

Release Notes: Junos[®] OS Release 15.1X53-D237 for QFX5110 and QFX5200 Switches

Release 15.1X53-D237
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- #custom string for global – Defined globally
[edit forwarding-options dhcp-relay overrides]
set user-defined-option-82 *string*

Enable the option:

- #Enabling the custom string to go out on circuit-id option82
[edit forwarding-options dhcp-relay group v4 relay-option-82 circuit-id]
set user-defined

Interfaces and Chassis

- **Auto-channelization of interfaces (QFX5200 switch)**—Starting in Junos OS Release 15.1X53-D230, you can use the auto-channelization feature to divide and channelize data automatically by detecting the cable type. The mode and number of channels are decided based on the channel link status. On QFX5200, auto-channelization supports three modes of operation with unique port settings:
 - When 4x10G split cables are connected, the 40G port auto-channelizes to four 10G channels.
 - When 2x50G split cables are connected, the 100G port auto-channelizes to two 50G channels.
 - When 4x25G split cables are connected, the 100G port auto-channelizes to four 25G channels.
- **CL74 FEC support for 25-gigabit and 50-gigabit channel speeds (QFX5200 switches)**—Starting with Junos OS Release 15.1X53-D230, you can disable or reen able clause 74 (CL74)—as well as CL91—forwarding error correction (FEC) support on QFX5200 switches. FEC CL91 is supported for the 100-gigabit port speed and FEC CL74 is supported for both 25-gigabit and 50-gigabit port speeds. FEC CL91 is enabled by default for the 100-gigabit port speed; when the ports are channelized either in 4x25-gigabit or 2x50-gigabit, FEC CL74 is enabled.
 - To disable the FEC mode:

```
[edit]  
set interfaces interface-name gigether-options fec none
```

- To reen able the FEC mode:

```
[edit]  
delete interfaces interface-name gigether-options fec none
```

or

```
[edit]  
set interfaces interface-name gigether-options fec (fec74|fec91)
```

- To check FEC status:

```
show interfaces interface-name
```

The output for the show command will list FEC statistics for a particular *interface-name*, including the FEC corrected errors count, the FEC uncorrected errors count, and the type of FEC that was disabled or enabled.

New Features in Release 15.1X53-D210

Hardware

- **QFX5110-48S switch**—The QFX5110 line of switches is Juniper Network's versatile fixed-configuration solution for hybrid cloud deployments. The model QFX5110-48S is a 10-Gigabit Ethernet enhanced small form-factor pluggable plus (SFP+) switch with 48 SFP+ ports and four 100-Gbps quad small form-factor pluggable solution (QSFP28) ports. Each SFP+ port (0 through 47) can operate as a native 10-gigabit port or a 1-gigabit port when 1-gigabit optics are inserted. Each QSFP28 port (port numbers 48 through 51) can operate as a native 100-Gigabit Ethernet port, a native 40-Gigabit Ethernet port, or as four independent 10-gigabit ports when using breakout cables. The four QSFP28 ports can be used as either access ports or as uplinks. The QFX5110-48S provides full duplex throughput of 960 Gbps. The QFX5110-48S has a 1U form factor and comes standard with redundant fans and redundant power supplies. The switch can be ordered with either ports-to-FRUs or FRUs-to-ports airflow and with AC or DC power supplies.

Class of Service (CoS)

- **Class-of-service support (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, class-of-service (CoS) support on QFX5110 switches is the same as on QFX5100 switches, providing all of the same configuration capabilities and functionality. QFX5110 switches provide a slight increase in buffer memory, which can be seen in the output of **show** commands.

[See [show class-of-service shared-buffer.](#)]

Infrastructure

- **Secure Boot (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, a significant system security enhancement, Secure Boot, has been introduced. The Secure Boot implementation is based on the UEFI 2.4 standard. The BIOS has been hardened and serves as a core root of trust. The BIOS updates, the bootloader, and the kernel are cryptographically protected. No action is required to implement Secure Boot.
- **Integrated software feature licenses (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, the standard QFX Series premium feature license for Border Gateway Protocol (BGP), Intermediate System-to-Intermediate System (IS-IS), and Virtual Extensible Local Area Network (VXLAN), and Open vSwitch Database (OVSDB) software license and the standard QFX Series advanced feature license for Border Gateway Protocol (BGP), Intermediate System-to-Intermediate System (IS-IS), Multiprotocol Label Switching (MPLS), and Virtual Extensible Local Area Network (VXLAN), and Open vSwitch Database (OVSDB) license are supported.

