Release Notes

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Junos ® OS Evolved Release 21.4R3

JUNIPER NETWORKS | Engineering Simplicity

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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 21.4R3.

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, ACX7100-48L, and ACX7509 Devices

IN THIS SECTION

These release notes accompany Junos OS Evolved Release 21.4R3 for ACX7100-32C, ACX7100-48L, and ACX7509 routers. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

IN THIS SECTION

Learn about new features introduced in this release for ACX Series routers.

What's New in 21.4R3

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.4R3 for ACX Series routers.

What's New in 21.4R2

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 21.4R2, click the Group by Release link. You can collapse and expand the list as needed.

- ACX7100-32C
- ACX7100-48L
- ACX7509

What's New in 21.4R1

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 21.4R1, click the Group by Release link. You can collapse and expand the list as needed.

- ACX7100-32C
- ACX7100-48L
- ACX7509

What's Changed

IN THIS SECTION

Learn about what changed in these releases for ACX Series routers.

What's Changed in Release 21.4R3-S4

IN THIS SECTION

Junos XML API and Scripting

- **Ability to restart restart daemonized applications**—Use the `request extension-service restart-daemonize-app` *`application-name`* command to restart a daemonized application running on a Junos device. Restarting the application can assist you with debugging and troubleshooting.

  [See request extension-service restart-daemonize-app.]

Network Management and Monitoring

- `operator` **login class is restricted from viewing NETCONF trace files that are** `no-world-readable` **(ACX Series, PTX Series, and QFX Series)**—When you configure NETCONF tracing options at the `[edit`

`system services netconf traceoptions]` hierarchy level and you restrict file access to the file owner by setting or omitting the `no-world-readable` statement (the default), users assigned to the `operator` login class do not have permissions to view the trace file.

What's Changed in Release 21.4R3-S3

IN THIS SECTION

Juniper Extension toolkit

- Ability to commit `extension-service file` configuration when application file is unavailable]--When you set the `optional` option at the `[edit system extension extension-service application file` *`file-name`*`]` hierarchy level, the operating system can commit the configuration even if the file is not available at the **/var/db/scripts/jet** file path.

What's Changed in Release 21.4R3

IN THIS SECTION

General Routing

- Stateful port configuration for PTP over Ethernet and default profile is supported only on boundary clock mode and not on ordinary clock mode.
- **Router advertisement module status on backup Routing Engine (MX Series)**—The router advertisement module does not function in the backup Routing Engine as the Routing Engine does not send an acknowledgment message after receiving the packets. Starting in this Junos OS Release, you can view the router advertisement module information using the `show ipv6 router-advertisement` operational command.

  [See show ipv6 router-advertisement)].
- **Change in in unnumbered-address support for GRE tunnel**—Starting in Junos OS Release 24.4R1, there is a behavioural change in unnumbered-address support for GRE tunnel with IPV6 family and display donor interface for both IPV4 and IPV6 families of GRE tunnel. You can view interface donor details under show interfaces hierarchy level.

  [See show interfaces.]
- **sFlow configuration**— sFlow configuration is allowed only on et, xe, and ge interfaces in Junos OS Evolved-based platforms. All other interfaces are blocked for configuring sFlow on Junos OS Evolved-based platforms. A CLI error will be thrown if sFlow is configured on any other interface other than et, xe or ge interface.

Interfaces and Chassis

- **Display the donor details of the IPv6 borrower interface**—The output for the `show interfaces` command now displays the donor details of the IPv6 borrower interface.

  [See show interfaces].

MPLS

- Starting with Junos Evolved Release 21.4R3 a CSPF LSP uses a new instance ID when attempting to re-signal a down LSP.
- When defining a constrained path LSP using more than one strict hop belonging to the egress node, the first strict hop must be set to match the IP address assigned to the egress node on the interface that receives the RSVP Path message. If the incoming RSVP Path message arrives on an interface with a different IP address the LSP is rejected.

Network Management and Monitoring

- **Changes to the NETCONF <edit-config> RPC response (ACX Series, PTX Series, and QFX Series)**—When the <edit-config> operation returns an error, the NETCONF server does not emit a <load-error-count> element in the RPC response. In earlier releases, the <edit-config> RPC response includes the <load-error-count> element when the operation fails.

OpenConfig

- OpenConfig container names for point-to-multipoint per interface ingress and egress sensors are modified for consistency from "signalling" to "signaling".

