junos-qfx
QFX5200	JUNOS 15.1X53-D30.19 JUNOS 15.1X53-D230.3	junos-qfx
QFX5200-32C-32Q	JUNOS 15.1X53-D210	junos-qfx

Table 3: DMI Schemas (continued)

Device	Name of the DMI Schema	Device Family
QFX5100-48S with ELS (standalone and Virtual Chassis) QFX5100-24Q with ELS (standalone and Virtual Chassis) QFX5100-96S with ELS (standalone and Virtual Chassis)	JUNOS 14.1X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos-qfx
QFX5100 switches with the following product SKUs: QFX5100-48S-3AFI QFX5100-24Q-3AFI QFX5100-24Q-3AFO QFX5100-24Q-D-3AFI QFX5100-24Q-D-3AFO	JUNOS 14.1X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos-qfx
QFX5100 switches with the following product SKUs: QFX5100-48T-AFI QFX5100-48T-AFO QFX5100-48T-DC-AFI QFX5100-48T-DC-AFO	JUNOS 14.1X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos-qfx
QFX5110 switches with the following product SKUs: QFX5110-32Q QFX5110-48S	JUNOS 17.2R2.8 JUNOS 17.3R1.10 JUNOS 17.4R1.16	junos-qfx
QFabric devices	JUNOS 14.1X53-D15 JUNOS 14.1X53-D17	junos-qf
QFX3500 (non-ELS) QFX3600 (non-ELS)	JUNOS 12.3X50-D35	junos-qfx
QFX3500 with ELS (standalone and Virtual Chassis) QFX3600 with ELS (standalone and Virtual Chassis)	JUNOS 14.1X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos-qfx
EX4300	JUNOS 14.1X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos
EX9200	JUNOS 16.1R1.11 JUNOS 17.1R1.8 JUNOS 17.2R1.13	junos
EX4600	JUNOS 14.1X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos-qfx

Table 3: DMI Schemas (continued)

Device	Name of the DMI Schema	Device Family
EX2200 and EX2200-C (standalone and Virtual Chassis) and EX3200 EX3300 (standalone and Virtual Chassis) EX4200 (standalone and Virtual Chassis) EX4500 (standalone and Virtual Chassis) EX4550 (standalone and Virtual Chassis) Mixed EX4200, EX4500, and EX4550 Virtual Chassis EX6200 EX8200 (standalone and Virtual Chassis)	JUNOS 14.2X53-D35.3 JUNOS 14.1X53-D40.8 JUNOS 14.1X53-D42.3	junos-ex
EX2300	JUNOS 15.1X53-D55.5 JUNOS 15.1X53-D56	junos-ex
EX3400	JUNOS 15.1X53-D55.5 JUNOS 15.1X53-D56	junos-ex
MX Series Routers MX80 MX104 MX240 MX480 MX960 MX2010 MX2020 Series routers	JUNOS 15.1R1.9	junos

See Setting a Default DMI Schema for detailed steps for setting a default schema.

Installation and Upgrade Instructions

Before you begin to install Network Director Release 3.1R2, ensure the following:

- The Junos Space Network Management Platform is of the required release number with the latest patch installed. For more information about the software requirements for Junos Space Network Management Platform, see "Junos Space Network Management Platform Requirements" on page 7.

NOTE: If you have installed Network Director Release 3.1R1 Beta on the same Junos Space appliance, then you must uninstall it before installing Network Director Release 3.1R2.

- Network Director cannot be installed on a system that has Connectivity Services Director or Edge Services Director already installed. Uninstall Connectivity Services Director or Edge Services Director before you install Network Director on your system.

You must complete the tasks in the prescribed order for installation or upgrade of Network Director. Use the following table to determine the prescribed order of tasks for your installation or upgrade.

Upgrade or Installation	Steps to be Performed
New installation—Network Director	1. Install or upgrade to a supported release of Network Management Platform. See "Junos Space Network Management Platform Requirements" on page 7 to know the supported Network Management Platform version. 2. Install Network Director Release 3.1R2. For detailed steps, see Installing Network Director. After the installation is complete, the system lists Network Director in the list of installed applications.

Upgrade or Installation	Steps to be Performed
Upgrade from earlier releases of Network Director—Network Director Release 3.1R2	1. Upgrade to a supported release of Network Management Platform. See "Junos Space Network Management Platform Requirements" on page 7 to know the supported Network Management Platform version. 2. Ensure that you have Network Director Release 2.0, 2.5R1, or 2.5R2 running. You can upgrade to Release 3.1 only from one of these releases. NOTE: • If you are running an older release of Network Director, upgrade to Network Director Release 2.0R1, 2.5R1, or 2.5R2 before you proceed with the upgrade. For detailed steps, see *Network Director Release 2.5 Quick Start Guide* or *Network Director Release 2.0 Quick Start Guide*. • If you are running Network Director Release 2.0, you must upgrade to Junos Space Network Management Platform Release 15.2 before you proceed with the upgrade. For the detailed steps to upgrade to Network Management Platform Release 15.2, see Upgrading Junos Space Network Management Platform. 3. Download and install the Junos Space Platform 15.2R2 patch from the Download Software page. 4. Back up the Junos Space Platform and Junos Space Application data from the Junos Space nodes by executing the backup script that is part of the Junos Space Platform 15.2R2 patch. 5. Install Junos Space Platform Release 16.1R1 on a standalone node or on the first node of the fabric and restore backed up data. 6. Configure device communication to ensure that discovered devices can communicate with the Junos Space server. 7. Install Network Director Release 3.1R2. For detailed instructions on installing Network Director, see *Network Director Quick Start Guide*.

