

Release Notes

Published
2023-07-21

Junos[®] OS Evolved Release 21.3R2

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Introduction

Use these release notes to find new and updated features, software limitations, and open issues for Junos OS Evolved Release 21.3R2.

These release notes are cumulative and are updated for later releases.

For more information on this release of Junos OS Evolved, see [Introducing Junos OS Evolved](#).

Junos OS Evolved Release Notes for ACX7100-32C and ACX7100-48L Devices

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These release notes accompany Junos OS Evolved Release 21.3R2 for ACX7100-32C and ACX7100-48L routers. They describe new features, limitations, and known problems in the hardware and software.

What's New

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- [What's New in 21.3R1 | 2](#)

Learn about new features introduced in these releases for ACX Series routers.

What's New in 21.3R2

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.3R2 for ACX Series routers.

What's New in 21.3R1

To view features supported on the ACX platforms, view the Feature Explorer using the following links. To see which features were added in Junos OS Evolved Release 21.3R1, click the Group by Release link. You can collapse and expand the list as needed.

- [ACX7100-32C](#)
- [ACX7100-48L](#)

What's Changed

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Learn about what changed in this release for ACX Series routers.

What's Changed in Release 21.3R2

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- User Interface and Configuration | 4

Class of Service

- Junos OS Evolved now correctly displays the index for `show class-of-service` commands.

Network Management and Monitoring

- **SNMP support for MIB**—Operational command `show snmp mib walk system` now shows the latest software version and does not show the build date.

[See [show snmp mib](#).]

- **Change in behavior of SNMP MIB object ifAlias**—SNMP MIB object ifAlias now shows the configured interface alias. In earlier releases, ifAlias used to show configured interface description.
- **Support for disconnecting unresponsive NETCONF-over-SSH clients (ACX Series, PTX Series, and QFX Series)**—You can enable devices to automatically disconnect unresponsive NETCONF-over-SSH clients by configuring the `client-alive-interval` and `client-alive-count-max` statements at the `[edit system services netconf ssh]` hierarchy level. The `client-alive-interval` statement specifies the timeout interval in seconds, after which, if no data has been received from the client, the device requests a response. The `client-alive-count-max` statement specifies the threshold of missed client-alive responses that triggers the device to disconnect the client, thereby terminating the NETCONF session.

[See [ssh \(NETCONF\)](#).]

Routing Protocols

- **The RPD_OSPF_LDP_SYNC message not logged**—On all Junos OS and Junos OS Evolved devices, when an LDP session goes down there is a loss of synchronization between LDP and OSPF. After the loss of synchronization, when an interface has been in the holddown state for more than three minutes, the system log message with a warning level is sent. This message appears in both the messages file and the trace file. However, the system log message does not get logged if you explicitly configure the `hold-time` for `ldp-synchronization` at the `edit protocols ospf area area id interface interface name` hierarchy level less than three minutes. The message is printed after three minutes.

- To achieve consistency among resource paths, the resource path `/mpls/signalling-protocols/segment-routing/aggregate-sid-counters/aggregate-sid-counterip-addr='address'/state/countersname='name'/out-pkts/` is changed to `/mpls/signaling-protocols/segment-routing/aggregate-sid-counters/aggregate-sid-counterip-addr='address'/state/countersname='name'/`. The leaf "out-pkts" is removed from the end of the path, and "signalling" is changed to "signaling" (with one "l").

User Interface and Configuration

- A new field `rollback pending` is added to the output of `show system commit` that identifies whether `commit confirmed` is issued. It is removed once `commit` or `commit check` is issued or `commit confirmed` is rolled back after rollback timeout.
- When you configure `max-cli-sessions` at the **edit system** hierarchy level, it restricts the maximum number of CLI sessions that can coexist at any time. Once the `max-cli-sessions` number is reached, new CLI access is denied. The users who are configured to get the CLI upon login, are also denied new login.

What's Changed in Release 21.3R1

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Authentication and Access Control

- **Command to automate SSH key-based authentication (ACX Series, PTX Series, and QFX Series)**—You can set up SSH-key based authentication between the network device and a remote host by issuing the request `security ssh password-less-authentication operational` mode command. When you execute the command with the appropriate options, the device generates SSH keys for the current user, provided

the user does not already have existing keys, and transfers the user's public key to the `authorized_keys` file of the specified user on the remote host.

[See [request security ssh password-less-authentication](#).]

Class of Service

- Junos OS Evolved now correctly displays the index for `show class-of-service` commands.

EVPN

- **Minimum auto-recovery time reduced for duplicate MAC address detection (ACX Series, PTX Series and QFX Series)**—Junos OS has changed the minimum value allowed for auto-recovery time for duplicate MAC address detection from 5 minutes to 1 minute. The auto-recovery time is the length of time that the device suppresses a duplicate MAC address. Reducing the auto-recovery time allows customers to quickly recover from a MAC address duplication state. You configure the `auto-recovery-time` option under the `duplicate-mac-detection` statement at the `edit routing-instances routing-instance-name protocols evpn` or `edit protocols evpn hierarchy`.

[See [Changing Duplicate MAC Address Detection Settings](#) .]

General Routing

- **Enhancement to the `show chassis pic` command**—You can now view additional information about the optics when you run the `show chassis pic` command. The output now displays the following additional field:

MSA Version: Multi-source Agreements (MSA) version that the specified optics is compliant to. Values supported are: SFP+/SFP28 -- SFF-8472 (versions 9.3 - 12.3), QSFP+/QSFP28 -- SFF 8363 (versions 1.3 - 2.10), and QSFP-DD -- CMIS 3.0, 4.0, 5.0.

Previously, the `show chassis pic` command did not display this additional field.

[See [show chassis pic](#).]

- **Enhancement to the `show interfaces (Aggregated Ethernet) command (ACX Series, PTX Series, and QFX Series)`**—When you run the `show interfaces extensive` command for Aggregated Ethernet interfaces. You can now view following additional fields for MAC statistics : Receive, Transmit, Broadcast and Multicast packets.

[See [show chassis pic](#).]

Interfaces and Chassis

- When configuring multiple flexible tunnel interface (FTI) tunnels, the source and destination address pair needs to be unique only among the FTI tunnels of the same tunnel encapsulation type. Prior to this PR, the source and destination address pair had to be unique among all the FTI tunnels regardless of the tunnel encapsulation type.

Junos XML API and Scripting

- **Changes to how command-line arguments are passed to Python op scripts (ACX Series, PTX Series, and QFX Series)**—When the device passes command-line arguments to a Python op script, it prefixes a hyphen (-) to single-character argument names, and it prefixes two hyphens (--) to multi-character argument names. The prefix enables you to use standard command-line parsing libraries to handle the arguments. In earlier releases, the device prefixes a single hyphen (-) to all argument names.

[See [Declaring and Using Command-Line Arguments in Op Scripts.](#)]

Layer 2 Features

- **Link selection support for DHCP**—We have introduced the `link-selection` statement at the `[edit forwarding-options dhcp-relay relay-option-82]` hierarchy level, which allows DHCP relay to add suboption 5 to option 82. Suboption 5 allows DHCP proxy clients and relay agents to request an IP address for a specific subnet from a specific IP address range and scope. Prior to this release, the DHCP relay dropped packets during the renewal DHCP process and the DHCP server used the leaf's address as a destination to acknowledge the DHCP renewal message.

[See [relay-option-82.](#)]

Network Management and Monitoring

- **Changes in contextEngineID for SNMPv3 INFORMS (ACX Series, PTX Series, and QFX Series)**—Now the contextEngineID of SNMPv3 INFORMS is set to the local engine-id of Junos devices. In earlier releases, the contextEngineID of SNMPv3 INFORMS was set to remote engine-id.

[See [SNMP MIBs and Traps Supported by Junos OS.](#)]

Known Limitations

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Learn about known limitations in Junos OS Evolved Release 21.3R2 for ACX Series routers.

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

General Routing

- ACX7100-32C :: Cross ping fails to another device with packet size above 2400 bytes and Jumbo frame is enabled. When PTP is enabled, ACX7100-32C port 31 will be configured to 1G. Packet Forwarding Engine chip from vendor only supports to 10G, so the speed is converted from 10G to 1G on external PHY, but there is one limitation: it can only support frame size to 2000 bytes officially, so jumbo frame cannot be supported on port 31 when PTP mode is enabled. [PR1593015](#)

Open Issues

IN THIS SECTION

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Learn about open issues in Junos OS Evolved Release 21.3R2 ACX Series routers.

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

General Routing

- On the ACX7100-48L platform running Junos OS Evolved, you cannot clear or reset the disk option specified in the scheduled request `node reboot` command. The node reboots with the disk option last specified. [PR1517596](#)
- Error messages are observed while accessing the supercon scratch pad registers on bootup and there is no functional impact. [PR1594136](#)
- With IGMPv3 reports received at a higher rate more than 1600 pps, packets are dropped due to control plane rate limit. Therefore, it is not possible to form 2,56,000 IGMP groups. Need to tweak DDOS configuration for reaching 2,56,000 IGMP groups. [PR1599998](#)
- In scaled environment, the interfaces do not come up during FEB offline - online since the Packet Forwarding Engine state does not transition to the online state though FEB has transitions to the online state. [PR1601158](#)
- PTP to PTP noise transfer fails for frequencies 1. 0.03125 HZ 2. 0.123125 HZ. [PR1608786](#)
- The syncE to PTP and syncE to 1pps noise transfer tests fails for frequencies 1. 0.00781 HZ 2. 0.01563 HZ 3. 0.03125 HZ 4. 0.06156 HZ 5. 0.12313 HZ. [PR1608866](#)
- The syncE to PTP and syncE to 1pps transient response marginally fails. This happens when the servo gets the initial 100 nano seconds jump in one measurement window and the next 100 nano seconds in the next measurement window adjusting less initially. [PR1608934](#)
- A restart of DHCP takes more time because of the internal issues with the SIGTERM event. [PR1610229](#)
- PTP to PTP noise transfer fails for frequency 0.03125 HZ. [PR1611838](#)
- The syncE to PTP and syncE to 1pps transient response marginally fails. This happens when the servo gets the initial 100 nano seconds jump in one measurement window and the next 100 nano seconds in the next measurement window adjusting less initially. [PR1611848](#)
- Default DSCP IPv6 classification might not work in ACX7100 platform. [PR1614249](#)
- Testing G.8275.1 performance with a mix of FEC modes might result in performance that is just outside class C, but still meets class B. Some variability is seen on each reboot. [PR1623957](#)

Resolved Issues

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- [Resolved Issues: 21.3R2 | 9](#)
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Learn about the issues fixed in this release for ACX Series routers.