MPLS

- The MPLS EXP bits transmitted in self ping messages are set based on the DSCP/ToS setting of the corresponding IP packet.
- When defining a constrained path LSP using more than one strict hop belonging to the egress node, the first strict hop must be set to match the IP address assigned to the egress node on the interface that receives the RSVP Path message. If the incoming RSVP Path message arrives on an interface with a different IP address the LSP is rejected.

Routing Protocols

- When the krt-nexthop-ack statement is configured, the RPD waits for the next hop to get acknowledged by PFE before using it for a route. Currently, only BGP-labeled routes and RSVP routes support this statement. All other routes ignore this statement.

Network Management and Monitoring

Changes to the NETCONF <edit-config> RPC response (ACX Series, PTX Series, and QFX Series)—When the <edit-config>operation returns an error, the NETCONF server does not emit a <load-error-count> element in the RPC response. In earlier releases, the <edit-config> RPC response includes the <load-error-count> element when the operation fails.

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.

What's Changed in Release 21.4R2-S2

IN THIS SECTION

Network Management and Monitoring

- sFlow configuration is allowed only on et, xe, and ge interfaces in Junos OS Evolved based platforms. All other interfaces are blocked for configuring sFlow on Junos OS Evolved platforms. A cli error is thrown if sFlow is configured on any other interface other than et, xe or ge interface.

What's Changed in Release 21.4R2

IN THIS SECTION

Multicast

- Changes to `show mvpn c-multicast` and `show mvpn instance` outputs]-- The FwdNh output field displays the multicast tunnel (mt) interface in the case of Protocol Independent Multicast (PIM) tunnels.

  [See show mvpn c-multicast.]

Network Management and Monitoring

- 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.

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 21.4R1-S2

IN THIS SECTION

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.

What's Changed in Release 21.4R1-S1

IN THIS SECTION

User Interface and Configuration

- 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.

The max-cli-sessions is configured so you can control the memory usage for the CLI. You may set the max-cli-sessions per your requirement. However, if max-cli-sessions is not configured, there is no control on the number of CLIs getting invoked.

What's Changed in Release 21.4R1

IN THIS SECTION

Class of Service

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

EVPN

- **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.

- **Support for displaying SVLBNH information**— You can now view shared VXLAN load balancing next hop (SVLBNH) information when you display the VXLAN tunnel endpoint information for a specified ESI and routing instance by using show ethernet-switching vxlan-tunnel-end-point esi*esi-identifier* esi-identifier instance *instance* svlbnh command.

- **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.]

- **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.

- **Changes to the show evpn instance command**— The output for show evpn instance extensive has been modified. Information for bridge domains can now be view by using `show evpn instance bridge-domain` or the `show mac-vrf routing instance bridge-domains` commands.

- **Ethernet tag ID set to 0 for EVPN Type 6 and EVPN Type 7 routes**— For VLAN bundle and VLAN-based services, Junos OS now automatically sets the Ethernet tag ID (VLAN ID) to zero for EVPN Type 6 and EVPN Type 7 routes per RFC 7432. In earlier releases, Junos OS used the VXLAN Network Identifier (VNI) as the Ethernet tag ID.

  To interoperate with devices that uses the VNI as the Ethernet tag ID, `set routing-instances` *`routing-instance-name`* `protocols evpn smet-etag-carry-vid`.

- **Minimum auto-recovery time reduced for duplicate MAC address detection**— 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

- In Junos OS Release 21.4R1 and later, ssh is enabled by default on all the routers with VM host support.

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. Previously, the source and destination address pair had to be unique across all encapsulation type.

- **Enhancement to the show chassis pic command (Junos OS Evolved)**— 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.

Junos OS API and Scripting

- **Limits increased for the `max-datasize` statement (ACX Series, PTX Series, and QFX Series)**—The `max-datasize` statement's minimum configurable value is increased from 23,068,672 bytes (22 MB) to 268,435,456 bytes (256 MB), and the maximum configurable value is increased from 1,073,741,824 (1 GB) to 2,147,483,648 (2 GB) for all script types. Furthermore, if you do not configure the `max-datasize` statement for a given script type, the default maximum memory allocated to the data segment portion of a script is increased to 1024 MB. Higher limits ensure that the device allocates a sufficient amount of memory to run the affected scripts.

  [See max-datasize.]

- **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 cli` 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

- **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).]

- **The configuration accepts only defined identity values for nodes of type identityref in YANG data models (ACX Series, PTX Series, and QFX Series)**—If you configure a statement that has type identityref in the corresponding YANG data model, the device accepts only defined identity values (as defined by an identity statement) as valid input. In earlier releases, the device also accepts values that are not defined identity values.