Operational Notes on General Interface Use

- The recommended screen resolution is 1280 x 1024. If your screen resolution is less than the supported resolution, the Network Director UI might not be displayed properly. For example, icons might not be displayed on the Network Director banner, pages might appear truncated, or scroll bars might not work correctly.
- The supported Web browsers are Google Chrome version 17 and later, Mozilla Firefox version 14.0 and later, and Microsoft Internet Explorer versions 9.0, 10.0, and 11.0.
- Network Director does not support cold migration of virtual machines. Cold migration is the migration of a virtual machine that is powered off.
- You can log in directly to Network Director without logging in to the Network Management Platform first. To do so, use the URL:

https://<*junos-space-host*>/networkdirector

The default username and password is the administrator's username and password.

- If you have logged in to Network Director for a long period of time, the connection to the server might time out. Monitoring screens might go blank or you might not be able to access tasks. To resolve this, log out of Network Director and then log in again.
- If you receive Java exception error message when you perform an operation, retry the operation. The error condition is usually temporary and has no other impact.
- In large-scale environments, it might take some time for the network tree in the View pane to reflect changes such as newly discovered devices or newly created locations.
- Deployment of configurations to QFX5100 switches from Network Director is possible only after you run the following commands by using the CLI of the QFX5100 switch:

```
[edit]
user@switch# set system extensions providers juniper license-type juniper deployment-scope commercial
user@switch# set system extensions providers chef license-type juniper deployment-scope commercial
```

Operational Notes on Device Discovery and Management

- The administrator username that you specify for discovering the OpenStack server must have admin privileges and must belong to an admin tenant in the OpenStack server.
- In a data center network, changes that you make to a vCenter network are dynamically updated in Network Director. However, changes that are made on an OpenStack network require you to wait for the periodic synchronization job to run or you must perform a manual resynchronization for the changes to be updated in Network Director.
- While discovering a CPE switch for a QFabric system, we recommend that you use the root user credentials.
- You must run the following command on all the switches that are connected to a vCenter server for LLDP discovery to work.

```
user@switch# set protocols lldp port-id-subtype interface-name
```

- For Network Director to be able to discover and manage devices, the following protocol ports must be open between the Junos Space Network Management Platform server and the devices:
  - Port 22 for SSH connections. If you have changed the SSH port to a port other than port 22 on your Network Management Platform, you must change the SSH ports on your managed devices to the port that the Network Management Platform uses.
  - Port 443 for virtualization and RingMaster import support. Use port 443 for outbound traffic to vCenter servers.

NOTE: If your RingMaster server uses any port other than port 443, then you must open that port from the Junos Space Network Management Platform server.

- Port 10162 for SNMP traps. Network Director receives traps from managed devices on this port. (After you install Network Director, use Network Director to configure SNMP on your devices to send traps to Network Director on this port.)
- Port 8889 for the management of wireless LAN controllers.
- Port 21 (TCP) and port 69 (UDP) for uploading the software image and configuration file to the FTP server.
- Port 8282 for connecting to the DLE.
- Ports 8774, 9696, 9292, 8777, 35357, and 8776 for accessing OpenStack and VMware NSX APIs.

You can verify that the ports are open to the devices by logging in to the Network Management Platform CLI and executing the **nmap** command. For example, to verify that port 8889 is open to a controller, enter:

```
root@space# nmap <controller-ip-address> -p 8889
```

- When the port statistics counters on a device are reset either manually or during an image upgrade, the traffic widgets might show incorrect values for some time. If this happens, wait for 2 to 3 poll intervals, after which the issue resolves itself.
- For wired devices, you might not be able to specify the SNMP community string from Network Director. However, the Refresh Discovery task from Topology View requires the SNMP community string to be configured on the device to proceed with the refresh discovery task. As a workaround, use the CLI to configure the required community string on the device before you use the Refresh Discovery task.

New and Changed Features for Network Director 3.1R2

- **New Hardware Support**—From Release 3.1R2 onward, Junos Space Network Director supports configuration of Layer 3 Fabric, Virtual Chassis Fabric, and Zero Touch Provisioning for the following device models:
  - QFX5110-32Q
  - QFX5110-48S

New and Changed Features for Network Director 3.1R1

This section describes the new features and enhancements to existing features in Network Director Release 3.1R1:

Hardware Features

- There are no new hardware features in Network Director Release 3.1R1.

Software Features

- **Support for Junos Fusion Data Center**—Starting in Network Director Release 3.1R1, you can plan, deploy, manage, and monitor Junos Fusion Data Centers using the Network Builder task in Network Director. Junos Fusion Data Center extends the Junos Fusion technology to data center networks. The Junos Fusion technology is based on the IEEE 802.1BR standard and provides a rich, open framework that makes networks more versatile, extensible, and responsive in multivendor environments and improves network agility and reduces costs. Junos Fusion Data Center provides automated network configuration and enhanced scalability for medium-to-large data centers with the Juniper Networks QFX10002-36Q switches, QFX10002-72Q switches, QFX5100 switches, and EX4300 switches.

  [See Understanding Junos Fusion Data Center.]

- **Enhancements to Junos Fusion Enterprise**—Junos Space Network Director Release 3.1R1 supports the following enhancements while creating and managing a Junos Fusion Enterprise setup in Network Director:

  - You can select more than one ICL or ICCP ports as LAG interfaces from the Select ICL & ICCP window. The LAG interface provides redundancy and load balancing between the two aggregation devices.
  - Network Director automatically configures the ICCP port to establish the ICCP session between the connected aggregated devices.
  - You can configure the local IP address for the ICCP port if you want to perform the manual ICCP provisioning.
  - In a multihome setup, you can change the alias name of the satellite devices so that the alias name is the same in both aggregation devices.
  - When you create a new chassis for the aggregation device model, you must select at least one line card that supports a cascade port.
  - In addition to the EX4300 device model, Network Director now supports EX2300 and EX3400 as satellite devices.
  - You can configure and edit the FPC slot ID for a satellite device for the selected cascade port.
  - You can configure parameters such as storm control or MAC Limit, 802.1x, DHCP relay, PVLAN, and Jumbo frames fragmentation in Junos Fusion Enterprise by using the Quick Templates feature.

  [See Creating and Managing Fusion Configuration Templates.]