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

Resolved Issues: 21.3R2

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General Routing

- Egress IP MTU exception and fragmentation are not supported. [PR1558327](#)
- Peer interfaces show up and LEDs glow during device reboot for DAC connections. [PR1574342](#)
- Filter with forwarding-class and destination-class combined might not work. [PR1595788](#)
- Traffic loss might be observed when evo-pfemamd restarts. [PR1608004](#)
- Junos OS Evolved:JDI_FT_REGRESSION:ui:ui_change :: On performing request system snapshot, the snapshot message is not captured in /etc/motd file. [PR1618946](#)
- On ACX7100-48L, the CLI show system firmware command some times might show current firmware version for FPC 0 as blank.[PR1618949](#)

User Interface and Configuration

- In a rare event after configuring and deleting the DDL configuration statements `set chassis aggregated-devices` and `set interface ae1 aggregated-ether-options`, the configuration object gets out of scope with no functional impact. [PR1617667](#)

Resolved Issues: 21.3R1

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General Routing

- The device NMI watchdog starts after USB scratch install is done and we wait for the user action to reboot, resulting in a system exception. [PR1555142](#)
- Few streams might observe 8-9 seconds traffic drop during ECMP member link flap. [PR1573295](#)
- High CPU seen mostly with systemd with 4000 mac-vrf instances activate or deactivate. [PR1581283](#)
- Large scale BFD sessions are not in stability. [PR1583444](#)
- PICD restart or crash might result in junks statistics for carrier transition. [PR1594253](#)
- The evo-pfemamd might crash after restarting app evo-pfemamd. [PR1594331](#)
- Few Label Switched Interface (LSI) MACs do not get properly learnt in the software with 8000 VPLS instance scale. [PR1597125](#)
- On ACX7100, no MAC address present in Ethernet table but arp is present in the system. [PR1597277](#)
- The arpd and ndp daemon crash is observed in scale setups. [PR1598217](#)
- The egress access control list (ACL) actions are skipped for BUM (Broadcast, Unknown Unicast, and Multicast) traffic and does not hit. [PR1598489](#)
- The ARPs (Address Resolution Protocol) might not be resolved on the IRB (integrated routing and bridging) interface which is replaced by another IRB interface. [PR1600209](#)

- For ACX7100-32C and ACX7100-48L the **Voltage Threshold Crossed** alarm might observe sometime. [PR1601493](#)

Infrastructure

- In certain circumstances journalctl can be overwhelmed with **No TTP_TLV_VRF** related log messages. [PR1610313](#)

User Interface and Configuration

- The mgd process might crash after performing the commit check. [PR1593192](#)
- The file copy command does not accept HTTPS URIs. [PR1596881](#)

Junos OS Evolved Release Notes for PTX10001-36MR, PTX10003, PTX10004, and PTX10008 Devices

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These release notes accompany Junos OS Evolved Release 21.3R2 for PTX10001-36MR, PTX10003, PTX10004, and PTX10008 Packet Transport Routers. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

NOTE: The PTX10016 is not supported on any of the Junos OS Evolved 21.3 Releases.

What's New

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- [What's New in 21.3R2 | 12](#)
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Learn about new features introduced in this release for PTX Series routers.

What's New in 21.3R2

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.3R2 for PTX Series routers.

What's New in 21.3R1

To view features supported on the PTX platforms, view the Feature Explorer using the following links. To see which features were added in Junos OS Evolved Release 21.3R1, click the Group by Release link. You can collapse and expand the list as needed.

- [PTX10001-36MR](#)
- [PTX10003](#)
- [PTX10004](#)
- [PTX10008](#)

What's Changed

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Learn about what changed in this release for PTX Series routers.

What's Changed in Release 21.3R2

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Class of Service

- Junos OS Evolved now correctly displays the index for `show class-of-service` commands.

General Routing

- **SNMP MIB support for field-replaceable unit (FRU) LEDs (PTX10008)**—SNMP MIB object `jnxLEDEntry` now indicates multiple LED indexes and color values for FRUs.

Layer 2 Features

- **New Commit check for Layer 2 Interfaces (PTX10003)**—We've introduced a commit check to prevent you from misconfiguring ethernet encapsulation on Layer 2 interfaces. Ethernet encapsulation is not supported on Layer 2 interfaces.

[See [encapsulation \(Logical Interface\)](#) and [Layer 2 Address Learning and Forwarding Overview](#).]

Network Management and Monitoring

- **SNMP support for MIB**—Operational command `show snmp mib walk system` now shows the latest software version and does not show the build date.

[See [show snmp mib](#).]

- **Change in behavior of SNMP MIB object `ifAlias`**—SNMP MIB object `ifAlias` now shows the configured interface alias. In earlier releases, `ifAlias` used to show configured interface description.

- **Support for disconnecting unresponsive NETCONF-over-SSH clients (ACX Series, PTX Series, and QFX Series)**—You can enable devices to automatically disconnect unresponsive NETCONF-over-SSH clients by configuring the `client-alive-interval` and `client-alive-count-max` statements at the `[edit system services netconf ssh]` hierarchy level. The `client-alive-interval` statement specifies the timeout interval in seconds, after which, if no data has been received from the client, the device requests a response. The `client-alive-count-max` statement specifies the threshold of missed client-alive responses that triggers the device to disconnect the client, thereby terminating the NETCONF session.

[See [ssh \(NETCONF\)](#).]

Routing Protocols

- **The RPD_OSPF_LDP_SYNC message not logged**—On all Junos OS and Junos OS Evolved devices, when an LDP session goes down there is a loss of synchronization between LDP and OSPF. After the loss of synchronization, when an interface has been in the holddown state for more than three minutes, the system log message with a warning level is sent. This message appears in both the messages file and the trace file. However, the system log message does not get logged if you explicitly configure the `hold-time` for `ldp-synchronization` at the `edit protocols ospf area area id interface interface name hierarchy` level less than three minutes. The message is printed after three minutes.
- To achieve consistency among resource paths, the resource path `/mpls/signalling-protocols/segment-routing/aggregate-sid-counters/aggregate-sid-counterip-addr='address'/state/countersname='name'/out-pkts/` is changed to `/mpls/signaling-protocols/segment-routing/aggregate-sid-counters/aggregate-sid-counterip-addr='address'/state/countersname='name'/`. The leaf "out-pkts" is removed from the end of the path, and "signalling" is changed to "signaling" (with one "l").

User Interface and Configuration

- A new field `rollback pending` is added to the output of `show system commit` that identifies whether `commit confirmed` is issued. It is removed once `commit` or `commit check` is issued or `commit confirmed` is rolled back after rollback timeout.
- When you configure `max-cli-sessions` at the **edit system** hierarchy level, it restricts the maximum number of cli sessions that can coexist at any time. Once the `max-cli-sessions` number is reached, new CLI access is denied. The users who are configured to get the CLI upon login, are also denied new login.

What's Changed in Release 21.3R1

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Authentication and Access Control

- **Command to automate SSH key-based authentication (ACX Series, PTX Series, and QFX Series)**—You can set up SSH-key based authentication between the network device and a remote host by issuing the `request security ssh password-less-authentication operational mode` command. When you execute the command with the appropriate options, the device generates SSH keys for the current user, provided the user does not already have existing keys, and transfers the user's public key to the `authorized_keys` file of the specified user on the remote host.

[See [request security ssh password-less-authentication](#).]

Class of Service

- Junos OS Evolved now correctly displays the index for `show class-of-service` commands.

EVPN

- **Minimum auto-recovery time reduced for duplicate MAC address detection (ACX Series, PTX Series and QFX Series)**—Junos OS has changed the minimum value allowed for auto-recovery time for duplicate MAC address detection from 5 minutes to 1 minute. The auto-recovery time is the length of time that the device suppresses a duplicate MAC address. Reducing the auto-recovery time allows customers to quickly recover from a MAC address duplication state. You configure the auto-recovery-

time option under the duplicate-mac-detection statement at the edit routing-instances routing-instance-name protocols evpn or edit protocols evpn hierarchy.

[See [Changing Duplicate MAC Address Detection Settings](#) .]

- **Output for show Ethernet switching flood extensive**—The output for show ethernet-switching flood extensive now displays the correct next-hop type for Virtual Ethernet and WAN mesh group in an EVPN-VXLAN network as unicast. Previously, the output for show ethernet-switching flood extensive would misidentify the next-hop type as composite.

General Routing

- **Enhancement to the show chassis pic command**—You can now view additional information about the optics when you run the show chassis pic command. The output now displays the following additional field:

MSA Version: Multi-source Agreements (MSA) version that the specified optics is compliant to. Values supported are: SFP+/SFP28 -- SFF-8472 (versions 9.3 - 12.3), QSFP+/QSFP28 -- SFF 8363 (versions 1.3 - 2.10), and QSFP-DD -- CMIS 3.0, 4.0, 5.0.