- **Changes in contextEngineID for SNMPv3 INFORMS (ACX Series and PTX SeriesEX 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..]

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

  [See show snmp mib..]

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

Known Limitations

There are no known limitations in hardware or software in Junos OS Evolved Release 21.4R3 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.

Open Issues

IN THIS SECTION

Learn about open issues in Junos OS Evolved Release 21.4R3 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.

EVPN

- On enabling EVPN VXLAN in a Junos OS Evolved system, a default route in primary instance pointing to management interface might result in anomalies in Junos OS Evolved database. PR1622035
- On performing GRES on ACX7509 platform with EVPN services, some logical interfaces are missing. Physical interfaces come up post reboot.PR1646722

General Routing

- ACX7509: Some of the interfaces from 16x100G and 20XSFP56 do not go down after evo-pfemand restarts. PR1592388
- The picd might generate a core file if an FPC is switched off and restarted with a scale configuration, a route, or a MAC entry. Picd comes up automatically and user intervention is not required. PR1602352
- The command `show system processes extensive` shows high short term CPU utilization. Values can range from 50 percent or higher for evo-pfemand. This is a single CPU view. As the ACX7509 system is a multi-core CPU, this has no impact on performance. PR1603899
- Interfaces map to the same Ethernet PHY flap when you modify any one of the interfaces speed. For example, when you remove speed (10g) on port 5 and then apply the same speed on the 20xsfp56 card, the interface 0-7 flaps. There can be a combination of speed as initial configuration. However, a link flap is observed within the ports of the port groups if the speeds of any port are reconfigured to other speeds. To avoid such a situation all the ports of the port group can have single-speed or do not reconfigure the speed within the port group. PR1608223
- In ACX7509, after multiple FPCs go online or offline, FPCs move to fault state. PR1616227
- A major alarm is reported for a fully populated dual Routing Engine or dual FEB system in Junos OS Evolved Release 21.4R1. A fully redundant (dual Routing Engine or dual FEB) ACX7509 feature is not available in Junos OS Evolved Release 21.4. This alarm can be ignored for the backup Routing Engine or FEB. PR1622133
- After restarting the picd or rpd agent application, multiple object-info anomalies for evo-pfemand are seen. PR1628843
- In ACX7509 and in scaled setup if you restart FPC, the FPC gets stuck after ungraceful FPC OIR. PR1633117
- In ACX7509, on multiple FPC restarts, links do not come up with FEC errors. PR1639666

- On Junos OS Evolved devices with EVPN-VXLAN, if there's a default route in primary instance pointing to management interface, you need to enable a policy to prevent it from being used for VXLAN resolution when there is any churn in the IP underlay.PR1657222
- In high DHCP traffic scenario, the jdhcpd process might get stuck at 99 percent if you enable traceoptions for DHCP that lead to network outage for the DHCP clients. PR1658087

Platform and Infrastructure

- On Junos OS platforms with MPC10, MPC11, and MPC LC-9600 linecards and all Junos OS Evolved platforms configured with TWAMP. MPC10 or MPC11 linecard might crash when the TWAMP client tries to create a session with the TWAMP server. PR1667716
- As a result of change in design, time issues upon installing ECMP nexthop in Junos OS Release 21.4R3 were seen. In certain scenarios, if there are multiple scale configurations seen with Unilist next hop indices with aggregated Ethernet logical interfaces, then for some of the next hops, hardware programming might fail. Therefore, programming of all routes pointing to the Unilist next hop will also fail. Similar issue has been identified and fixed in the PR1637301 with certain design changes. PR1677123 and PR1677855

User Interface and Configuration

- On Junos OS Evolved platforms, when `vlan-bridge` and corresponding logical interface is configured, a link is created between them. When you delete the logical interface using the load-override method, you won't be able to back up the link information in the system. When you recreate the same logical interface, the link creation might not happen. Delete the logical interface and recreate the same using load-update to recover from the issue.PR1647853

Resolved Issues

IN THIS SECTION

Learn about the issues fixed in these 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: 21.4R3

IN THIS SECTION

Class of Service (CoS)

- When a fixed classifier is detached, all default classifiers must be attached again. PR1649163

EVPN

- VxLAN encapsulation might fail to forward traffic to remote devices. PR1639204

General Routing

- Traffic loss is seen after VRRP primary role switchover. PR1633986
- We observe hardware core file at **HwdAppStopObserver** after upgrading to Junos OS Evolved Release 21.4R1.13. PR1636243
- The rpd-agent process might crash with a high scale of member nexthops. PR1640224
- On ACX7100 and ACX7509 platforms, a few control packets get forwarded on ERPS discarding port, leading to traffic loop. PR1641454
- Non-standard optics generates pcid core file. PR1649925