- **Support for Media Access Control Security(MACsec) profiles**—You can create a profile for the MACsec configuration and apply these profiles to the extended ports of a Junos Fusion Enterprise setup.

See Configuring and Managing MACsec Profiles.

- **Enhancements to the Manage Port Profiles page**—You can search for Port profiles based on one or more of the following criteria from the Manage Port Profiles page:
  - Port profiles on a specific device.
  - Port profiles assigned to a specific port on a device.
  - Port profiles that are assigned to interfaces that belong to the same VLAN. When you specify the VLAN name in the search field, all the Port profiles that are part of the VLAN are listed in a table format.

  [See Creating and Managing Port Profiles.]
- **Enhancements to the device topology**— Network Director now preserves the changes you make to a device position or arrangement of devices in Junos Fusion, QFabric, and IP fabric topologies even if you navigate away from the page.

  [See Managing Fusion Fabrics.]
- **Enhancements to the Device Connectivity View**— Network Director now uses a unique icon to depict Samsung Access Points (APs) in the Device Connectivity page. You can mouse over the Samsung AP icon to view details of the device.

  [See Managing the Topology View.]
- **Support for brownfield Layer 3 Fabric**— You can discover a Layer 3 fabric in Network Director that is not created using Network Director and OpenClos. To discover a brownfield Layer 3 fabric, specify the IP subnet range as all the devices that belong to the same Layer 3 Fabric reside in the same subnet.

  [See Discovering Devices in a Physical Network.]

Known Behavior

This section lists the known behavior in Network Director:

- Network Director only supports SNMP V1 and V2C traps.
- For EX4300 satellite devices to be part of a Junos Fusion Enterprise, ensure that you use *U-Boot 2011.12-00062-gf837a99 (Jul 11 2014 - 13:47:59)* and *FreeBSD/PowerPC U-Boot bootstrap loader 2.4* as the boot loader, with PoE firmware version *2.6.3.92.1*, and *10G PIC-2 ports* as cluster ports.
- Juniper Networks Data Center Switching Management Pack for vROps does not display the following:
  - Layer 3 Fabric devices under Fabric option in the Juniper Infrastructure Overview Dashboard.
  - Data in the Health, Risk and Efficiency badges for Layer 3 Fabric devices.
- When defining your network configuration in quick templates by using a particular command, ensure that you define the subcommands individually. Stating subcommands as a single command causes errors. For example, the commands **set snmp location sunnyvale** and **set snmp contact admin@example.com** are valid when defined

individually. However, if you combine these commands into the single command **set snmp location sunnyvale contact admin@example.com**, schema validation treats the last command **contact** as an extra entry and causes an error.

- In an OpenStack+NSX based data center, the flow analysis feature is not supported for virtual machines that are part of more than one network or VNI.
- Network Director does not support Junos Space domains and subdomains. Do not assign devices to domains and subdomains in Junos Space.
- EX4300 switch running Junos OS Release 14.1X53-D10 or 14.1X53-D15 cannot be managed using Network Director.
- If you are using Microsoft Internet Explorer version 9.0 or 10.0, the View Connectivity task in the Datacenter View and the Flow Analysis > View Details subtask in the Dashboard View might not work as expected. Use a supported version of Google Chrome or Mozilla Firefox to perform these tasks.
- EX4600 switches are grouped under Campus Switching ELS platform in Network Director even though the device family for EX4600 displays as JUNOS-QFX in the Inventory page. All Campus Switching ELS profiles can be associated with these switches.

  You *must* use the QFX schema to manage this device instead of the EX ELS schema.
- In Location View, if you assign all the members of a Virtual Chassis, Virtual Chassis Fabric, or QFabric system to buildings or floors, then none of the Device level tasks are available. We recommend that you assign the entire logical device—the QFabric system, Virtual Chassis, or the Virtual Chassis Fabric—to any given location.
- For Data Center switching ELS Port profile, profile assignment might fail for single and multiple devices after you specify the port range of channelized interfaces even if the range you specified is within the range available on the device (or devices).
- When an EX4300 switch is used as a member switch in a QFX5100 mixed mode Virtual Chassis or Virtual Chassis Fabric, Network Director does not consider the configurations that you make on DCBX and Device Count fields, and configuration commits fail.
- If QFX3500, QFX3600, or EX4300 Virtual Chassis are running releases earlier than Junos OS Release 13.2X51-D20, any changes made to the Virtual Chassis, such as adding or deleting members or changing the role of members, might not reflect in Network Director.
- Deploying a Fabric profile that has the same name as an already deployed Fabric profile, but a different Fabric ID, removes the interface association of the first Fabric profile from the device. Therefore, do not deploy Fabric profiles with the same name on a device.
- With QFabric systems that are running Junos OS releases earlier than Release 13.1X50-D20, the Control Plane Topology does not work if the CPE switches are used in Virtual Chassis mode. If you need assistance with an earlier release, contact Juniper Networks support.
- Network Director does not support access points that are directly connected to a controller.