Previously, the show chassis pic command did not display this additional field.

[See [show chassis pic](#).]

- **Enhancement to the show interfaces (aggregated Ethernet) command (ACX Series, PTX Series, and QFX Series)**—When you run the show interfaces extensive command for aggregated Ethernet interfaces. You can now view following additional fields for MAC statistics: Receive, Transmit, Broadcast and Multicast packets.

[See [show chassis pic](#).]

- **Validation of TCA threshold values (PTX10008)**—We've implemented immediate validation of threshold values configured in the tca-identifier (enable-tca | no-enable-tca) (threshold number | threshold-24hrs number) statement under the [edit interface <interface name> optics-optics tca] hierarchy level to ensure the threshold value entered is valid.

[See [optics-options](#).]

- **A major alarm is raised (PTX10008)**—A major alarm is raised when a fan tray controller is removed from the chassis.
- **Enhancement to the request system license add terminal command (PTX10001-36MR)**—When you run the request system license add terminal command, you can now view following additional fields for information: JUNOS564022985: Ignoring unknown feature.

[See [Managing vMX Licenses](#).]

Interfaces and Chassis

- When configuring multiple flexible tunnel interface (FTI) tunnels, the source and destination address pair needs to be unique only among the FTI tunnels of the same tunnel encapsulation type. Prior to this PR, the source and destination address pair had to be unique among all the FTI tunnels regardless of the tunnel encapsulation type.

Junos XML API and Scripting

- **Changes to how command-line arguments are passed to Python op scripts (ACX Series, PTX Series, and QFX Series)**—When the device passes command-line arguments to a Python op script, it prefixes a hyphen (-) to single-character argument names, and it prefixes two hyphens (--) to multi-character argument names. The prefix enables you to use standard command-line parsing libraries to handle the arguments. In earlier releases, the device prefixes a single hyphen (-) to all argument names.

[See [Declaring and Using Command-Line Arguments in Op Scripts.](#)]

Layer 2 Features

- **Link selection support for DHCP**—We have introduced the `link-selection` statement at the `[edit forwarding-options dhcp-relay relay-option-82]` hierarchy level, which allows DHCP relay to add suboption 5 to option 82. Suboption 5 allows DHCP proxy clients and relay agents to request an IP address for a specific subnet from a specific IP address range and scope. Prior to this release, the DHCP relay dropped packets during the renewal DHCP process and the DHCP server used the leaf's address as a destination to acknowledge the DHCP renewal message.

[See [relay-option-82.](#)]

- **Support for Maximum Response Time in EVPN Type 8 Routes**—Junos OS now supports the Maximum Response Time (MRT) attribute field in EVPN Type 8 Route messages. This attribute is defined in the IETF draft of IGMP and MLD Proxy for EVPN, version 13. MRT is used to synchronize the wait time before responding to IGMP messages. To maintain compatibility with devices running previous versions of Junos OS that do not support MRT, set `protocols evpn leave-sync-route-oldstyle`.

[See [evpn.](#)]

- **New Commit check for Layer 2 Interfaces (PTX10003)**—We've introduced a commit check to prevent you from misconfiguring ethernet encapsulation on Layer 2 interfaces. Ethernet encapsulation is not supported on Layer 2 interfaces.

[See [encapsulation \(Logical Interface\)](#) and [Layer 2 Address Learning and Forwarding Overview.](#)]

Network Management and Monitoring

- **Changes in contextEngineID for SNMPv3 INFORMS (ACX Series, PTX Series, and QFX Series)**—Now the contextEngineID of SNMPv3 INFORMS is set to the local engine-id of Junos devices. In earlier releases, the contextEngineID of SNMPv3 INFORMS was set to remote engine-id.

[See [SNMP MIBs and Traps Supported by Junos OS](#).]

Security

Renamed veriexec-check option—We have changed the veriexec-check option of the request system malware-scan command to integrity-check. This update does not include any functional changes. You can use the integrity-check option to check whether integrity mechanisms are enabled for the Juniper Malware Removal Tool.

Software Licensing

- **Juniper Agile Licensing (PTX10003, PTX10016, QFX5130-32CD, and QFX5220)**—Starting from this release onwards, the Juniper Agile License Manager is deprecated. You can use the Juniper Agile Licensing Portal to activate, install, manage, and monitor licenses on Juniper Networks devices.

[See [Juniper Agile Licensing Guide](#).]

Known Limitations

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Learn about known limitations in Junos OS Evolved Release 21.3R2 for PTX Series routers.

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

General Routing

- On PTX10008 platforms running on Junos OS Evolved, if multiple SIBs are in offline state and GRES is performed immediately, the SIBs might get stuck in the offline state for sometime. [PR1554423](#)
- If we offline multiple SIBs and halt the primary Routing Engine, the SIBs can be stuck in the offlining state for 15 minutes before it goes to offline state. [PR1584712](#)
- Ungraceful FRU removal results in CRC errors on the peer FRUs, which can potentially wedge the Packet Forwarding Engine. [PR1615297](#)

MPLS

- If all the Routing Engines are not rebooted after a network service configuration change, the rpd process might crash. [PR1461468](#)

Network Management and Monitoring

- Configuring the `set system no-hidden-commands` configuration statement blocks NETCONF sessions. As a workaround, you can delete the `system no-hidden-commands` configuration statement and start the NETCONF sessions. [PR1590350](#)

Routing Protocols

- If you do not issue the `restart routing` command after configuring the `enhanced-ip` configuration statement might result in a label inconsistency that causes the device to generate an rpd core file. [PR1577451](#)

Open Issues

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Learn about open issues in Junos OS Release 21.3R2 for PTX Series routers.

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

General Routing

- Each filter contains one or more filter terms. Each filter term might contain counters. If traffic hits the filter term, then the counter (packets or bytes) increments. If a user tries to modify the unsupported scaled filter, then the counters (packets or bytes) in filter terms are cleaned up, which means the counters do not retain the original values before the modification. [PR1530597](#)
- The timingd-lc error, **CdaExprClient: grpc api call ExprServerInfoGet failed** and **CdaExprClient: Failed to fetch server info error:5** is seen on all FPCs after restarting router or FPC restart. [PR1561362](#)
- On PTX10000 line of routers, CB slot becomes fault standby after issuing the request `node power-off re slot` command on the primary `re slot`. The correct CB state is offline. [PR1581476](#)
- For the input subscription paths containing a ":" character, the extension header in case of GNMI and certain fields for the `show network-agent statistics` command shows incorrect values. [PR1581659](#)

- When the multicast traffic is sent from a Session and Resource Control (SRC) to the receivers with the egress sampling enabled, then J-Flow records report incorrect source IP and destination IP. [PR1609008](#)
- When 10,000 term ISF filter (with or without fast-lookup filter statement) with a set of add or delete ISF events lead to an evo-aftmand core file generation. This is not an FFT crash as the filter was programmed in FLT (hence a baseline issue). [PR1610506](#)
- On 400G or 4x100G interfaces using third party 400G-ZR optics, after the data path of the optics is powered up and Tx laser enabled, sometimes the actual transmitting power might appear very low. A check-and-recovery mechanism has been implemented in the 400G-ZR software driver. If the actual Tx power appears very low after powered-up and Tx laser enabled, a data path powering-down and re-init sequence is exercised. The Tx power level is recovered back to normal. Once such hardware bug is hit, the actual link up time is longer than expected. No further user intervention is needed as the workaround is built in the software. [PR1616445](#)
- ON PTX10003-80C routers, you might see an unexpected output pps with the policy-options configured. [PR1617915](#)
- Traceroute in MPLS OAM on segment routing over IPv6 might fail in ECMP case if the device is in topology. This is because the Linux kernel in Junos OS Evolved release puts an autoflowlabel on every IPv6 packet. This flow label is transparent to daemon process, which uses a null value for it and calculates the next hop details. However, Packet Forward Engine takes the flow label into account and calculates the next hop details. This difference in calculation of next hop details leads to a mismatch in the path the packet takes to the destination and can cause the traceroute to fail. [PR1618406](#)
- When there are lot of fabric OAM error raised and cleared in the system and if the system raises CM error for an unknown FPC, Packet Forwarding Engine, plane combination, then the fabric OAM alarm will persist on the system. This alarm is benign and has no impact on functionality or operation of the system. [PR1622649](#)
- On PTX Series platforms, the ddos-protection protocols group ARP counters do not show correct values because the protocol group ARP is not supported. [PR1629097](#)
- Copying of files to the RCB over WAN ports is slow. This is observed across all platforms running Junos OS Evolved release. If there is a need to speed it up, apply the following configuration as a workaround.

```
set system ddos-protection protocols ssh aggregate bandwidth 20000
set system ddos-protection protocols ssh aggregate burst 12000
```

[PR1636194](#)

Infrastructure

- With PTX-series running Junos Evolved software with NSR configured, when an IPv6 BGP connection reset, the kernel might restart unexpectedly. This issue only happens on a large scale network with NSR feature. [PR1636063](#)

Interfaces and Chassis

- The local switching traffic sequence numbers are not reset. [PR1560111](#)

Juniper Extension Toolkit (JET)

- The stub creation functions will not be available. [PR1580789](#)

Layer 2 Features

- It is observed rarely that issuing a request `system zeroize` does not trigger ZTP. A simple workaround is to reinitiate ZTP. [PR1529246](#)

MPLS

- Restart routing immediately after the device recovers and starts acting as LSR, transit traffic loss might be seen. [PR1575188](#)

Routing Policy and Firewall Filters

- Programmed filter terms in the hardware is sorted based upon terms sequence-id. Also, the `show | display translation-scripts translated-config` command displays the filter terms as per OC configuration, but hardware programming of filter terms is in sorted order of sequence-id. [PR1621620](#)

User Interface and Configuration

- The `scp` does not work from CLI. As a workaround, you can use the `file copy` CLI command instead of `scp` CLI command. [PR1611364](#)
- Configd might not be cleaning up shared pointers in DDS as seen in the output of: `> show platform object-info anomalies app configd`. There is no functional impact of these anomalies and these can be cleared by restarting configd from CLI as below: `> restart configd` [PR1641960](#)
- If after any config commit an anomaly is seen for configd in the output of below CLI. It would mean that the APP configd has not released the shared pointer after deleting the published object. This has no functional impact and the anomaly can be cleared by restarting app configd `regress@grogu-re0> show platform object-info anomalies app configd`. [PR1643192](#)

Resolved Issues

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Learn about the issues fixed in this release for PTX Series routers.