- On ACX7100 and ACX7509 OAM link fault management (LFM) discovery state is is not correct. Discovery state is either active, send, local, or fault. PR1651580

Resolved Issues: 21.4R2

IN THIS SECTION

- [vrrp] [vrrp_evo] ptx10004 : :: EVO:JDI_FT_REGRESSION: Bowmore :: Traffic loss is seen after VRRP Mastership switch on 21.4 PR1633986
- TCAM field group entry shuffle is not traffic safe PR1650266

Resolved Issues: 21.4R1

IN THIS SECTION

General Routing

- Egress IP MTU exception and fragmentation are not supported. PR1558327
- High CPU seen mostly with systemd with 4000 mac-vrf instances activate or deactivate. PR1581283
- PICD restart or crash might result in junk statistics for carrier transition. PR1594253
- Default CoS profiles applied to Layer 2 VPN and Layer 2 circuit logical interfaces are not shown in the output of `run show class-of-service-interface` *IF*. PR1596342
- Few label switched interfaces (LSI) MACs do not get properly learnt in the software with 8000 VPLS instance scale. PR1597125

- In scaled scenarios (4k BDs, IRBs), with restart of l2ald and pfe daemons, arpd and ndp daemon crash is observed and it recovers by itself and no functionality impact is seen. PR1598217
- The egress access control list (ACL) actions are skipped for Broadcast, Unknown Unicast, and Multicast (BUM) traffic and does not hit. PR1598489
- The Address Resolution Protocols (ARPs) might not be resolved on the integrated routing and bridging (IRB) interface which is replaced by another IRB interface. PR1600209
- For ACX7100-32C and ACX7100-48L routers, the **Voltage Threshold Crossed** alarm might be observed sometimes. PR1601493
- Traffic loss might be observed when evo-pfemand restarts. PR1608004
- Default dscp-ipv6-compatibility classification does not work when deactivating and then activating dscp-ipv6 classification scenario. PR1614249
- PCI device missing FPC[0] FPC supercon FPGA alarms are observed. PR1615519
- On performing `request system snapshot`, the snapshot message is not captured in the /etc/motd file. PR1618946
- On ACX7100-32C and ACX7100-48L, the `show system firmware` command some times might show current firmware version for FPC 0 as blank. PR1618949

Infrastructure

- Memory leak is observed in packet send path. PR1620610
- Lookups command might not work. PR1608401

User Interface and Configuration

- The `file copy` command does not accept HTTPS URLs. PR1596881
- The file copy failure is seen via netconf or operation script. PR1597550

Junos OS Evolved Release Notes for PTX10001-36MR, PTX10003, PTX10004, PTX10008, and PTX10016 Devices

IN THIS SECTION

These release notes accompany Junos OS Evolved Release 21.4R3 for PTX10001-36MR, PTX10003, PTX10004, PTX10008, and PTX10016 Packet Transport Routers. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

IN THIS SECTION

Learn about new features introduced in this release for PTX Series routers.

What's New in 21.4R3

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.4R3 for PTX Series switches.

What's New in 21.4R2

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.4R2 for PTX Series routers.

What's New in 21.4R1

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 21.4R1, click the Group by Release link. You can collapse and expand the list as needed.

- PTX10001-36MR
- PTX10003
- PTX10004
- PTX10008
- PTX10016

What's Changed

IN THIS SECTION

Learn about what changed in these releases for PTX Series routers.

What's Changed in Release 21.4R3-S4

IN THIS SECTION

Junos XML API and Scripting

- **Ability to restart restart daemonized applications**—Use the `request extension-service restart-daemonize-app` *`application-name`* command to restart a daemonized application running on a Junos device. Restarting the application can assist you with debugging and troubleshooting.

  [See request extension-service restart-daemonize-app.]

Network Management and Monitoring

- **`operator` login class is restricted from viewing NETCONF trace files that are `no-world-readable` (ACX Series, PTX Series, and QFX Series)**—When you configure NETCONF tracing options at the `[edit system services netconf traceoptions]` hierarchy level and you restrict file access to the file owner by setting or omitting the `no-world-readable` statement (the default), users assigned to the `operator` login class do not have permissions to view the trace file.

What's Changed in Release 21.4R3-S3

IN THIS SECTION

Juniper Extension toolkit

- Ability to commit `extension-service file` configuration when application file is unavailable]--When you set the `optional` option at the `[edit system extension extension-service application file` *`file-name`*`]`

hierarchy level, the operating system can commit the configuration even if the file is not available at the **/var/db/scripts/jet** file path.