- Nonstop software upgrade (NSSU) for EX8200 Virtual Chassis might not work as expected.
- The Access profile configuration and the port security configuration that are part of the Port profile configuration might not work on EX9200 switches running Junos OS Release 12.3R2.5.
- Alarms generated on individual QFabric nodes do not display in Topology View. Bandwidth utilization value for VCP and a*ex* interfaces might not be displayed in the Topology View.
- Network Director might not display:
  - Unprovisioned members added to a Virtual Chassis or a Virtual Chassis Fabric.
  - The *Not Present* status for members removed from a Virtual Chassis or a Virtual Chassis Fabric.
- For Data Center Switching ELS Port profile, a profile assignment might fail for channelized interfaces in a port range even when the channelized interfaces in that port range are available on the devices.
- The Validate Pending Configuration task does not validate the unsupported configurations on data center devices.
- In the manual mode, when out-of-band changes are resynchronized, the conflicting CR might not be listed for quick templates.
- In the Edit Layer 3 Fabric workflow, the deployment status might display as Failed for replaced or deleted QFX5100 or EX4300 switches (running Junos OS Release 13.2X51-D*nn*) even if the configuration is successfully deployed on the device. Also, it might take more than 10 minutes for the device status to be updated in the Edit Layer 3 Fabric job.
- During a cluster switchover, if a backup configuration job or a device discovery job is running in Network Director, the switchover status might display as In progress even after the switchover is complete.
- In a Junos Fusion setup, you might need to assign two aggregation devices for an auto-profile policy. For example, if a satellite device has 65 ports, then you might need to add two aggregation devices as
  AD1: ge-65/0/1- ge-65/0/10 and AD2 : ge-65/0/1 - ge-65/0/10. To assign both the aggregation devices, select the aggregation devices at the group level and do not select the satellite device.
- When editing a MACsec profile that is already deployed in Network Director, you can modify all the configuration parameters in the MACsec profile, except the Connection Association Name and MACsec mode.
- The resynchronization job for the MX Series device fails if the VLAN ID for the device is configured as none from the device CLI.
- You cannot modify the configuration for a Layer 3 Fabric from Network Director if the Layer 3 Fabric was created using the brownfield process during device discovery in Network Director.

Known Issues

This section lists the known issues in Network Director Release 3.1.

For the most complete and latest information about known defects Junos Space Network Director defects, use the Juniper Networks online Junos Problem Report Search application.

- After you upgrade Network Director from Release 2.5 to Release 3.0, the VMware vRealize Operations (vROps) stops receiving data from Network Director.

  Workaround: After upgrading to Network Director Release 3.0, open the vROps user interface and delete the ND adapter, add the ND adapter afresh, and try again. [PR1232254]

- If you open Network Director in multiple tabs of the same browser window, autorefresh works only for the latest tab.

  Workaround: For autorefresh to work on all sessions, use different browsers. [PR978137]

- Network Director promotes duplicate VLAN profiles to VLAN with VRRP profiles when you make out-of-band changes to a device.

  Workaround: Delete the unassigned profile from Network Director. [PR1120850]

- With Microsoft Internet Explorer 11, the View Virtual Network Connectivity page in the Datacenter View might not display the Zoom In, Zoom Out, and Refresh icons.

  Workaround: Scroll to the left of the screen to use the Zoom In, Zoom Out, and Refresh icons. [PR1098365]

- When you create a Zero Touch Provisioning (ZTP) profile, you are unable to add a default route or gateway address.

  Workaround:

  1. Open the *dhcpd.conf* file on the DHCP server.
  2. Add an entry for **option routers**, between the **subnet** and **option subnet-mask** entries of the appropriate subnet, and specify the gateway IP address as shown in the example below:

     An example code snippet:

     ```
     subnet 10.222.210.0 netmask 255.255.254.0{
     option routers 10.222.210.1;
     option subnet-mask 255.255.254.0;
     ```

  3. Restart the dhcpd service from the Junos Space console by issuing the **service dhcpd restart** command.

     [PR1103325]

- After you make out-of-band changes on authentication details that are part of a VRRP profile, refreshing the configuration does not create a new profile.

  Workaround: Make the out-of-band changes as part of the VRRP profile, deploy the VRRP profile, and resynchronize the configuration from Network Director. [PR1100717]

- All the saved changes (not deployed) on the Manage IP connectivity page are lost after you add a new device to the data center.

  Workaround: Before adding a new device to the data center, deploy all the changes that you made in the Manage IP Connectivity page. [PR1109046]

- After you deploy a policy from Network Director, if you clear the policy options and remove the corresponding Route Filters, only the association of the policy with BGP is deleted. The policy as such is not deleted from the device.

  Workaround: None available at present. [PR1109827]

- If you have VRRP version 3, after you edit an already deployed Device Common Settings profile and deploy the changes, the deployment fails. This occurs because Network Director appends the VRRP version 3 configuration also to the changed configuration, whereas only the changed configuration must be deployed.

  Workaround: Disable VRRP version 3 or make VRRP configuration compatible with version 3. [PR1118766]

- In the Manage IP Connectivity workflow, if you opted not to resynchronize devices that are Out of Sync, then all new Save or Deploy operations might fail with the following message Manage IP Connectivity Fails.

  Workaround: Synchronize the devices once prompted. [PR1119978]

- Deleting configuration files in Junos Space for devices also removes the baseline for the devices.

  Workaround: None available at present. [PR1107121]

- If an image upgrade job and a cluster fail job runs simultaneously, the image upgrade job status might show as Success, but the image might not have been upgraded.

  Workaround: Retry the image upgrade after cluster failover is complete. [PR1109072]

- Device might continue to remain in the Synchronising state after some deployments.

  Workaround: Initiate a manual resynchronization for the devices using the Resynchronize Device Configuration task. [PR1111410]

- During ZTP, device autodiscovery might fail if the device takes long time to reboot after upgrading to the new image.

  Workaround: Discover the device manually if autodiscovery failed after ZTP. [PR1114186]

- Conversion of two standalone satellite devices to a three member cluster might fail causing the status of one member to be displayed as provision down.

  Workaround: Execute the following command by using the CLI of the aggregation device:run request chassis satellite reboot fpc-slot fpc-slot-number. [PR1200371]

- The EX9200 device is not identified as an aggregation device in Junos Fusion setup and the link up job is not triggered.

  Workaround: Configure SNMP on EX9200 devices to identify it as an aggregation device. [PR1186656]

- If two MC-LAG peer devices are brown fielded with different device models and if the IP address of any one of the MC-LAG devices matches the IP address of a Peer device of another MC-LAG device, then the Manage MC-LAG page might display MC-LAG pairing with a different model.

  Workaround: Ensure that MC-LAG peer device has a unique ICCP local IP address in the network. [PR1116833]

- In the Dashboard View, the data for the last one hour is displayed in grey color after the filter criteria is applied for one hour.