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

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Class of Service (CoS)

- MPLS fixed classifiers might not work on Junos OS Evolved platforms. [PR1616492](#)

General Routing

- The static MACs configured over aggregated Ethernet might not get programmed in forwarding after the FPC restart. [PR1581325](#)
- The filter with the forwarding-class and destination-class combined configuration might not work. [PR1595788](#)
- Multicast traffic drop might be observed after performing Routing Engine switchover or rpd restart. [PR1593810](#)
- On PTX10001-36MR routers, inconsistency in the platform name used in multiple places, version, SNMP MIBs, and so on. [PR1597999](#)
- The error message Nexthop: Comp_nh: 181429 Child nh count zero, do not create state181429 is observed after FPC restart. [PR1600642](#)
- The MVRP enabled trunk ports might go into blocked or designated state on the PTX Series platforms. [PR1601915](#)
- The Layer 2 host injected packets might not go out of IRB interface for 40G link. [PR1602131](#)
- The `show system errors fru detail` command does not display the `reset-pfe` as the `cmerror` configured action. [PR1602726](#)
- The remote aggregated Ethernet member failures (through disable/laser-off) might cause the high tail drop to result in high traffic loss. [PR1604823](#)
- The telnet and ssh session might not establish on PTX Series platforms. [PR1605753](#)
- On PTX10008 routers, fan tray controller removal or absence alarm is generated. [PR1605987](#)

- The DNS lookup might fail on all Junos OS Evolved platforms. [PR1607505](#)
- The power consumption report does not display correct values. [PR1608607](#)
- The IPv6 reachability fails in the management instance. [PR1608619](#)
- On PTX10000 line of routers, defunct rcv processes increase which might cause primary Routing Engine reboot. [PR1608776](#)
- The `show pfe statistics traffic` command does not show host bound traffic. [PR1611115](#)
- After picd restart, interface goes down in channelized 100G link. [PR1611379](#)
- The session connections might reset if the backup Routing Engine with NSR configured. [PR1611520](#)
- Some of the fabric links might go into faulty state after swapping FPC LC1201 with LC1202. [PR1612624](#)
- Mitigate false wrap of drop statistics when physical interfaces move into or out of an aggregated Ethernet while the physical interface drops excess traffic. [PR1613889](#)
- On PTX10008 and PTX10016 routers, FPCs might be stuck in onlining state after the software release upgrade. [PR1614489](#)
- The CDA-BT process generates a core file when the FPC is turned offline. [PR1615343](#)
- Twenty-seven percent traffic loss appears at the 221B packet size. [PR1615524](#)
- Device does not respond for traceroute while checking traceroute over VPN. [PR1615677](#)
- On PTX10008 routers, after the FPC goes offline, minor cm-errors might occur for the ZFI block on the other FPCs. [PR1616179](#)
- The `show interfaces brief` and the `show interfaces extensive` commands show inconsistent error counts. [PR1616765](#)
- Limitation with fast-lookup-filter (FFT) usage in ISF mode. [PR1616804](#)
- On PTX10008 routers, we observe the following error:
`RtIfaHandler::notifyCommand,EalIfaHandler::registryClientCommand ,EalIfaHandler::OnAdd (this=0x7f2ffe40e9a0
EalIfaHandler::instance()::handler, ifah=...) at ../../src/EalIfaHandler.cpp:222.` [PR1616909](#)
- Unexpected Routing Engine switchover might be observed. [PR1617720](#)
- Multicast traffic to a mixed high-priority and low-priority OQs of a busy port might suffer drops of higher-priority multicast. [PR1618026](#)
- Match on v6-prefix for prefix lengths less than or equal to 64 bits does not work. [PR1618211](#)

- On PTX10001-36MR routers, when performing the request `system snapshot`, the snapshot message is not captured in `/etc/motd` file. [PR1618946](#)
- `InputIntf` is reported incorrectly for `mpls-ipv4` and `mpls-ipv6` ingress sampling in case of Layer 3 VPN. [PR1619052](#)
- The `hwdr` process might crash when an FPC is pulled out or some power failure or fault happens for FPC. [PR1619102](#)
- On PTX10008 routers, 10g wrong TX rate for queues configured the mix of high-low tx rates without excess bandwidth. [PR1620284](#)
- Firewall counter does not hit with a specific configuration sequence. [PR1620410](#)
- Incorrect sensor modeling or mapping in the Junos Telemetry streaming scenario. [PR1621037](#)
- PIC stuck in Offlining state when an offline command is issued right after transceiver plugin. [PR1621694](#)
- ZTP does not work properly on PTX Series platforms if an EX Series device is used as a DHCP server. [PR1621987](#)
- On PTX10008 routers, interface goes down while performing custom optics profile validation for low power mode in non-channelized mode. [PR1624228](#)
- On PTX10008 routers, the following continuous information level syslog messages appear: `evo-aftmand-bt:Pfe:controller add for fru :controller modify for fru:fru power-on (block mode) for fryu:initiating online (block mode) for fru`. [PR1624375](#)
- The `show pfe route ip` command times out when the route table size is large. [PR1624629](#)
- BUM traffic might be dropped on ESI peer in a VLAN aware service. [PR1624677](#)
- The primary kernel might get crashed if NSR is enabled. [PR1626040](#)
- Add the `show cda pipestats` command to more releases for serviceability. [PR1626687](#)
- The IP not-ECN-capable traffic is not RED-dropped in an ECN-enabled congested queue. [PR1627496](#)
- On PTX10008 routers, license installation fails with the validation hook evaluation failed commit error. [PR1628733](#)
- PTX EVO : DDoS filter does not classify OSPF packets as OSPF-Hello and OSPF-Data packet. [PR1628889](#)
- The indirect next hop version ID higher than 255 might cause the indirect next hop FRR session to move down state and drops the transit traffic. [PR1630215](#)

- On PTX10008 routers, the transit CCM sessions come up but transit oopback(LB) ping or LinkTrace(LT) PDUs do not go through. [PR1632255](#)
- P2MP LSP ping fails on bud-node. [PR1632385](#)
- The evo-cda-bt core file is generated if the show cda qpoll or get-state is used while a Packet Forward Engine goes offline or is faulted, and also after the Packet Forward Engine restarts. [PR1633850](#)
- Firewall policer for MPLS family fails in the recent image. [PR1634644](#)
- On PTX10008 routers, the following frequent syslog is appears:
zephyr_clock_get_tod_ext_sync_sample(xxx): READ BT-X tod_sec: xxxxxxxxxx, tod_ns: xxxxxxxxxx. [PR1635771](#)
- There is a mismatch between user configured wavelength and actually transmitted wavelength on 400G-ZR wavelength setting with 75GHz spacing. [PR1638603](#)
- The FPC start time is incorrect in the show chassis fpc details CLI command output. [PR1641515](#)

Flow-based and Packet-based Processing

- The msvcsd process might be crashed when the nexthop-learning statement is enabled with the J-Flow service. [PR1620569](#)

Infrastructure

- The Host 0 Active Disk Usage Exceeded alarm might be generated due to a large number of files under /var/log/journal which were held by the eventd daemon. [PR1601251](#)
- The ephemeral or dynamic port range has been modified in Junos OS Evolved platforms. [PR1602717](#)
- The ICMP tunneling might not work on PTX Series platforms. [PR1605465](#)
- The default-address-selection might not work. [PR1608877](#)
- Egress TCP RST might not correctly populate the DSCP field. [PR1612208](#)
- On PTX10008 routers, backup path is not found in ASBR6 FIB Table. [PR1618916](#)

Interfaces and Chassis

- IRB VGA MAC IP is missed if IRB logical interface is configured first with a MAC-address. [PR1611559](#)
- On PTX10003 routers, SNMP walk on jnxLEDTable fails. [PR1620398](#)

Juniper Extension Toolkit (JET)

- Python script execution using CLI that access data port does not work. [PR1603437](#)

Network Management and Monitoring

- Incorrect IF-MIB::ifHCInUcastPkts and ifHCInBroadcastPkts statistics gets displayed. [PR1621606](#)
- SNMP traps are not generated for second trap group. [PR1623201](#)

Routing Policy and Firewall Filters

- Services might not work after committing the firewall filter counter configuration with similar name of two terms. [PR1625168](#)

User Interface and Configuration

- Updates to the system login configuration might not reflect after a commit. [PR1589858](#)
- On PTX10001-36MR routers, configured publish deleted anomalies are seen while running p2mp rsvp eoam test. [PR1617667](#)