[See [Software Features That Require Licenses on the QFX Series.](#)]

hashing enhances LAGs by minimizing destination remapping when a new member is added to or deleted from the LAG.

Resilient hashing works in conjunction with the default static hashing algorithm. It distributes traffic across all members of a LAG by tracking the flow's LAG member utilization. When a flow is affected by a LAG member change, the Packet Forwarding Engine rebalances the flow by reprogramming the flow set table. Destination paths are remapped when new members are added to or existing members are deleted from a LAG.

[See [Understanding the Algorithm Used to Hash LAG Bundle and Egress Next-Hop ECMP Traffic.](#)]

- **Generic routing encapsulation (GRE) support (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, you can use GRE tunneling services on QFX5110 switches to encapsulate any network layer protocol over an IP network. Acting as a tunnel source router, the switch encapsulates a payload packet that is to be transported through a tunnel to a destination network. The switch first adds a GRE header and then adds an outer IP header that is used to route the packet. When it receives the packet, the switch that is performing the role of a tunnel remote router extracts the tunneled packet and forwards the packet to the destination network. GRE tunnels can be used to connect noncontiguous networks and to provide options for networks that contain protocols with limited hop counts.

IPv6

- **IPv6 feature support (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, you can configure Neighbor Discovery Protocol, Virtual Router Redundancy Protocol (VRRP) for IPv6, and Protocol Independent Multicast (PIM) for IPv6. You can also configure BGP and IS-IS for IPv6, as well as OSPFv3. Additionally, unicast IPv6 is supported for virtual-router instances. DHCPv6 is also supported.

[See [Example: Configuring IPv6 Interfaces and Enabling Neighbor Discovery and Verifying and Managing DHCPv6 Local Server Configuration.](#)]

Layer 2 Features

- **VLAN support (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, VLANs enable you to divide one physical broadcast domain into multiple virtual domains.
- **Link Layer Discovery Protocol (LLDP) support (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, LLDP enables a switch to advertise its identity and capabilities on a LAN, as well as receive information about other network devices.

[See [LLDP Overview.](#)]

- **Q-in-Q tunneling support (QFX5110 switches)**—Starting with Junos OS Release 15.1X53-D210, QFX5110 switches support Q-in-Q tunneling, which enables service providers on Ethernet access networks to extend a Layer 2 Ethernet connection between two customer sites. Using Q-in-Q tunneling, providers can also segregate or bundle customer traffic into fewer VLANs or different VLANs by adding another layer of 802.1Q tags. Q-in-Q tunneling is useful when customers have overlapping

Option 82 provides information about the network location of a DHCP client, and the DHCP server uses this information to implement IP addresses or other parameters for the client.

- **DHCPv6 option 37**—Option 37 is the DHCPv6 equivalent of the remote ID suboption of DHCP option 82. It is used to insert information about the network location of the remote host into DHCPv6 packets.
- **Dynamic ARP inspection (DAI)**—DAI inspects Address Resolution Protocol (ARP) packets on the LAN and uses the information in the DHCP snooping database on the switch to validate ARP packets and to protect against ARP spoofing (also known as ARP poisoning or ARP cache poisoning). ARP requests and replies are compared against entries in the DHCP snooping database, and filtering decisions are made on the basis of those comparisons.
- **IP source guard**—IP source guard prevents IP address spoofing by examining each packet sent from a host attached to an untrusted access interface on the switch. The IP address, MAC address, VLAN, and interface associated with the host are checked against entries stored in the DHCP snooping database. If the packet header does not match a valid entry in the DHCP snooping database, the packet is discarded.
- **IPv6 source guard**—IP source guard for IPv6.
- **IPv6 router advertisement (RA) guard**—IPv6 RA guard is a mitigation technique based on ICMPv6 Router Advertisement (RA) messages for attack vectors. RA guard is used to validate RA messages on the basis of whether they meet certain criteria, which are configured on the switch using policies. RA guard inspects RA messages and compares the information contained in the message attributes to the configured policy. Depending on the policy, RA guard either drops or forwards the RA messages that match the conditions.
- **IPv6 neighbor discovery (ND) inspection**—IPv6 ND inspection mitigates attacks based on the Neighbor Discovery Protocol by inspecting neighbor discovery messages and verifying them against the DHCPv6 snooping table.
- **MAC limiting**—You can configure MAC limiting on an interface or a VLAN, and specify the action to take on the next packet the interface or the VLAN receives after the limit is reached.
- **MAC move limiting**—You can configure MAC move limiting to track MAC address movements on the switch, so that if a MAC address changes more than the configured number of times within one second, the changes to MAC addresses are dropped, logged, or ignored, or the interface is shut down.
- **Persistent MAC learning**—Persistent MAC addresses (also called sticky MAC addresses) help restrict access to an access port by identifying the MAC addresses of workstations that are allowed access to a given port. Secure access to these workstations is retained even if the switch is restarted.