  Workaround: None available at present. [PR1058767]

- Network Director does not support IPv6 topology discovery.

  Workaround: None available at present. [PR1204972]

- Network Director might not be able to discover virtual machine tags for vCenter Version 6.0, if there is no description for tags or categories.

  Workaround: Upgrade to vCenter Version 6.0 Update 1 or later and try again. [PR1186865]

- Brownfield fails if both the apply-groups and the interface description CLI are present under the interface-range stanza. This type of configuration is mostly seen for QFabric CPE.

  Workaround: Delete the **apply-groups** configuration under the **interface-range** stanza and specify the groups configuration directly under the **interface-range** stanza.

  For example in the QFabric CPE configuration, do the following:

  1. Delete the **apply-groups** configuration under the interface ranges **Node_Device_Interfaces** and **Interconnect_Device_Interfaces**:

     ```
     user@device#delete interfaces interface-range Node_Device_Interfaces apply-groups qfabric-int
     user@device#delete interfaces interface-range Interconnect_Device_Interfaces apply-groups qfabric-int
     ```

  2. Specify the configuration under the groups qfabric-int directly within the **interface-range** stanza:

     ```
     user@device#set interfaces interface-range Node_Device_Interfaces mtu 9216
     user@device#set interfaces interface-range Node_Device_Interfaces unit 0 family ethernet-switching port-mode access vlan members qfabric
     user@device#set interfaces interface-range Interconnect_Device_Interfaces mtu 9216
     user@device#set interfaces interface-range Interconnect_Device_Interfaces unit 0 family ethernet-switching port-mode access vlan members qfabric
     ```

  3. Commit the changes:

     ```
     user@device#commit
     ```

     [PR1125950]

- In the Datacenter Connectivity View, the zoom pane that appears at the bottom right might not highlight the area that is zoomed.

  Workaround: None available at present. [PR1100350]

- If you physically connect a new Virtual Chassis leaf member before adding the leaf member from Network Director, the leaf member might not be mapped to Layer 3 Fabrics as expected.

  Workaround: Plug and play is not supported for Virtual Chassis leaf members. Therefore, before you physically connect the Virtual Chassis members, make sure that you add the Virtual Chassis leaf members by using the Layer 3 Fabric wizard. [PR1098910]

- While editing Layer 3 Fabric profiles (Port, VLAN, and Device profiles) users are not warned by any notification that changing Layer 3 Fabric profile configurations might impact the Layer 3 Fabric functionality.

  Workaround: After the profiles are modified, you can discard the changes from the Deploy task. [PR1058811]

- For Layer 3 Fabrics, if a plug-and-play leaf device is added and mapped to the Fabric, the Cabling page in the Edit Layer 3 Fabric workflow might not update the cabling plan for that leaf in the graph and grid views.

  Workaround: When you edit the Layer 3 Fabric, modify the description in the Fabric Requirements page and then navigate to the Cabling page. The Cabling page updates the proper cabling plan for the plug-and-play leaf device. [PR1058827]

- In the manual mode, when out-of-band changes are resynchronized, the conflicting CR might not be listed for quick templates.

  Workaround: None available at present. [PR1046833]

- In the Edit Layer 3 Fabric workflow, the deployment status might display as Failed for replaced or deleted QFX5100 or EX4300 switches (running Junos OS Release 13.2X51-Dxx) even if the configuration is successfully deployed on the device. Also, it might take more than 10 minutes for the device status to be updated in the Edit Layer 3 Fabric job.

  Workaround: None available at present. [PR1061773]

- When you create the first data center in Network Director, the View pane might not be updated dynamically with the data center components and devices.

  Workaround: Navigate to any other View and then return to the Datacenter View. [PR1061337]

- Discovery of a QFabric device that has some system log messages in the **default-log-messages** file might trigger multiple resynchronization jobs.

  Workaround: Clear the system log messages in the **default-log-messages** file before discovery. The CLI command for clearing default log messages is **clear log default-log-messages**. [PR1027051]

- Network Director does not perform Virtual Chassis resynchronization for standalone devices when the device status changes from DOWN to UP or when Network Director restarts.

Workaround: Delete and rediscover the devices from Network Director. [PR1001626

- In Topology View, Network Director does not display LAG details between QFabric and other devices.

  Workaround: None available at present. [PR967224]

- For wired devices, you are unable to specify the SNMP community string from Network Director. However, the Refresh Discovery task from Topology View requires the SNMP community string to be configured on the device to proceed with the refresh discovery task.

  Workaround: Use the CLI to configure the required community string on the device before you use the Refresh Discovery task. [PR1014926]

- If you associate a hierarchical Data Center switching or Campus switching ELS CoS profile that has Priority Flow Control configuration with an interface of an EX4300 switch that is part of an EX4600 Virtual Chassis, QFX Virtual Chassis, or Virtual Chassis Fabric, the deployment fails.

  Workaround: Clone the CoS profile, remove the PFC settings from the cloned profile, and associate the cloned profile with the EX4300 interfaces. [PR1017364]

- When a device is removed from one Virtual Chassis or Virtual Chassis Fabric and added to another Virtual Chassis or Virtual Chassis Fabric respectively, the show virtual-chassis status output command from Network Director might not display the expected information for that member in either the Virtual Chassis or the Virtual Chassis Fabric.

  Workaround: Before you discover that member from Network Director, recycle that member in the Virtual Chassis or Virtual Chassis Fabric in which the member device information is not displayed. [PR970798]

- If the IP address of space nodes change after installing Network Director, the Layer 3 Fabric configuration might still retain the old IP address of space nodes as the SNMP trap target.