Resolved Issues: 21.3R1

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General Routing

- VCCV type 1 connectivity verification is not supported. [PR1503724](#)
- The `mpls-label` does not reap out when configured for SR-sid ingress sensors. [PR1516811](#)
- A set of info level no passwd entry cron logs are displayed in every 1 minute. [PR1527266](#)
- Global port-mirroring applied with deactivation does not display XML correctly for PTX10003 platforms. [PR1529413](#)
- The `show chassis alarms` command must be redirect to the `show system alarm`. [PR1536020](#)
- The port mirroring stops working for the FTI interface when the GRE source is changed. [PR1536223](#)
- On PTX10003-80C routers, configuration archival might not work. [PR1540843](#)
- CPU utilization of `evo-aftman` process goes to 100 percent in a certain scenario on PTX Series devices. [PR1562328](#)
- Layer 2 interface information is not included in DHCPv4 option-82 circuit-id or remote-id and DHCPv6 relay-agent-interface-id or relay-agent-remote-id options when service provider style configuration for switch interfaces is employed. [PR1564010](#)
- Drop counts in the `show interfaces voq ae0` command might not match with the `show interfaces queue` command when the `clear interface` command is issued while traffic is flowing. [PR1567598](#)
- The `request system zeroize` command does not delete snapshot images from the backup HDD. [PR1569294](#)
- On PTX10008 platforms, user script output must be logged during the ZTP execution for determining failure in the logs. [PR1570167](#)
- A certain leaf in the `/components/component[name='FPC1:CPU']/properties/property/cpu-utilization-total` is not available. [PR1571502](#)
- On the PTX10008 platforms, the communication failure with `/fpc0/evo-aftmand-bt/` CLI timeout error and traffic loss might be observed. [PR1574513](#)
- IPv6 traffic loss might be observed after NSR SWO. [PR1576369](#)
- On PTX10008 platforms, incorrect capacity value is shown on the JNP10K-PWR-AC2 and JNP10K-PWR-DC2 PSM. [PR1578682](#)
- FPC status LEDs are not turning RED during power fault. [PR1579466](#)
- The Packet Forwarding Engine function might break down on all the FPCs after performing Routing Engine switchover on the Junos OS Evolved platforms. [PR1579683](#)

- An FPC is stuck in `onlining` state and reboots continuously during unified ISSU. [PR1580374](#)
- The `l2cpd` process might crash on the Junos OS Evolved platforms with dual Routing Engines. [PR1580479](#)
- The Junos Telemetry Interface properties are missing after HwD app restart. [PR1580735](#)
- In certain scenarios, shapers applied on a 10G interface might drop the traffic more than the configured max-rate. [PR1580795](#)
- The `timingd` process might crash post NSR. [PR1581270](#)
- Streaming over IPv6 fails in the Junos OS Evolved platforms. [PR1581341](#)
- The `rpd` process might crash on the new primary Routing Engine after performing the graceful switchover. [PR1581878](#)
- The `rpd` process generates a core file after Routing Engine switchover. [PR1582095](#)
- On PTX10004 platforms, after disabling active path, forcing FRR shows large traffic loss and increased `irp.core.trapcode.cfg_err` counter. [PR1582170](#)
- On PTX10008 platforms, the `show chassis craft-interface` command does not show correct PSM LED status. [PR1582444](#)
- Node locked license addition fails. [PR1582704](#)
- There might be a failure of the `config-sync` service and a major system alarm is raised after upgrade. [PR1582717](#)
- The Junos telemetry interfaces leaves `/components/component[name='FPC2:PIC1:PORT0:Xcvr0']/transceiver/state` are missing. [PR1583076](#)
- On PTX10008 platforms, `grpc` core files might be seen on a large number of telemetry subscriptions. [PR1583161](#)
- The system might crash if you configure IPv6 FBF with prefix `/88`. [PR1583374](#)
- On PTX10008 platforms, the `show chassis clocks` command must be handled in a graceful way or with a meaningful error. [PR1583715](#)
- The FRR convergence number is high with ALB enabled on the aggregated Ethernet bundle. [PR1583866](#)
- The `ospf-hello` DDoS statistics `pktCnt` is listed as 0. [PR1584458](#)
- The `vmcore` files are generated after performing the switchover. [PR1585436](#)

- After PIC goes offline and then online, the `show interfaces queue intf` command shows large values for cumulative tail-drop and RED-drop packets and bytes. [PR1585552](#)
- Packet loss might be seen during global repair of FRR. [PR1586122](#)
- On PTX10008 routers, need to add HBM statistics for the network processing unit (NPU) sensor. [PR1586148](#)
- The `RPD_KRT_KERNEL_BAD_ROUTE` error message is seen in certain scenarios when the `rpd` process restarts or GRES happens when NSR is enabled. This error has no functional impact. [PR1586466](#)
- Removing SIB without turning offline first might impact traffic. [PR1586820](#)
- The Junos Telemetry Interface leaves such as `used-power` and `allocated-power` under `/components` do not reflect correct values. [PR1587184](#)
- The exported header of the NPU sensor is changed to match Junos OS. [PR1588242](#)
- On PTX10008 platform, error or warning messages are appeared when issuing `request chassis cb slot 1 offline` command before node goes offline. [PR1589433](#)
- Traffic loss is observed on global repair after disabling the active path forcing FRR. [PR1589803](#)
- Sensor statistics might not be displayed accurately in the `show network-agent statistics operational` command for the data generated from multiple nodes. [PR1590249](#)
- On PTX10008 platforms, the Packet Forwarding Engine might get stuck in ready state with anomalies type `net::juniper::fabric::fabricPfeE`. [PR1590319](#)
- VM core files are observed when performing switchover. [PR1590372](#)
- Non-zero values might be displayed against the drop field in the `show network-agent statistics CLI` command output post switchover scenarios. [PR1590432](#)
- FPC goes offline after switchover if the system has power shortage. [PR1592004](#)
- On PTX10008 platforms, `picd` log floods when there is the following system alarm: `Optics does not support configured speed`. [PR1592165](#)
- The `aftmand` process might crash when an interface is configured with the analyzer. [PR1592267](#)
- The ZTP occasionally fails to apply user configuration after the system upgrade. [PR1592281](#)
- The duplicate Junos Telemetry Interface leaf of `oper-status` tag for logical interface index 16386 have mismatch value. [PR1592468](#)
- The firewall filter might not take into effect on Junos OS Evolved PTX Series platforms. [PR1592500](#)

- On the PTX10008 and PTX10001-36MR platforms, sFlow sample-rate configuration greater than 16000000 is not supported. [PR1592788](#)
- Port related component sensor does not get exported when subscribed to the /components/component/state/ path. [PR1593031](#)
- After Routing Engine switchover, the following error messages are seen: JexprSlowCntrRead - Unable to get the plct Inst for pfeIdx: 255, User-type: OVFM_OFFCHIP_NEXTHOP_CNTR. [PR1593079](#)
- The rpdagent crashes on the primary Routing Engine after multiple GRES with GR and NSR enabled. [PR1593104](#)
- The port mirroring instance might be down on Junos OS Evolved based platforms. [PR1593276](#)
- Load balance might not take effect for the Layer 2 VPN traffic on the PTX10008 platforms. [PR1593548](#)
- The node name must not be attached to the system hostname under LLDP. [PR1593991](#)
- The evo-pfemamd might crash after restarting app evo-pfemamd. [PR1594331](#)
- The BFD session for MPLS LSP goes down after enabling ultimate-hop-popping. [PR1594621](#)
- The type leaf value for FPC3:PIC0:PORT0:XcvtX displays XCVR. [PR1595103](#)
- On PTX10008 platform, inconsistent component name for FPC CPU. [PR1595109](#)
- On PTX10008 platforms, application error alarms and trace-writer core files are generated due to defunct rcp zombie. [PR1595409](#)
- Layer 2 VPN stops forwarding when interface encapsulation is changed to vlan-ccc from ethernet-ccc and back. [PR1595455](#)
- Some TCP sessions might not be established after performing the request system snapshot command. [PR1595470](#)
- On PTX10008 platforms, default wavelength for 400G ZR module is incorrect. [PR1595498](#)
- The applications might crash if the publishing parent objects linked child objects are published by different applications. [PR1595846](#)
- On 400G ZR, logical interface creation fails after adding or deleting invalid speed configuration. [PR1597022](#)
- The following error message is observed: cannot find ifToken for counterType:12. [PR1597355](#)
- The aftmand core file might be observed on all Junos Os Evolved platforms. [PR1597649](#)

- Major host 13 Ethernet interface link down false alarm is seen after Routing Engine 1 replacement manually. [PR1597763](#)
- Master-only IP address keeps in old master (new backup) and device becomes inaccessible after Routing Engine switchover. [PR1598173](#)
- Due to issue in AGEOUT notification for inline sessions, sessions remains up till peer sends BFD down packet or BFD client brings it down. [PR1599257](#)
- FTC status LED and SIB power LED are unlit or off on PTX10008 platforms. [PR1600178](#)
- The config interface `ip remove` command is not working correctly. [PR1600932](#)
- On PTX10008 routers, the `set chassis redundancy routing-engine 1 mastercommand` does not change the default Routing Engine election priority. [PR1601430](#)
- On PTX10008 routers, AFTMAN core files are seen at `jexpr_if_logical_l2d_alloc` while powering off or on all the Packet Forwarding Engine across all the FPCs. [PR1602035](#)
- On PTX10003 platform, IRB ping fails post power off or power on underlying Packet Forwarding Engine for aggregated Ethernet child member. [PR1602181](#)
- GRE keepalive packet with recursion control bit set gets dropped on PTX10003 platforms. [PR1602353](#)
- Continuous FPC restart might be observed on Junos OS Evolved platforms with the firewall policer configuration. [PR1602446](#)
- On PTX10008 routers, powering off Packet Forwarding Engines displays the following error message: `Jexpr: deleteFdbEntry: Null`. [PR1602670](#)
- The following error message is observed: `evo-aftmand-bt[18089]: [Error] IfStats:map entry not present for ifl:1039`. [PR1604334](#)
- The channel 0 physical interface does not come up after adding the correct speed configuration. [PR1604810](#)
- The host loopback wedge might be detected in the Packet Forwarding Engine when deleting the aggregated Ethernet bundle configuration. [PR1605599](#)
- On PTX10008 platforms, fan tray controller removal or absence alarm is generated. [PR1605987](#)
- The DNS lookup might fail on all Junos OS Evolved platforms. [PR1607505](#)
- On PTX10008 platforms, defunct `rcp` increases due to `transport-alarm-statsd` daemon. [PR1608776](#)
- On PTX10008 platforms, the `evo-aftmand-bt.fpc_x86_64` core file is seen @ `jexpr_pile_malloc` with LSR core profile configuration. [PR1608999](#)