- JNP-QSFP-40GE-IR4—Juniper Networks proprietary 40GBASE-IR4, 40Gigabit Ethernet pluggable; 2 km transmission on SMF cable.
- JNP-QSFP-40G-LR4—QSFP+ module 40GBASE-LR4, 40-Gigabit Ethernet pluggable; 10 km transmission on SMF cable
- JNP-QSFP-40G-LX4—QSFP+ module 40GBASE-LX4, 40-Gigabit Ethernet pluggable; 2 km transmission on SMF cable, 100 m transmission on OM3, MMF cable, or 150 m transmission on OM4, MMF cable
- **Support for 1-Gigabit optical transceivers on the SFP management port (QFX5200 switch)**—Provides support for:
 - QFX-SFP-1GE-SX—SFP module 1000BASE-SX Gigabit Ethernet; 220 m transmission on FDDI, MMF cable, 275 m transmission on OM1, MMF cable, or 550 m transmission on OM2 cable
 - QFX-SFP-1GE-T—SFP module 1000BASE-T Gigabit Ethernet; 100m transmission on Category 5 cable
- **Support for QSFP+ direct attach copper (DAC) cables (QFX5200 switch)**—Provides support for:
 - EX-QSFP-40GE-DAC-CM—QSFP+ DAC assembly; 0.5 m, passive
 - QFX-QSFP-DAC-1M—QSFP+ DAC assembly, 1 M, passive
 - QFX-QSFP-DAC-3M—QSFP+ DAC assembly, 3 M, passive
 - QFX-QSFP-DAC-5M—QSFP+ DAC assembly, 5 M, passive
 - QFX-QSFP-DAC-7MA—QSFP+ DAC assembly, 7 M, active
 - QFX-QSFP-DAC-10MA—QSFP+ DAC assembly; 10 M, active

Infrastructure and Chassis

- **Disaggregated Junos OS (QFX5200 switch)**—Starting with the QFX5200 switch, the software has been disaggregated from the hardware. With disaggregated Junos OS, you can now purchase the Junos Base Services (JBS) license to use basic Junos OS functions, the Junos Advanced Services (JAS) license to use Border Gateway Protocol (BGP), Intermediate System-to-Intermediate System (IS-IS), and Virtual Extensible Local Area Network (VXLAN), and the Junos Premium Services (JPS) license to use features supported in the JAS license and the MPLS feature set. The disaggregated Junos OS feature licenses are available on a perpetual basis.



NOTE: You must purchase the JBS license to use basic functions, but you do not need to install the license key in Junos OS Release 15.1X53-D30. JBS basic functions work with this release without installing the license key. However, you will need to install the license key in a future release of Junos OS to be determined, so make sure to retain the authorization code you received from the License Management System to generate a license key for the JBS license.

Layer 2 Features

- **VLAN support (QFX5200 switch)**—VLANs enable you to divide one physical broadcast domain into multiple virtual domains.
- **Link Layer Discovery Protocol (LLDP) support (QFX5200 switch)**—LLDP enables a switch to advertise its identity and capabilities on a LAN, as well as receive information about other network devices.
- **Q-in-Q tunneling support (QFX5200 switch)**—This feature allows service providers on Ethernet access networks to extend a Layer 2 Ethernet connection between two customer sites. Using Q-in-Q tunneling, providers can also segregate or bundle customer traffic into fewer VLANs or different VLANs by adding another layer of 802.1Q tags. Q-in-Q tunneling is useful when customers have overlapping VLAN IDs, because the customer's 802.1Q (dot1Q) VLAN tags are prepended by the service VLAN (S-VLAN) tag.
- **Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), and VLAN Spanning Tree Protocol (VSTP) support (QFX5200 switch)**—These protocols enable a switch to advertise its identity and capabilities on a LAN and receive information about other network devices.