What's Changed in Release 21.4R3

IN THIS SECTION

Class of Service (CoS)

- For PTX Series devices running Junos OS Evolved, software priority "medium-low" maps to hardware priority "medium" for normal scheduling mode and "low" for strict priority scheduling mode.

General Routing

- Stateful port configuration for PTP over Ethernet and default profile is supported only on boundary clock mode and not on ordinary clock mode.
- **New ARP and NDP packet classification**—We've introduced two CP classes for ARP and NDP packets received over VTEP interface. When your device identifies a packet as ARP or NDP, it performs an ingress port check which verifies whether the VTEP interface receives these packets. If VTEP interface receives the packet, datapath re-writes the CP class to the newly defined values. Based on this new CP class, the system performs the remaining packet processing and forwards the packets toward the host path. The system adds a separate DDoS policer to this ARP traffic, which ensures that the ARP traffic is not triggering underlay ARP DDoS violation.
- **Change in the `help syslog PFE` command output**—In Junos OS Evolved, the output for help syslog PFE command is fixed to be consistent with Junos OS output on PTX10008 device. ERRMSG tags in Junos OS Evolved are named as SFLOWD_ whereas in Junos they are named as PFE_SFLOW_.

Interfaces and Chassis

- **Change in unnumbered-address support for GRE tunnel**—Starting in Junos OS Release 24.4R1, there is a behavioural change in unnumbered-address support for GRE tunnel with IPV6 family and display donor interface for both IPV4 and IPV6 families of GRE tunnel. You can view interface donor details under show interfaces hierarchy level.

  See [show interfaces.]

- **Display the donor details of the IPv6 borrower interface**—The output for the `show interfaces` command now displays the donor details of the IPv6 borrower interface.

  [See show interfaces].

- **JNP10K-PWR-DC2 power supplies installed in PTX10008 and PTX10016 routers display as online when the power supplies are switched off**— JNP10K-PWR-DC2 power supplies installed in PTX10008 and PTX10016 routers in which Junos OS Release 21.4R1 or Junos OS Evolved Release 21.4R1 is installed display as online in the output of the command `show chassis environment psm` when the input power feeds are connected, but the power switch on the power supplies are switched off.

MPLS

- A CSPF LSP uses a new instance ID when attempting to re-signal a down LSP.
- When defining a constrained path LSP using more than one strict hop belonging to the egress node, the first strict hop must be set to match the IP address assigned to the egress node on the interface that receives the RSVP Path message. If the incoming RSVP Path message arrives on an interface with a different IP address the LSP is rejected.
- The MPLS EXP bits transmitted in self ping messages are set based on the DSCP/ToS setting of the corresponding IP packet.

Network Management and Monitoring

- **Changes to the NETCONF `<edit-config>` RPC response**—When the `<edit-config>` operation returns an error, the NETCONF server does not emit a `<load-error-count>` element in the RPC response. In earlier releases, the `<edit-config>` RPC response includes the `<load-error-count>` element when the operation fails.
- sFlow configuration is allowed only on et, xe, and ge interfaces in Junos OS Evolved based platforms. All other interfaces are blocked for configuring sFlow on Junos OS Evolved platforms. A cli error is thrown if sFlow is configured on any other interface other than et, xe or ge interface.

OpenConfig

- OpenConfig container names for Point-to-Multipoint per interface ingress and egress sensors are modified for consistency from "signalling" to "signaling".

Routing Protocols

- When the `krt-nexthop-ack` statement is configured, the RPD waits for the next hop to get acknowledged by PFE before using it for a route. Currently, only BGP-labeled routes and RSVP routes support this statement. All other routes ignore this statement.

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.
- **Support for temperature sensor (PTX10001-36MR)**—We support the temperature sensor statement at the **edit chassis cb** hierarchy level. You can use the temperature sensor statement to increase the fan speed and customize the temperature threshold. We recommend certain values for ZR and ZR-M modules to work which helps the temperature to remain within the thresholds.

  [See temperature-sensor.]

What's Changed in Release 21.4R2-S2

IN THIS SECTION

Network Management and Monitoring

- sFlow configuration is allowed only on et, xe, and ge interfaces in Junos OS Evolved based platforms. All other interfaces are blocked for configuring sFlow on Junos OS Evolved platforms. A cli error is thrown if sFlow is configured on any other interface other than et, xe or ge interface.