- High priority queue might not get the expected bandwidth on the Junos OS Evolved platforms. [PR1609823](#)
- On PTX10001-36MR, PTX10004, and PTX10008 platforms, IS-IS does not come up when network type is P2P for IRB interface. [PR1612606](#)
- Mitigate false wrap of drop statistics when physical interfaces move into or out-of an aggregated Ethernet while physical interface drops excess traffic. [PR1613889](#)

Authentication and Access Control

- Root password might not be accepted under su on the Junos OS Evolved platforms. [PR1607861](#)

Class of Service (CoS)

- The user-defined CoS might not get applied on the interface when you configure class-of-service stanza with `interface all`. [PR1592900](#)

EVPN

- Sometimes the BUM traffic coming through EVPN MPLS tunnel gets dropped or duplicated when going out of the aggregated Ethernet interface after tunnel termination when the aggregated Ethernet members are spanned across multiple Packet Forwarding Engines. [PR1578314](#)
- On PTX10004 platforms, the EVPN option is missing under `routing-instances protocols`. [PR1581821](#)

Infrastructure

- The `default-address-selection` statement might not work on all the Junos OS Evolved platforms. [PR1570552](#)
- The FTP IPv6 server function might fail on all the Junos OS Evolved platforms. [PR1591733](#)
- The `detail` and the `write-file` options for the `monitor traffic interface` CLI command are incompatible with each other when used simultaneously. [PR1596188](#)
- Malformed packets might be sent out on egress interfaces in Junos OS Evolved platforms. [PR1603783](#)

Interfaces and Chassis

- The `resiliencyd.re.re0` core files are seen on executing `cminfra` scripts. [PR1578822](#)

- The Junos Telemetry Interface optics sensor's alarm data type changed from `bool_val` to `str_val`. [PR1580113](#)
- On PTX10008 platforms, ifmand core files are seen on configuring master-only on the non-duplicate address. [PR1583681](#)
- When changing the micro BFD session address from IPv4 to IPv6 or vice versa, the BFD session and aggregated Ethernet interface go down. [PR1584853](#)
- The SIB might be stuck at an offlining state after performing offline and online operations. [PR1591076](#)
- Some interface unit descriptions are missing from the output of the `show interfaces description` command on certain PTX Series platforms. [PR1591340](#)
- The 25G interfaces with FEC91 go down on a few configurations. [PR1594740](#)
- On PTX10003-160C platforms, interface is not programmed in routing-instance. [PR1596768](#)
- On PTX10003 platforms, the `show platform object-info anomalies summary` CLI command times out. [PR1598337](#)
- The LACP system priority might take a value of 0 and causes an LACP interoperability issue. [PR1602724](#)
- A few links on channelized interface is down after `oir_enable` and `oir_disable` in 4X25G. [PR1606644](#)

Juniper Extension Toolkit (JET)

- The gRPC connection stuck on ESTABLISHED state with no active collector. [PR1592542](#)

MPLS

- MBB is not triggered when LSP reverts back to the primary path. [PR1587704](#)

Network Management and Monitoring

- The SNMP query timeout failure might be observed on the Junos OS Evolved platforms. [PR1585409](#)
- The syslog archival transfer might fail if the archive site URL is configured with an IPv6 address. [PR1603342](#)

Routing Policy and Firewall Filters

- The `dfwd-junos-relay` core file is generated during switchover. [PR1597853](#)

- The dfwd crashes when the `no-decrement-ttl` filter match condition and action is sent from control plane to the Packet Forwarding Engine. [PR1602645](#)
- The firewalld might crash if you configure `fragment-offset` out of the range (fragment-offset range: 1-900000000000). [PR1605805](#)

Routing Protocols

- Traffic might be misroute or dropped after the Packet Forwarded Engine restarts or interface flaps. [PR1581845](#)
- On a rare occasion, the rpd process generates a core file on the backup Routing Engine after loading a new image. [PR1583630](#)
- Origin validation replication status shows up in the `show task replication` command output even when it is not configured. [PR1583692](#)
- The rpd process might crash when the BGP RPKI session `record-lifetime` is configured less than the hold time. [PR1585321](#)
- The rpd process might crash in a BGP multipath scenario if the interface for a single hop EBGP peer goes down. [PR1589141](#)
- PIM joins might not be synchronized between the primary and backup Routing Engines because of `ppmd` restart. [PR1591685](#)
- When you enable or disable BGP in a short time interval on a scaled NSR, the router might result in a backup rpd restart. [PR1591717](#)

User Interface and Configuration

- The following error is seen: `shell-init: error retrieving current directory: getcwd: cannot access parent directories: No such file or directory`. [PR1549479](#)
- The `no-persist-groups-inheritance` configuration is not supported. [PR1575995](#)
- System logs are not updated when a new user gets added or an old user is deleted after commit. [PR1589858](#)
- Post request `system zeroize` operation, the `sshd` service is not enabled by default due to a race condition on PTX10008 platforms. [PR1594258](#)
- The `file copy` command does not accept HTTPS URIs. [PR1596881](#)
- The `transfer-on-commit` configuration does not commit if you commit through NETCONF. [PR1602331](#)

- The request `pfe execute command` usage too frequently might cause `cmdd` to crash. [PR1610829](#)

Junos OS Evolved Release Notes for QFX5130-32CD, QFX5220, and QFX5700 Devices

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These release notes accompany Junos OS Evolved Release 21.3R2 for QFX5130-32CD, QFX5220-32CD, QFX5220-128C, and QFX5700 switches. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

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- [What's New in 21.3R1 | 38](#)

Learn about new features introduced in this release for QFX Series switches.

What's New in 21.3R2

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.3R2 for QFX Series switches.

What's New in 21.3R1

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Learn about new features introduced in this release for QFX Series Switches.

Hardware

- **Support for the JNP-100G-DAC-5M DAC cable (QFX5130-32CD and QFX5220-32CD)**—Starting in Junos OS Evolved Release 21.3R1, we support the JNP-100G-DAC-5M direct attach copper (DAC) cable.

[See [Hardware Compatibility Tool](#).]

- **Support for the JNP-100G-DAC-1M and JNP-100G-DAC-3M cables (QFX5220-32CD)**—Starting in Junos OS Evolved Release 21.3R1, we support the JNP-100G-DAC-1M and the JNP-100G-DAC-3M direct attach copper (DAC) cables.

[See [Hardware Compatibility Tool](#).]

Junos OS API and Scripting

- **Support for REST interface over HTTPS (ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, QFX5130-48C and QFX5220)**— Starting in Junos OS Evolved Release 21.3R1, we support HTTPS protocol for REST interfaces.

[See [REST API Guide](#).]

IP Tunneling

- **Support for multiple single-hop EBGP sessions on different links using the same link-local address (PTX10001-36MR, PTX10008, and QFX5220)**—Starting in Junos OS Evolved Release 21.3R1, you need not configure unique BGP peer addresses for Juniper Networks devices for every external BGP (EBGP) session. You can now enable single-hop EBGP sessions on different links over multiple directly connected peers that use the same IPv6 link-local address. In earlier Junos OS Evolved Releases, BGP peers could be configured with link-local addresses, but multiple BGP peers could not be configured to use the same link-local address on different interfaces.

[See [Overview: Configure Multiple Single-Hop EBGP Sessions on Different Links Using the Same Link-Local Address \(IPv6\)](#).]

MPLS

- **RSVP updates available bandwidth values without notifying IS-IS (PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220)**—When RSVP label-switched paths (LSPs) and segment routing LSPs coexist on a link, RSVP takes into account how much bandwidth the segment routing LSPs use. By default, RSVP updates the values for the local unreserved bandwidth and the maximum available bandwidth and passes the values on to IS-IS. Starting in Junos OS Evolved Release 21.3R1, you can configure RSVP to update available bandwidth values without notifying IS-IS if the bandwidth change is within a certain threshold configured at the [edit protocols rsvp interface *interface-name* update-threshold-max-reservable].

If you configure the local-bw-override-threshold statement at the [edit protocols rsvp interface *interface-name* non-rsvp-bandwidth] hierarchy level, RSVP always updates the available bandwidth values.

However, it reports only the new values to IS-IS if the bandwidth change passes the threshold.

[See [update-threshold-max-reservable](#) and [local-bw-override-threshold](#).]

Routing Options

- **Enhancements to prefix-limit and accepted-prefix-limit configuration statements, and updates to show bgp neighbor command (PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, QFX5130-48C, and QFX5220)**—Starting in Junos OS Evolved Release 21.3R1, the prefix-limit and accepted-prefix-limit configuration statements include the following options:
 - drop-excess *<percentage>*—If you include the drop-excess *<percentage>* option, the excess routes are dropped when the maximum number of prefixes is reached. If you specify a percentage, the routes are logged when the number of prefixes exceeds that percentage value of the maximum number.