  Workaround: Log in to Junos Space console and select the (Debug) run shell option. Run the following commands at the shell prompt:

  - **python2.7 /opt/configure_for_ND.py -ndvip <VIP> -nodeip <node management ip> -restport 20080 -traptgt <node management ip> -dbuser <DB user> -dbpass <DB password> -ndtrapport 10162**
  - If there is a device management interface configured, run the same command using device management ip option as follows:
    python2.7 /opt/configure_for_ND.py -ndvip <VIP> -nodeip <device management ip> -restport 20080 -traptgt <device management ip> -dbuser <DB user> -dbpass <DB password> -ndtrapport 10162
  - If it is a cluster environment, the command needs to be run on each node. The argument **-traptgt** must be repeated the same number of times as the number of nodes present. Assuming there are four nodes, run the following command on each of the four nodes:
    python2.7 /opt/configure_for_ND.py -ndvip <VIP> -nodeip <node management ip> -restport 20080 -traptgt <node1 management ip> -traptgt <node2 management ip>

-traptgt <node3 management ip> -traptgt <node4 management ip> -dbuser <DB user> -dbpass <DB password> -ndtrapport 10162

- If it is a cluster environment and each node has a device management interface configured, the command needs to be run on each node. The argument **-traptgt** must be repeated the same number of times as the number of nodes present. Assuming there are four nodes, run the following command on each of the four nodes.
  python2.7 /opt/configure_for_ND.py -ndvip <VIP> -nodeip <device management ip> -restport 20080 -traptgt <node1 device management ip> -traptgt <node2 device management ip> -traptgt <node3 device management ip> -traptgt <node4 device management ip> -dbuser <DB user> -dbpass <DB password> -ndtrapport 10162 [PR1062066]

- Unable to close Details window under Monitor mode.

  Workaround: Press **Esc** to close the Details window. [PR1117428]

- Monitor widgets such as Status, Resource Utilization, Power, and Fan details display no data when a few devices are deleted and re-discovered from Network Director.

  Workaround: None available at present. [PR1122181]

- The Client Sessions and Session Trend widgets might not show any data when a Virtual Chassis member is assigned under Location View or Custom Group View.

  Workaround: Assign the Virtual Chassis logical device as a whole under Location View or Custom Group View. [PR1012400]

- Running a VM to VM flow analysis might fail or show latency values as 0/0/0 if there are other flows on the VMs being analyzed.

  Workaround: None available at present. [PR1062477]

- When a QFabric node device alias is changed, Historical Monitoring data will be lost and port entries might be duplicated.

  Workaround: Delete QFabric from Network Director and rediscover the node devices. [PR926912]

- Network Director does not display alarms at the member or node level for a Virtual Chassis or a Virtual Chassis Fabric.

  Workaround: Select the Virtual Chassis or the Virtual Chassis Fabric device in Logical View to view the alarms. [PR991298]

- After you upgrade Network Director from Release 2.5 to Release 3.0, you might not be able to add QFX-5200 and QFX5100-24Q switches as leaf devices under Layer 3 Fabrics.

  Workaround: None available at present. [PR1235922]

- 100-Gigabit Ethernet ports are shown as 40-Gigabit Ethernet ports in the Convert Ports page unless explicitly set in device.

  Workaround: Set the ports with 100-Gigabit transceivers in the device by using the command: set chassis fpc 0 pic 0 port 8 speed 100G and commit the configuration.

Wait for the device to be in sync. The Convert Ports page now shows the port correctly as a 100-Gigabit Ethernet port. [PR1234853]

- Network Director deletes the configuration for ports for which auto-speed detection is disabled in Port Conversion.

  Workaround: None available at present. [PR1228275]

- The Deploy Configuration page lists all devices for Port Conversion.

  Workaround: Use the Device Selection page to only those devices for which you want to convert ports. [PR1227932]

- Port Conversion pushes the configuration to incorrect FPCs if the renumbering member ID command is used in the configuration for devices that support VC and VCF configurations.

  Workaround: None available at present. [PR1227497]

- Network Director might not validate port groups in Port Conversion for QFX10002 and QFX10008 switches.

  Workaround: None available at present. [PR1228276

- After you upgrade Network Director from Release 2.5 to Release 3.0, incorrect roles are displayed for some of the users.

  Workaround: Roles and tasks are not deleted after the upgrade and only additional tasks are added. Delete these additional tasks after the upgrade. [PR1231329]

- Unable to create Layer 3 fabrics as Zero Touch Provisioning (ZTP) is not supported on Centos 7.2.1511 and DHCP 4.2.5.

  Workaround: Use the following versions for ZTP support:

  - Ubuntu 14.04
  - Centos 6.6

  [PR1235928]

- VLANs that are not configured with Layer 3 interfaces are mapped to spine devices.

  Workaround: None available at present. [PR1237441]

- Device LAG ports configuration is not supported in EVPN-VXLAN.

  Workaround: Use the multi-home LAG option to configure device LAG ports. [PR1236498]

- For IP Fabrics you cannot configure network address as start address.

  Workaround: Use a valid network IP address in the subnet. [PR1233532]

- Editing a tenant and assigning ports to a new leaf device, results in failed deployment.

  Workaround: Create a new IP fabric device and assign ports to the device before you edit a tenant and deploy it. [PR1232167

- The Auto assigned option is not deleted if you remove a Port profile association that is assigned by auto policy and manually assign the same option.

Workaround: None available at present. [PR1202439]

- After you delete a port association from Port profile, the LLDP does not show which device is connected when you issue the command delete interface interface-name.

  Workaround: Assign a Port profile to a port manually or by using quick template, to configure unit 0 on the interface. [PR1223305]

- After adding a cascade port, the satellite cluster is not added to the aggregation devices when the link up event is triggered.

  Workaround:

  1. Connect the device directly to a cascade port on the aggregation device.
  2. Configure the port as a cascade port.
  3. Refresh the topology and verify the configuration generated on the device.
  4. After the resync fusion inventory job is triggered, check the tree to see whether the cluster is added to the Enterprise Fusion setup.

  [PR1228613]

- If you add more than one port to a Port profile that is associated to the extended Port profiles, the deployment fails.