What's Changed in Release 21.4R2

IN THIS SECTION

General Routing

- **JNP10K-PWR-DC2 power supplies installed in PTX10008 and PTX10016 routers display as online when the power supplies are switched off**— JNP10K-PWR-DC2 power supplies installed in PTX10008 and PTX10016 routers in which Junos OS Release 21.4R1 or Junos OS Evolved Release 21.4R1 is installed display as online in the output of the command `show chassis environment psm` when the input power feeds are connected, but the power switch on the power supplies are switched off.
- **JNP10K-PWR-DC2 power supply does not support 5500 W or 2750 W if the power supply temperature increases above 60 degrees Celsius (PTX10008 and PTX10016)**— If the power supply temperature increases above 60 degrees Celsius, the maximum power capacity of JNP10K-PWR-DC2 power supply installed in PTX10008 or PTX10016 routers reduces from 5500 W to 5000 W if four feeds are connected and from 2750 W to 2500 W if two feeds are connected. If there is no redundant power supply installed in the router, the router would shut down.

Multicast

- Changes to `show mvpn c-multicast` and `show mvpn instance` outputs]-- The FwdNh output field displays the multicast tunnel (mt) interface in the case of Protocol Independent Multicast (PIM) tunnels.

  [See show mvpn c-multicast.]

Network Management and Monitoring

- 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.

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 21.4R1-S2

IN THIS SECTION

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.

What's Changed in Release 21.4R1-S1

IN THIS SECTION

General Routing

- JNP10K-PWR-DC2 power supplies installed in PTX10008 and PTX10016 routers display as online when the power supplies are switched off - JNP10K-PWR-DC2 power supplies installed in PTX10008 and PTX10016 routers in which Junos OS Evolved Release 21.4R1.13-EVO is installed

display as online in the output of the command `show chassis environment psm` when the input power feeds are connected, but the power switch on the power supplies are switched off.

User Interface and Configuration

- 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.

  The `max-cli-sessions` is configured so you can control the memory usage for the CLI. You may set the `max-cli-sessions` per your requirement. However, if `max-cli-sessions` is not configured, there is no control on the number of CLIs getting invoked.

What's Changed in Release 21.4R1

IN THIS SECTION

Class of Service

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

EVPN

- **Output for the show Ethernet switching flood extensive command**—The output for the `show ethernet-switching flood extensive` command 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 the `show ethernet-switching flood extensive` command would misidentify the next-hop type as composite.

- **Support for displaying SVLBNH information**— You can now view shared VXLAN load balancing next hop (SVLBNH) information when you display the VXLAN tunnel endpoint information for a specified ESI and routing instance by using `show ethernet-switching vxlan-tunnel-end-point esi`*`esi-identifier`* `esi-identifier instance` *`instance`* `svlbnh` command.

- **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.]

- **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.

- **Changes to the show evpn instance command**—The output for show evpn instance extensive has been modified. Information for bridge domains can now be view by using `show evpn instance bridge-domain` or the `show mac-vrf routing instance bridge-domains` commands.

- **Ethernet tag ID set to 0 for EVPN Type 6 and EVPN Type 7 routes**— For VLAN bundle and VLAN-based services, Junos OS now automatically sets the Ethernet tag ID (VLAN ID) to zero for EVPN Type 6 and EVPN Type 7 routes per RFC 7432. In earlier releases, Junos OS used the VXLAN Network Identifier (VNI) as the Ethernet tag ID.

  To interoperate with devices that uses the VNI as the Ethernet tag ID, `set routing-instances` *`routing-instance-name`* `protocols evpn smet-etag-carry-vid`.

- **Minimum auto-recovery time reduced for duplicate MAC address detection**— 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

- In Junos OS Release 21.4R1 and later, ssh is enabled by default on all the routers with VM host support.
- **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..]
- **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.]
- **A major alarm is raised (PTX10008)**—A major alarm is raised when a fan tray controller is removed from the chassis.
- **SNMP MIB support for field-replaceable unit (FRU) LEDs (PTX10008)**—SNMP MIB object jnxLEDEntry now indicates multiple LED indexes and color values for FRUs.

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. Previously, the source and destination address pair had to be unique across all encapsulation type.
- **Enhancement to snmp mib command behavior (PTX10008)**—Starting in Junos OS Evolved, when you execute show snmp mib walk decimal command, the output parameter jnxRedundancySwitchoverReason is not working as expected, which always show the value 0 instead of expected values. Now, jnxRedundancySwitchoverReason output parameter is corrected to expected behavior with the following expected values. `jnxRedundancySwitchoverReason OBJECT-TYPE SYNTAX INTEGER href=' other(1), – others neverSwitched(2), – never switched userSwitched(3), – user-initiated switchover autoSwitched(4) – automatic switchover ' format="html" scope="external">`

  [See show snmp mib.]
- **Enhancement to the show chassis pic command (Junos OS Evolved)**— 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.