- `hide-excess <percentage>`—If you include the `hide-excess <percentage>` option, the excess routes are hidden when the maximum number of prefixes is reached. If you specify a percentage, the routes are logged when the number of prefixes exceeds that percentage value of the maximum number.

We have enhanced the `show bgp neighbor` command to display the following additional information:

- Count of prefixes that are dropped or hidden based on network layer reachability information (NLRI) when the maximum number of allowed prefixes threshold is exceeded
- Alerts when a peer starts to drop or hide routes
- Configuration details of the `prefix-limit` and `accepted-prefix-limit` statements

[See [prefix-limit](#), [accepted-prefix-limit](#), [show bgp neighbor](#), and [Multiprotocol BGP](#).]

Routing Protocols

- **Support for BGP Auto-discovered Neighbor (PTX10001-36MR, PTX10003, PTX10004, PTX10008 and QFX5220)**—Starting in Junos OS Evolved Release 21.3R1, we support BGP auto-discovered neighbors using IPv6 Neighbor Discovery Protocol (ND). With this feature, you can enable BGP to create peer neighbor sessions using link-local IPv6 addresses of directly connected neighbor devices. You need not specify remote or local neighbor IP addresses.

To enable peering for a given interface or set of interfaces without specifying the local or remote neighbor addresses, configure the `peer-auto-discovery` statement at the `[edit fabric protocols bgp group <name> dynamic-neighbor <name>]` hierarchy level.

[See [BGP Auto-Discovered Neighbors](#).]

Additional Features

We've extended support for the following features to these platforms.

- **Host-to-host security for BGP sessions using IPsec with the `mode` statement set to transport** (PTX10001-36MR, PTX10004, PTX10008, and QFX5220):

We support the `parse`, `netlink-socket`, `database`, and general security traceoptions flags. We've also introduced the `ipsec traceoptions` flag for BGP traffic.

[See [IP Security for BGP](#), [Configuring IPsec Security Associations](#), and [traceoptions \(Protocols BGP\)](#).]

- **Path Computation Element Protocol (PCEP) support for reporting and delegating colored Distributed Constrained Shortest Path First (DCSPF) segment routing LSPs** (PTX10003 and QFX5200)

[See [Understanding Static Segment Routing LSP in MPLS Networks](#).]

- **Storm control** (ACX7100-32C and ACX7100-48L , and QFX5700)

[See [Understanding Storm Control](#)]

- **TARGET_DEFINED** subscription mode support with JTI and export data using JavaScript Object Notation (JSON) encoding format with JTI and gRPC Network Management Interface (gNMI) extension headers (PTX10001-36MR, PTX10003, PTX10004, PTX10008, and QFX5220)

[See [export-profile \(Junos Telemetry Interface\)](#) and [Understanding OpenConfig and gRPC and gNMI on Junos Telemetry Interface.](#)]

What's Changed

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- [What's Changed in Release 21.3R1 | 43](#)

Learn about what changed in this release for QFX Series switches.

What's Changed in Release 21.3R2

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- [Class of Service | 41](#)
- [Network Management and Monitoring | 42](#)
- [Routing Protocols | 42](#)
- [User Interface and Configuration | 42](#)

Class of Service

- Junos OS Evolved now correctly displays the index for `show class-of-service` commands.

Network Management and Monitoring

- **SNMP support for MIB**—Operational command `show snmp mib walk system` now shows the latest software version and does not show the build date.

[See [show snmp mib](#).]

- **Change in behavior of SNMP MIB object ifAlias**—SNMP MIB object ifAlias now shows the configured interface alias. In earlier releases, ifAlias used to show configured interface description.
- **Support for disconnecting unresponsive NETCONF-over-SSH clients (ACX Series, PTX Series, and QFX Series)**—You can enable devices to automatically disconnect unresponsive NETCONF-over-SSH clients by configuring the `client-alive-interval` and `client-alive-count-max` statements at the `[edit system services netconf ssh]` hierarchy level. The `client-alive-interval` statement specifies the timeout interval in seconds, after which, if no data has been received from the client, the device requests a response. The `client-alive-count-max` statement specifies the threshold of missed client-alive responses that triggers the device to disconnect the client, thereby terminating the NETCONF session.

[See [ssh \(NETCONF\)](#).]

Routing Protocols

- **The RPD_OSPF_LDP_SYNC message not logged**—On all Junos OS and Junos OS Evolved devices, when an LDP session goes down there is a loss of synchronization between LDP and OSPF. After the loss of synchronization, when an interface has been in the holddown state for more than three minutes, the system log message with a warning level is sent. This message appears in both the messages file and the trace file. However, the system log message does not get logged if you explicitly configure the `hold-time` for `ldp-synchronization` at the `edit protocols ospf area area id interface interface name` hierarchy level less than three minutes. The message is printed after three minutes.
- To achieve consistency among resource paths, the resource path `/mpls/signalling-protocols/segment-routing/aggregate-sid-counters/aggregate-sid-counterip-addr='address'/state/countersname='name'/out-pkts/` is changed to `/mpls/signaling-protocols/segment-routing/aggregate-sid-counters/aggregate-sid-counterip-addr='address'/state/countersname='name'/`. The leaf "out-pkts" is removed from the end of the path, and "signalling" is changed to "signaling" (with one "l").

User Interface and Configuration

- A new field `rollback pending` is added to the output of `show system commit` that identifies whether `commit confirmed` is issued. It is removed once `commit` or `commit check` is issued or `commit confirmed` is rolled back after rollback timeout.

- When you configure `max-cli-sessions` at the **edit system** hierarchy level, it restricts the maximum number of CLI sessions that can coexist at any time. Once the `max-cli-sessions` number is reached, new CLI access is denied. The users who are configured to get the CLI upon login, are also denied new login.

What's Changed in Release 21.3R1

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Authentication and Access Control

- **Command to automate SSH key-based authentication (ACX Series, PTX Series, and QFX Series)**—You can set up SSH-key based authentication between the network device and a remote host by issuing the `request security ssh password-less-authentication operational mode` command. When you execute the command with the appropriate options, the device generates SSH keys for the current user, provided the user does not already have existing keys, and transfers the user's public key to the `authorized_keys` file of the specified user on the remote host.

[See [request security ssh password-less-authentication](#).]

Class of Service

- Junos OS Evolved now correctly displays the index for `show class-of-service` commands.

EVPN

- **Minimum auto-recovery time reduced for duplicate MAC address detection (ACX Series, PTX Series and QFX Series)**—Junos OS has changed the minimum value allowed for auto-recovery time for duplicate MAC address detection from 5 minutes to 1 minute. The auto-recovery time is the length of time that the device suppresses a duplicate MAC address. Reducing the auto-recovery time allows customers to quickly recover from a MAC address duplication state. You configure the auto-recovery-time option under the duplicate-mac-detection statement at the edit routing-instances routing-instance-name protocols evpn or edit protocols evpn hierarchy.

[See [Changing Duplicate MAC Address Detection Settings](#) .]

General Routing

- **Default FEC Settings (QFX5130-32CD, QFX5220-32CD, and QFX5220-128C)**— The default FEC mode for 4x25 optics is changed to FEC91 instead of FEC74. For 4x25G Direct Attach Copper Breakout Cables (DACBO), the default FEC mode remains as FEC74.

[See [show interfaces extensive](#).]

- **Enhancement to the show chassis pic command**—You can now view additional information about the optics when you run the show chassis pic command. The output now displays the following additional field:

MSA Version: Multi-source Agreements (MSA) version that the specified optics is compliant to. Values supported are: SFP+/SFP28 -- SFF-8472 (versions 9.3 - 12.3), QSFP+/QSFP28 -- SFF 8363 (versions 1.3 - 2.10), and QSFP-DD -- CMIS 3.0, 4.0, 5.0.

Previously, the show chassis pic command did not display this additional field.

[See [show chassis pic](#).]

- **Enhancement to the show interfaces (Aggregated Ethernet) command (ACX Series, PTX Series, and QFX Series)**—When you run the show interfaces extensive command for Aggregated Ethernet interfaces. You can now view following additional fields for MAC statistics : Receive, Transmit, Broadcast and Multicast packets.

[See [show chassis pic](#).]

EVPN

- **Community information no longer included in VRF routing table**—The QFX series switches no longer include the inherited advertised route target communities, EVPN extended communities, or VXLAN encapsulation communities for EVPN Type 2 and EVPN Type 5 routes when an IP host is added in the VRF routing table.

- **Minimum auto-recovery time reduced for duplicate MAC address detection (QFX series)**—Junos OS has changed the minimum value allowed for auto-recovery time for duplicate MAC address detection from 5 minutes to 1 minute. The auto-recovery time is the length of time that the device suppresses a duplicate MAC address. Reducing the auto-recovery time allows customers to quickly recover from a MAC address duplication state. You configure the `auto-recovery-time` option under the `duplicate-mac-detection` statement at the **edit routing-instances routing-instance-name protocols evpn** or **edit protocols evpn** hierarchy.

[See [Changing Duplicate MAC Address Detection Settings](#) .]

- **Output for show Ethernet switching flood extensive**—The output for `show ethernet-switching flood extensive` now displays the correct next-hop type for Virtual Ethernet and WAN mesh group in an EVPN-VXLAN network as `unilist`. Previously, the output for `show ethernet-switching flood extensive` would misidentify the next-hop type as `composite`.

Interfaces and Chassis

- When configuring multiple flexible tunnel interface (FTI) tunnels, the source and destination address pair needs to be unique only among the FTI tunnels of the same tunnel encapsulation type. Prior to this PR, the source and destination address pair had to be unique among all the FTI tunnels regardless of the tunnel encapsulation type.