Layer 3 Features

- **BGP support (QFX5200 switch)**—BGP is an exterior gateway protocol (EGP) for routing traffic between autonomous systems (ASs). You can configure BGP at the `[edit protocols bgp]` hierarchy level.
- **OSPF support (QFX5200 switch)**—The IPv4 OSPF protocol is an interior gateway protocol (IGP) for routing traffic within an autonomous system (AS). QFX5200 switches support OSPFv1 and OSPFv2. You can configure OSPF at the `[edit protocols ospf]` hierarchy level.
- **Bidirectional Forwarding Detection (BFD) support for static routes and the BGP, IS-IS, OSPF, PIM, and RIP protocols (QFX5200 switch)**—BFD uses control packets and shorter detection time limits to rapidly detect failures in a network. Hello packets are sent at a specified, regular interval by routing devices. A neighbor failure is detected when a routing device stops receiving a reply after a specified interval.

On a QFX5200 switch, you can configure BFD for static routes and for the BGP, IS-IS, OSPF, PIM, and RIP protocols.
- **IS-IS support (QFX5200 switch)**—The IS-IS protocol is an IGP for routing traffic within an AS.
- **Virtual Router Redundancy Protocol (VRRP) support (QFX5200 switch)**—VRRP enables you to provide alternative gateways for end hosts that are configured with static default routes. You can implement VRRP to provide a highly available default

path to a gateway without needing to configure dynamic routing or router discovery protocols on end hosts.

- **Hierarchical ECMP (QFX5200 switch)**—Hierarchical ECMP resolves route prefixes to two-level ECMP automatically, allowing better load-balancing of traffic. Hierarchical ECMP is enabled by default.

MPLS

- **MPLS support (QFX5200 switch)**—MPLS provides both label edge router (LER) and label switch router (LSR) and provides the following capabilities:
 - Support for both MPLS major protocols, LDP and RSVP
 - IS-IS interior gateway protocol (IGP) traffic engineering
 - Class of service (CoS)
 - Object access method, including ping, traceroute, and Bidirectional Forwarding Detection (BFD)
 - Fast reroute (FRR), a component of MPLS local protection
Both one-to-one local protection and many-to-one local protection are supported.
 - Loop free alternate (LFA) FRR
 - 6PE devices
 - Layer 3 VPNs for IPv4
 - LDP tunneling over RSVP
 - L2 Circuit (draft Martini) support
 - L3VPN Carrier-Over-Carrier (CoC)
 - ECMP on LSR
 - RSVP auto bandwidth
- **Equal cost multipath (ECMP) groups on label-switching router (LSR) devices for MPLS (QFX5200 switch)**—When a link goes down, ECMP uses fast reroute protection to shift packet forwarding to use operational links, thereby decreasing packet loss.

Multicast Protocols

- **Internet Group Management Protocol (IGMP) support (QFX5200 switch)**—IGMP manages the membership of hosts and routers in multicast groups. IP hosts use IGMP to report their multicast group memberships to any immediately neighboring multicast routers. Multicast routers use IGMP to learn, for each of their attached physical networks, which groups have members.
- **IGMP snooping support (QFX5200 switch)**—IGMP snooping regulates multicast traffic in a switched network. With IGMP snooping enabled, a LAN switch monitors the IGMP transmissions between a host (a network device) and a multicast router, keeping track of the multicast groups and associated member interfaces. The switch uses that

- **System logging (syslog) support (QFX5200 switch)**—Syslog enables you to log system messages into a local directory on the switch or to a syslog server.
- **sFlow technology support (QFX5200 switch)**—This feature provides monitoring technology for high-speed switched or routed networks. You can configure sFlow technology to monitor traffic continuously at wire speed on all interfaces simultaneously. sFlow technology also collects samples of network packets, providing you with visibility into network traffic information. You configure sFlow monitoring at the `[edit protocols sflow]` hierarchy level. sFlow operational commands include `show sflow` and `clear sflow collector statistics`.
- **Port mirroring support (QFX5200 switch)**—Port mirroring copies packets entering or exiting a port or entering a VLAN and sends the copies to a local interface for local monitoring. You can use port mirroring to send traffic to applications that analyze traffic for purposes such as monitoring compliance, enforcing policies, detecting intrusions, monitoring and predicting traffic patterns, correlating events, and so on.

Security

- **Firewall filter support (QFX5200 switch)**—You can provide rules that define whether to accept or discard packets. You can use firewall filters on interfaces, VLANs, routed VLAN interfaces (RVIs), link aggregation groups (LAGs), and loopback interfaces.
- **Policing support (QFX5200 switch)**—You can use policing to apply limits to traffic flow and to set consequences for packets that exceed those limits.
- **Storm control support (QFX5200 switch)**—You can enable the switch to monitor traffic levels and take a specified action when a specified traffic level—called the storm control level—is exceeded, preventing packets from proliferating and degrading service. You can configure a switch to drop broadcast and unknown unicast packets, shut down interfaces, or temporarily disable interfaces when a traffic storm occurs.