Junos OS API and Scripting

- **Limits increased for the `max-datasize` statement (ACX Series, PTX Series, and QFX Series)**—The `max-datasize` statement's minimum configurable value is increased from 23,068,672 bytes (22 MB) to 268,435,456 bytes (256 MB), and the maximum configurable value is increased from 1,073,741,824 (1 GB) to 2,147,483,648 (2 GB) for all script types. Furthermore, if you do not configure the `max-datasize` statement for a given script type, the default maximum memory allocated to the data segment portion of a script is increased to 1024 MB. Higher limits ensure that the device allocates a sufficient amount of memory to run the affected scripts.

  [See max-datasize.]

- **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

- **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

- **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.

- **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.]

- **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).]

- **The configuration accepts only defined identity values for nodes of type identityref in YANG data models (ACX Series, PTX Series, and QFX Series)**—If you configure a statement that has type identityref in the corresponding YANG data model, the device accepts only defined identity values (as defined by an identity statement) as valid input. In earlier releases, the device also accepts values that are not defined identity values.

- **Changes in contextEngineID for SNMPv3 INFORMS (ACX Series and PTX SeriesEX 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..]

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

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

IN THIS SECTION

Learn about known limitations in Junos OS Evolved Release 21.4R3 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

- During boot up PTP FPGA link resets which toggles the link, Hence the message observed in the console. PR1572061

- Whenever interface deactivate HW counters for SR-TE path related get deleted, re-adding these path on enabling the interface can cause loss of counter. Same behavior is there while deleting one of the SR-TE paths in a given SR-TE policy. PR1630517
- Supported matches (fltTypes) work only for one filter. One might not select and combine them across two different filters.PR1674004
- In Junos OS Evolved, when any configuration is committed and `commit complete` is seen on the CLI, the system operational state takes a little extra time to reflect the committed configuration. This extra time is taken by Junos OS Evolved configd daemon to process the commit. The extra time taken is proportional to the size of the committed configuration. In the PR scenario, the Routing Engine switchover is triggered immediately after the `commit complete`. The immediate Routing Engine switchover interrupts the commit processing, which is still under progress by configd to publish the objects to Junos OS Evolved DDS (Distributed Data Store). This results in an inconsistent Junos OS Evolved operational state which is out-of-sync with the committed configuration. PR1680192
- While config commit going through, if switchover happens, both RES are out of sync. PR1680223

Network Management and Monitoring

- Junos OS Evolved has a feature to block or deny all hidden commands. Users can get this feature by configuring `set system no-hidden-commands`. However when this is configured and committed Junos OS blocks or denies new netconf or junoscript XML sessions. As a workaround users can delete `system no-hidden-commands` configuration statement and start new netconf or junoscript sessions. PR1590350

Routing Policy and Firewall Filters

- The IPv4 unsupported filter match fragment-flags reserved must not be used, as it matches don't fragment traffic pattern as well.PR1676517

Open Issues

IN THIS SECTION

Learn about open issues in Junos OS Evolved Release 21.4R3 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

- When an aggregated Ethernet link is brought down, a transient error message: **[Error] Nexthop: EalNhHandler: failed to add Nh: xxxx, type: composite, as pil add failed** might be seen. There is no functional impact due to these errors. PR1570710
- A vulnerability in the handling of exceptional conditions in Juniper Networks Junos OS Evolved allows an attacker to send specially crafted packets to the device, causing the Advanced Forwarding Toolkit manager (evo-aftmand-bt or evo-aftmand-zx) process to crash and restart, impacting all traffic going through the FPC, resulting in a Denial of Service (DoS). Please refer to https://kb.juniper.net/JSA11188 for more information. PR1572969
- For PTX10001-36MR, the software driver reads the voltage threshold erroneously causing the **Host 0 Voltage Threshold Crossed** alarm to be present on the device. PR1592258
- Several warning messages show up as rpd restarts while performing GRES on a system running Junos oS Evolved. PR1612487
- On Junos OS Evolved PTX Series platforms, next-header match in IPv6 firewall filter does not work as expected. Next-header matches the payload-protocol (last-header) on Junos OS Evolved PTX Series platform. PR1645401 PR1648864.
- PTX10001-36MR:IS-IS does not form adjacency due to 802.1Q tag included in packets through EVPN-VXLAN.PR1651461