  Workaround: After the deployment fails, edit the prompted Port profile and deploy the changes again. [PR1237763]

- The tree view is not correctly displayed when there is more than one cluster with the same name in the tree view.

  Workaround:

  1. Make sure only ICCP and ICL devices are connected, and refresh the topology.

     The link up event is triggered only for redundancy satellite devices, and not for FPC satellite devices.

  2. Connect single-home satellite device or a cluster devices to one of the aggregation device in a multi-host setup and refresh the topology.

     The link up event generates the configuration for different FPC devices.

  [PR1225525]

- Monitoring cannot be disabled for aggregation devices at the group level.

  Workaround: None available at present. [PR1213805]

- The configuration for orchestration for ELS devices fails if you select the interface mode as access or if you do not configure an interface mode.

Workaround: Log in to the device and set interface mode as trunk for the interface and then configure orchestration for that interface. [PR1235223]

- The Port Conversion page displays for EX4600 switches even though the port conversion is not supported for these devices.

  Workaround: Do not select EX4600 devices for port conversion. [PR1226676]

- Adding leaf to an existing multihome LAG, editing the multihome ae inetrface, or deleting an existing leaf from the LAG are not supported in an overlay network.

  Workaround: None available at present. [PR1206683]

- After an upgrade to Network Director 3.0, earlier versions of APIs are listed.

  Workaround: Right-click on the APIs and select Uninstall to remove the earlier versions. [PR1229453]

- The quick template functionality is not supported in Junos Fusion Enterprise devices.

  Workaround: None available at present. [PR1239050]

- In a medium-scale Junos Fusion setup where five Junos Fusion systems each with 100 Satellite Devices are managed, incorrect monitoring data is displayed.

  Workaround: In a Junos Fusion setup where 5 Junos Fusion systems each with 100 Satellite Devices are managed, change the number of parallel requests by setting the system property to 5 from default value 25.

  To change the parallel requests value:

  1. Open a debug (command) prompt by using the Junos Space Settings Menu.
  2. Navigate to **/usr/local/jboss/domain/configuration/host.xml**
  3. Under **<jvm-options>**, change the option value **<option value="-Dmonitoring.simultaneous.request=5"/>**
  4. Restart the jboss process.

     service jboss restart

  [PR1239748]

- When large number of devices are discovered in Network Director, some of the device status is shown as Down in Network Director even though their status is shown as UP in Junos Space Management Platform.

  Workaround: Delete devices that are incorrectly shown as Down in Network director and re-discover the devices in Network Director. [PR1207914]

- In large-scale environments, some of the devices cannot be monitored after the device discovery.

  Workaround: Restart the JBoss server for the monitoring features to work properly in standalone and cluster setups:

To restart the JBoss server in a standalone setup:

1. Stop the watchdog, domain controller, and JBoss services on the standalone node.

   service jmp-watchdog stop

   service jboss-dc stop

   service jboss stop

2. Start the watchdog service.

   service jmp-watchdog start

NOTE: Starting the watchdog service restarts the JBoss and domain controller services as well.

To restart the JBoss server in a cluster setup:

1. Stop the services on the secondary node.

   service jmp-watchdog stop

   service jboss stop

2. Stop the services on the master node (You can find the VIP hosted node Space > Fabric)

   service jmp-watchdog

   stop service jboss-dc

   stop service jboss stop

3. Start the services on the master node.

   service jmp-watchdog start

4. Start the service on the secondary node.

   service jmp-watchdog start

[PR1165010]

- The Port status and the power supply status is not shown in a cluster setup when two satellite devices are configured as member nodes.

  Workaround: None available at present. [PR1223602]

- The overlay fabric configuration does not get deleted when you remove an IP fabric from the Selected section of the Edit Overlay Fabric page. However, the overlay fabric configuration gets deleted if the overlay is deleted from the from the Manage Overlay Fabric page.

Workaround: None available at present. [PR1234916]

- ESXi server does not work on ports that have only one VLAN configured. When a tenant overlay fabric is configured such that one of the ports is configured with only one VLAN, native VLAN ID is set to the ID of the only VLAN configured on the interface. This allows Bare Metal Servers (BMS) to use untagged packets. For an ESXi server to work on such ports, the native VLAN ID needs to be removed.

  Workaround: Deploy a template by using the command delete interface native-vlan-id for those interfaces where one VLAN is configured and tagged packets are sent. ESXi server uses tagged packets by default. [PR1234899]

- Duplicate Port profiles are shown in Network Director after you upgrade Network Director from:

  - Release 2.5R1 to Release 3.0R1 or 3.0R2
  - Release 2.5R2 to Release 3.0R1 or 3.0R2

  Workaround: Delete all the unassigned profiles that are generated as duplicate Port profiles. You can identify duplicate Port profiles from the profile name. A duplicate Port profile name is suffixed with a number. For example, iSCSI_918. [PR1246846]

- High CPU utilization is observed in the EX2200, EX2300, EX3400, or EX3300 devices when these devices are managed and monitored in Network Director.

  Workaround: Increase the poll interval from default 10 mins to 40 or 50 mins for the categories PortTrafficMonitorCollector and EquipmentMonitorDeviceStatusCollector under monitor settings.

  To increase the poll interval:

  1. Navigate to **Preferences > Monitoring > Monitoring Settings**.

     The Preferences page displays the monitoring settings.

  2. In the **Poll Interval (in mins)** field, enter the poll interval for the categories PortTrafficMonitorCollector and EquipmentMonitorDeviceStatusCollector.

  3. Click **OK**.

NOTE: The poll interval for both the categories should be the same.

If increasing poll interval does not reduce the CPU usage, disable monitoring for affected devices.

To disable monitoring for the devices:

1. Navigate to **Preferences > Monitoring > Device Settings.**

   The Preferences page displays Enable/Disable Collection for devices in a tabular format.

2. From the table, select the check box that corresponds to the device for which you want to disable the monitoring.

3. Click **Disable.**

4. Click **OK.**

[PR1285504]

- In a Junos Fusion Data Center setup, if the alias name of the satellite device does not match on both the aggregation devices, Network Director does not show the monitoring data for the satellite devices.