Software Installation and Upgrade

- **Support for FreeBSD 10 kernel for Junos OS (QFX5200 switches)**—On QFX5200 switches, FreeBSD 10 is the underlying OS that enables SMP for Junos OS, rather than the FreeBSD 6.1 that is used in some older Juniper Networks devices. If you compare the QFX5200 to devices that run the older kernel, you will notice that some system commands display different output and a few others are deprecated.

Storage

- **FIP snooping and Data Center Bridging Capability Exchange (DCBX) protocol (QFX5200 switch)**—QFX5200 supports both FIP snooping and DCBX. FIP snooping filters prevent an FCoE device from gaining unauthorized access to a Fibre Channel (FC) storage device or to another FCoE device. DCBX discovers the data center bridging (DCB) capabilities of connected peers. DCBX advertises the capabilities of applications on interfaces by exchanging application protocol information through application time-length-values (TLVs).
- **CEE (QFX5200 switch)**—CEE is an enhanced single interconnect Ethernet technology developed to converge a variety of applications in data centers. CEE's primary focus

is to consolidate the number of cables and adapters connected to servers. You can use data center bridging features on QFX5200 CEE-enabled switches to transport converged Ethernet and FC traffic while providing the class-of-service (CoS) characteristics and other characteristics FC requires for transmitting storage traffic. Only port schedulers are supported; ETS is not supported.

System Management

- **Login authentication using RADIUS and TACACS+ (QFX5200 switch)**—You can use RADIUS and TACACS+ authentication to validate users who attempt to access the switch.
- **System utilization alarms support (QFX5200 switch)**—This feature provides system alarms to alert you of high disk usage in the /var partition on the switch. You can display these alarm messages by issuing the **show system alarms** operational mode command if the /var partition usage is higher than 75 percent. A usage level between 76 and 90 percent indicates high usage and raises a minor alarm condition, whereas a usage level over 90 percent indicates that the partition is full and raises a major alarm condition.

Traffic Management

- **Class of service (CoS) (QFX5200 switch)**—When a packet traverses a switch, the switch provides the appropriate level of service to the packet using either default class-of-service(CoS) settings or CoS settings that you configure. On ingress ports, the switch classifies packets into appropriate forwarding classes and assigns a loss priority to the packets. On egress ports, the switch applies packet scheduling and any rewrite rules to re-mark packets.
- **Class-of-service (CoS) rewrite rules and classifier support (QFX5200 switch)**—You can use rewrite rules to set the value of the CoS bits within a packet header, so you can alter the CoS settings of incoming packets. Packet classification maps incoming packets to a particular class-of-service (CoS) servicing level. You can use classifiers to map packets to a forwarding class and a loss priority and to assign packets to output queues based on the forwarding class.
- **Port scheduling with queue shaping support (QFX5200 switch)**—You can manage excess traffic and avoid congestion on a network interface where traffic might exceed the maximum port bandwidth. You can manage parameters such as transmit rate, shaping rate, and priority on each queue.
- **Priority-based flow control support (QFX5200 switch)**—This feature provides you with PFC (standard IEEE 802.1Qbb) capability, a link-level flow control mechanism that you can use to pause traffic selectively according to its class. You must use PFC for Fibre Channel over Ethernet (FCoE) traffic.
- **Ethernet PAUSE autonegotiation support (QFX5200 switch)**—You can configure symmetric flow control. To configure PAUSE, include the **flow-control** statement at the **[edit interfaces interface-name ether-options]** hierarchy level.

Related Documentation

- [Changes in Behavior and Syntax in QFX5110 and QFX5200 Switches on page 24](#)
- [Known Behavior for QFX5110 and QFX5200 Switches on page 25](#)

- When base configs are executed the following syslog message is seen: **kernel: GENCFG: op 51 (AE bias) failed; err 255 (Undefined)**. These messages do not have any functionality impact. [PR1416004](#)
- No functionality impact is observed because of the following error message: **Error: BCM_NH-,brcm_nh_bdvlan_ucast_uninstall(),128:l3 nh 6594 unintsall failed in h/w with Mini-PDT base configurations.** [PR1407175](#)