Junos XML API and Scripting

- **Changes to how command-line arguments are passed to Python op scripts (ACX Series, PTX Series, and QFX Series)**—When the device passes command-line arguments to a Python op script, it prefixes a hyphen (-) to single-character argument names, and it prefixes two hyphens (--) to multi-character argument names. The prefix enables you to use standard command-line parsing libraries to handle the arguments. In earlier releases, the device prefixes a single hyphen (-) to all argument names.

[See [Declaring and Using Command-Line Arguments in Op Scripts](#) .]

Layer 2 Features

- **Link selection support for DHCP**—We have introduced the `link-selection` statement at the `[edit forwarding-options dhcp-relay relay-option-82]` hierarchy level, which allows DHCP relay to add suboption 5 to option 82. Suboption 5 allows DHCP proxy clients and relay agents to request an IP address for a specific subnet from a specific IP address range and scope. Prior to this release, the DHCP relay dropped packets during the renewal DHCP process and the DHCP server used the leaf's address as a destination to acknowledge the DHCP renewal message.

[See [relay-option-82](#) .]

Network Management and Monitoring

- **Changes in contextEngineID for SNMPv3 INFORMS**—Now the contextEngineID of SNMPv3 INFORMS is set to the local engine-id of Junos devices. In earlier releases, the contextEngineID of SNMPv3 INFORMS was set to remote engine-id.

[See [SNMP MIBs and Traps Supported by Junos OS](#).]

Software Licensing

- **Juniper Agile Licensing (PTX10003, PTX10016, QFX5130-32CD, and QFX5220)**—Starting from this release onwards, the Juniper Agile License Manager is deprecated. You can use the Juniper Agile Licensing Portal to activate, install, manage, and monitor licenses on Juniper Networks devices.

[See [Juniper Agile Licensing Guide](#).]

Known Limitations

There are no known limitations in hardware and software in this release for QFX Series switches.

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

Open Issues

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Learn about open issues in Junos OS Evolved Release 21.3R2 for QFX Series switches.

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

General Routing

- On the QFX5130-32CD platform running Junos OS Evolved, you cannot clear or reset the disk option specified in the scheduled request node reboot command. The node reboots with the disk option last specified. [PR1517596](#)
- FIPS mode is not supported. [PR1530951](#)
- On the QFX series Junos Evolved OS platforms, the OSPF routes might not be learned from the neighbors. [PR1570498](#)
- Any MTU change on an interface on QFX5220-32CD, QFX5220-128C or QFX5130 will cause the interface to flap multiple times. This will stabilise within 2 seconds. [PR1576199](#)
- Enabling MPLS traffic engineering causes the LDP session not to come up, the reason behind is that the underlying TCP connection stays at SYN-SENT state. Disabling or deactivating the MPLS traffic engineering solves this issue. [PR1617629](#)

Layer 2 Features

- It is observed rarely that issuing a command does not trigger ZTP. A simple workaround is to reinitiate ZTP. [PR1529246](#)

Resolved Issues

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- [Resolved Issues: 21.3R1 | 48](#)

Learn about the issues fixed in this release for QFX Series switches.

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

Resolved Issues: 21.3R2

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General Routing

- On QFX5700s, DAC connection at the peer end does not go down while RCB reboots. [PR1574342](#)
- Filter with forwarding-class and destination-class combined might not work. [PR1595788](#)
- Traffic loss might be observed when evo-pfemamd restarts. [PR1608004](#)
- The egress traffic drops because the egress queue buffer gets stuck on the 400G interfaces. [PR1618147](#)
- The native-vlan-id configured on service provider style UNI interface might not work on QFX5130 or QFX5700. [PR1618731](#)
- Junos OS Evolved:JDI_FT_REGRESSION:ui:ui_change :: On performing request system snapshot, the snapshot message is not captured in /etc/motd file. [PR1618946](#)

Infrastructure

- The alarm **Host 0 Active Disk Usage Exceeded** might be generated due to large files which are already marked as deleted. [PR1601251](#)

Resolved Issues: 21.3R1

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General Routing

- The QFX series Junos Evolved OS platforms, the OSPF routes might not be learned from the neighbors. [PR1570498](#)
- The BGP sessions might intermittently flap if the egress sFlow sampling is enabled at a high sampling rate. [PR1571636](#)
- On QFX5700s platforms, peer interfaces are showing up and LEDs are glowing during device reboot for DAC connections. [PR1574342](#)
- Existing configuration does not get overwritten while configuring the device using ZTP. [PR1577004](#)
- The traffic related to native VLAN might be dropped. [PR1581075](#)
- Port mirroring instance might be down on the Junos OS Evolved based platforms. [PR1593276](#)
- The interface might not learn mac-address if it is configured with `vlan-id-list` starting with VLAN id 1 and `native-vlan-id`. [PR1597013](#)

Infrastructure

- The alarm **Host 0 Active Disk Usage Exceeded** might be generated due to large files which were already marked as deleted. [PR1601251](#)
- In certain circumstances `journalctl` can be flooded with **No TTP_TLV_VRF** related log messages. [PR1610313](#)

User Interface and Configuration

- The `file copy` command does not accept HTTPS URLs. [PR1596881](#)

Upgrade Your Junos OS Evolved Software

Products impacted: ACX7100-32C, ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, QFX5220-32CD, QFX5220-128C, and QFX5700.

Follow these steps to upgrade your Junos OS Evolved software:

1. Using a Web browser, navigate to the All Junos Platforms software download URL on the Juniper Networks webpage: <https://www.juniper.net/support/downloads/>
2. In the Find a Product box, enter the Junos OS platform for the software that you want to download.

3. Select Junos OS Evolved from the OS drop-down list.
4. Select the relevant release number from the Version drop-down list.
5. In the **Install Package** section, select the software package for the release.
6. Log in to the Juniper Networks authentication system using the username (generally your e-mail address) and password supplied by a Juniper Networks representative.
7. Review and accept the End User License Agreement.
8. Download the software to a local host.

NOTE: We don't recommend that you download the Services Profile 1 image to use the lean rpd profile. We will deprecate this image in Junos OS Evolved 21.4R1. For more information about the types of Junos OS Evolved installation package prefixes, see [Junos OS Evolved Installation Packages](#).

9. Copy the software to the device or to your internal software distribution site.
10. Install the new package on the device.

NOTE: We recommend that you upgrade all software packages out of band using the console because in-band connections are lost during the upgrade process.

For more information about software installation and upgrade, see [Junos® OS Evolved Software Installation and Upgrade Guide](#). For more information about EOL releases and to review a list of EOL releases, see <https://support.juniper.net/support/eol/software/junosevo/>.

Licensing

In 2020, Juniper Networks introduced a new software licensing model. The Juniper Flex Program comprises a framework, a set of policies, and various tools that help unify and thereby simplify the multiple product-driven licensing and packaging approaches that Juniper Networks has developed over the past several years.

The major components of the framework are:

- A focus on customer segments (enterprise, service provider, and cloud) and use cases for Juniper Networks hardware and software products.
- The introduction of a common three-tiered model (standard, advanced, and premium) for all Juniper Networks software products.

- The introduction of subscription licenses and subscription portability for all Juniper Networks products, including Junos OS and Contrail.

For information about the list of supported products, see [Juniper Flex Program](#).

Finding More Information

- **Feature Explorer**—Juniper Networks Feature Explorer helps you to explore software feature information to find the right software release and product for your network.

<https://apps.juniper.net/feature-explorer/>

- **PR Search Tool**—Keep track of the latest and additional information about Junos OS open defects and issues resolved.

<https://prsearch.juniper.net/InfoCenter/index?page=prsearch>

- **Hardware Compatibility Tool**—Determine optical interfaces and transceivers supported across all platforms.

<https://apps.juniper.net/hct/home>

NOTE: To obtain information about the components that are supported on the devices and the special compatibility guidelines with the release, see the Hardware Guide for the product.

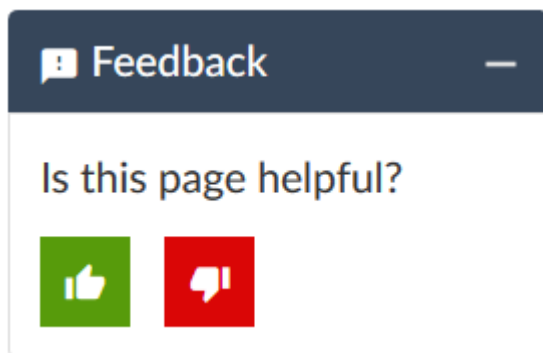
- **Juniper Networks Compliance Advisor**—Review regulatory compliance information about [Common Criteria](#), [FIPS](#), [Homologation](#), [RoHS2](#), and [USGv6](#).

<https://pathfinder.juniper.net/compliance/>

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

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Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active Juniper Care or Partner Support Services 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 <https://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://supportportal.juniper.net/s/knowledge>
- 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://supportportal.juniper.net/s/knowledge>
- Join and participate in the Juniper Networks Community Forum: <https://www.juniper.net/company/communities/>
- Create a service request online: <https://supportportal.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://support.juniper.net/support/requesting-support/>
- 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

20 July 2023—Revision 3, Junos OS Release 21.3R2 for the ACX7100-32C, ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, QFX5220, and QFX5700 Devices.

29 July 2022—Revision 2, Junos OS Release 21.3R2 for the ACX7100-32C, ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, QFX5220, and QFX5700 Devices.

18 February 2022—Revision 1, Junos OS Release 21.3R2 for the ACX7100-32C, ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, QFX5220, and QFX5700 Devices.

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