  Workaround: Configure the same alias name for the satellite device on both the aggregation devices. [PR1293816]

- After the IP Fabric provisioning is successfully completed, auto discovery of IP fabric is not getting triggered in Network Director. This is observed when the eth3 interface IP address is changed on Junos Space sever after Junos Space installation.

  Workaround: Modify the eth3 IP address in the .conf files that are pushed to the TFTP server when provisioning the IP Fabric. This ensures that new eth3 interface IP address is used by Network Director while discovering the IP Fabric. [PR1293526]

- In Network Director Wired Device Common Settings, you cannot disable the DHCP relay on a device.

  Workaround: To disable the DHCP relay on a device, access the device by using the CLI and remove the DHCP relay config stanza from the device. [PR1290375]

- In Network Director Wired Device Common Settings, you cannot delete the profile login settings relay on a device.

  Workaround: To delete the profile login from a device, access the device by using the CLI and remove the Profile Login configuration stanza from the device. [PR1291978]

- When the Connection Association Key and Confirm Connection Association Key are edited in a MACsec profile, the MACsec profile does not show the state as Pending Deployment.

Workaround: Edit some other attribute in the MACsec profile along with the Connection Association Key and Confirm Connection Association Key for the MACsec profile to show the state as Pending Deployment. [PR1295679]

Documentation Updates

This section lists the errata and changes in Network Director Release 3.1R1 documentation.

Network Director Release 3.1R1 online Help has the following documentation errata:

- Context-sensitive help is not available for the following pages.
  - Tasks > Image Management > Software Upgrade Groups
  - Tasks> Show Routing Table

  However, you can access the documentation for these pages from the Network Director 3.1 documentation site or by clicking the online **Help** button in the Network Director home page.

Third-Party Integration

- **Juniper Networks Data Center Switching Management Pack for vROps**—VMware vRealize Operations (vROps) is a component of VMware's vRealize suite of products. vROps provides an integrated, single pane of glass view into the performance, capacity, and configuration management capabilities of VMware vSphere, physical and cloud environments.

  Juniper Networks Data Center Switching Management Pack for vROps is a plugin from Juniper Networks that you can install and integrate with vROps. Once installed, the management pack obtains all the necessary monitoring data from Juniper Networks devices and displays the data in vROps.

- **Juniper Networks plugin for VMware vCenter**—You can discover and manage VMware vCenter servers by using Network Director. Network Director enables you to visualize and perform certain management tasks on the vCenter severs. If you primarily use the VMware vSphere to manage your virtual network and want to view details about the Juniper Networks devices that are connected to your virtual network, you can do so by installing the Juniper Networks plugin for VMware vCenter. After you install and configure this plugin on the vCenter server, you can start viewing data about the connected Juniper Networks devices by using the following widgets:
  - Physical Networking widget—To open this widget, select a **Host** in the vSphere user interface and select **Summary**. This widget displays the virtual NIC that the host connects to, the physical switch and the port number that the virtual switch uses to connect to the physical network, and the VLAN that is configured on the physical switch port.
  - vMotion History widget—To open this widget, select a virtual machine in the vSphere user interface and select **Summary**. This widget displays the vMotion history of the selected virtual machine along with details of the Juniper Networks switches that were involved in the vMotion.

You can download the Juniper Networks Data Center Switching Management Pack for vROps and the Juniper Networks plugin for VMware vCenter from the Download Software page. See the Juniper Networks Data Center Switching Management Pack for vROps documentation and README file that is included in the Juniper Networks plugin for VMware vCenter zip file for detailed steps on installing the plugin.

Finding More Information

For the latest, most complete information about known and resolved issues with Junos Space Network Management Platform and Junos Space Management Applications, see the Juniper Networks Problem Report Search application at: http://prsearch.juniper.net.

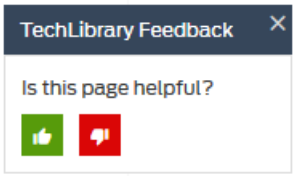
Juniper Networks Feature Explorer is a Web-based application that helps you to explore and compare Junos Space Network Management Platform and Junos Space Management Applications feature information to find the correct software release and hardware platform for your network. Find Feature Explorer at: http://pathfinder.juniper.net/feature-explorer/.

Juniper Networks Content Explorer is a Web-based application that helps you explore Juniper Networks technical documentation by product, task, and software release, and download documentation in PDF format. Find Content Explorer at: http://www.juniper.net/techpubs/content-applications/content-explorer/.

Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

- Online feedback system—Click TechLibrary Feedback, on the lower right of any page on the Juniper Networks TechLibrary site, and do one of the following:



  - Click the thumbs-up icon if the information on the page was helpful to you.
  - Click the thumbs-down icon if the information on the page was not helpful to you or if you have suggestions for improvement, and use the pop-up form to provide feedback.

- E-mail—Send your comments to **techpubs-comments@juniper.net**. Include the document or topic name, URL or page number, and software version (if applicable).

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit http://www.juniper.net/support/warranty/.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: https://www.juniper.net/customers/support/
- Search for known bugs: https://prsearch.juniper.net/
- Find product documentation: https://www.juniper.net/documentation/
- Find solutions and answer questions using our Knowledge Base: https://kb.juniper.net/
- Download the latest versions of software and review release notes: https://www.juniper.net/customers/csc/software/
- Search technical bulletins for relevant hardware and software notifications: https://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: https://www.juniper.net/company/communities/
- Create a service request online: https://myjuniper.juniper.net

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://entitlementsearch.juniper.net/entitlementsearch/

Creating a Service Request with JTAC

You can create a service request with JTAC on the Web or by telephone.

- Visit https://myjuniper.juniper.net.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see https://support.juniper.net/support/requesting-support/.

Revision History

6 March 2018—Revision 1, Junos Space Network Director Release 3.1R2.