Related Documentation

- [New and Changed Features for QFX5110 and QFX5200 Switches on page 5](#)
- [Changes in Behavior and Syntax in QFX5110 and QFX5200 Switches on page 24](#)
- [Known Behavior for QFX5110 and QFX5200 Switches on page 25](#)
- [Resolved Issues for QFX5110 and QFX5200 Switches on page 29](#)
- [Documentation Updates for QFX5110 and QFX5200 Switches on page 41](#)
- [Migration, Upgrade, and Downgrade Instructions for QFX5110 and QFX5200 Switches on page 42](#)
- [Product Compatibility for QFX5110 and QFX5200 Switches on page 44](#)

Resolved Issues for QFX5110 and QFX5200 Switches

This section lists the issues fixed in the Junos OS 15.1X53 releases.

For the most complete and latest information about known Junos OS defects, use the Juniper online [Junos Problem Report Search](#) application.

- [Resolved Issues: Release 15.1X53-D237 on page 29](#)
- [Resolved Issues: Release 15.1X53-D236 on page 30](#)
- [Resolved Issues: Release 15.1X53-D235 on page 31](#)
- [Resolved Issues: Release 15.1X53-D234 on page 32](#)
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Resolved Issues: Release 15.1X53-D237

- [General Routing on page 30](#)

Layer 2 Features

- On QFX5110 switches, when the same VLAN tag ID is configured on the NNI and UNI interfaces belonging to the same bridge domain, the traffic on the NNI exits with a single tag instead of dual tags. As a workaround, use different VLAN tag IDs on the NNI and UNI interfaces. [PR1192760](#)

Network Management and Monitoring

- In a sampling feature, certain scenarios force handling of the sampled packet at the interrupt context, which might corrupt the BMEB packet context and lead to BMEB FDB corruption. [PR1156464](#)

Resolved Issues: Release 15.1X53-D210

- [Firewall Filters](#)
- [Interfaces and Chassis](#)
- [MPLS](#)
- [Platforms and Chassis](#)

Firewall Filters

- On a QFX5200 switch, if a firewall filter applied on a loopback interface is also applied to a management interface (em0), all traffic on the management interface is dropped by default. You must explicitly configure an accept term to allow traffic to the management interface. [PR1225137](#)

Interfaces and Chassis

- On a QFX5200 switch, the **show chassis led** command displays incorrect status for the Link/Activity LED. For example, when an interface is administratively disabled, **show chassis led** shows the LED status as green even though the Link/Activity LED indicates that the port is disabled. [PR1081459](#)

MPLS

- QFX5200 switches do not support having the same interface as part of both an MPLS configuration and a routing-instance configuration. When the same interface is configured for MPLS and for a routing instance, a commit does not work and an error occurs. [PR1097427](#)

Platforms and Chassis

- On QFX5200 switches, periodic polling of fans occurs in intervals of less than a second. For some frequencies of polling, the presence of the fan module is not detected, and an alarm is logged. This alarm is corrected and cleared immediately in the next poll cycle. This behavior does not affect the working of the fans. [PR1217426](#)

Related Documentation

- [New and Changed Features for QFX5110 and QFX5200 Switches on page 5](#)
- [Changes in Behavior and Syntax in QFX5110 and QFX5200 Switches on page 24](#)
- [Known Behavior for QFX5110 and QFX5200 Switches on page 25](#)
- [Known Issues for QFX5110 and QFX5200 Switches on page 26](#)
- [Documentation Updates for QFX5110 and QFX5200 Switches on page 41](#)
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Documentation Updates for QFX5110 and QFX5200 Switches

There are no errata or changes in Junos OS Releases 15.1X53 for QFX5110 and QFX5200 switch documentation.

Related Documentation

- [New and Changed Features for QFX5110 and QFX5200 Switches on page 5](#)
- [Changes in Behavior and Syntax in QFX5110 and QFX5200 Switches on page 24](#)

7. Read the End User License Agreement, click the **I agree** radio button, and then click **Proceed**.
8. Save the **jinstall-qfx-5e<version>-domestic-signed.tgz** file on your computer.
9. Open or save the installation package either to the local system in the **var/tmp** directory or to a remote location. If you are saving the installation package to a remote system, make sure that you can access it using HTTP, TFTP, FTP, or scp.

Backing Up the Current Configuration Files

Before you install the new installation package, we strongly recommend that you back up your current configuration files, because the upgrade process removes all of the stored files on the switch.

To back up your current configuration files:

```
user@host# save filename filename
```

Executing this command saves a copy of your configuration files to a remote location such as an external USB device.