- Multiple rewrite rules aggregated Ethernet: `mpls-any` and `mpls-inet-both-non-vpn` are not supported on PTX Series running BT ASIC. The order of applying the Rewrite rules is not correct. The non-VPN rewrite rule gets effect for the VPN traffic - See Rewriting MPLS and IPv4 Packet Headers.PR1655653
- On all Junos OS Evolved platforms, an error log from rpd or kernel corresponding to **JSR backup registration failed** might be observed during extreme scenarios of rpd restart.PR1660685
- Sometimes BGP and RSVP sessions remain down after quickly disabling and enabling arpd process. Whenever customer encounters such scenarios, the system can be recovered from erroneous state by executing `restart routing gracefully` in CLI.PR1665362
- On adding filter to loopback interface, at times wrong count is seen for firewall policer. The workaround is to `clear firewall all`.PR1664600
- On all Junos OS Evolved platforms, the process fabspoked-pfe crash might be observed while executing CLI commands for fabric statistics. Executing CLI commands specific to the status related to FBC and SIBs hits this issue.PR1669435
- On restarting app msvscd, data does not get exported through UDP query.PR1670826
- During GRES, out of order messages are seen as CNH delete comes first before the route change of MPLS route pointing to it. It is transient and CNh delete happens later when route change message arrives. PR1674101

Juniper Extension Toolkit (JET)

- In Junos OS Evolved, there are two different gRPC Python files for each JAPI file. The names of the files are ***pb2_grpc.py** and ***pb2.py**. The stub creation functions are present in ***pb2_grpc.py**. PR1580789
- Until Junos OS Evolved 21.3, release mgd is 32-bit binary. libsi can only be linked with 64-bit binaries. To access data or WAN ports in Junos OS Evolved, we need libsi to be linked with the binary. By default, the shell on the Junos OS Evolved device includes libsi, but it is not available to CLI commands as CLI makes mgd invoke cscript to run a Python script through CLI. PR1603437

MPLS

- In Junos OS Evolved platforms, LDP session `authentication key-chain` configuration done based on session remote-id on initiator stops from session establishment even though the responder's `authentication key-chain` is configured for its remote-id. PR1592431
- Traceroute in MPLS OAM on SR over IPv6 might fail in ECMP case if Junos OS Evolved box is in topology. This is because linux kernel in Junos OS Evolved 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 NH details. The Packet Forwarding Engine however takes the flow label into account and calculates the NH details. This difference in calculation of NH details leads to a mismatch in the path the packet takes to the destination and can cause traceroute to fail. PR1618406
- On all Junos OS Evolved platforms, the rpd core file might be seen in multi-instance RSVP scenario when a configuration file that has many RSVPs enabled routing-instances get overridden by another configuration file.PR1641045
- The rpd crashes during `restart routing` if LDP periodic statistics collection is enabled.PR1666568

Network Management and Monitoring

- When `maximum-password-length` is configured and the user tries to configure password and the password length exceeds configured `maximum-password-length`, error is thrown, along with error **<ok/>** tag is also emitted. (Ideally **<ok/>** tag must not be emitted in an error scenario.) The configuration does not get committed. PR1585855
- Junos OS Evolved has a feature to block or deny all hidden commands. Users can get this feature by configuring `set system no-hidden-commands`. However when this is configured and committed Junos OS Evolved blocks or denies new netconf or junoscript XML sessions. As a workaround users can delete `system no-hidden-commands` configuration statement and start the new netconf or junoscript sessions. PR1590350
- The mgd can crash when an invalid value is configured for identityref type leafs or leaf-lists while configuring Openconfig or any other third-party YANG. The problem happens with json and xml loads. PR1615773

Routing Policy and Firewall Filters

- On Junos OS Evolved platforms for the 20.4R3 release, the unsupported configuration of BGP flow spec `interface-group exclude` might lead to some errors and Packet Forwarding Engine corruption which does not permit filter bind. PR1639391

Routing Protocols

- The following scenario happens when we enable IS-IS authentication key-chain having multiple keys between routers. The IS-IS adjacency is up because both routers have the same key active. When we manually change the system time in such a way that routers have different keys active in the key chain, the IS-IS adjacency must go down. However, that is not happening. PR1572441

User Interface and Configuration

- Passwordless authentication successful for configured user even after deleting ssh public key details from user login hierarchy. PR1625032
- Configuration archival (transfer-on-commit) over FTP protocol does not work in Junos OS Evolved. The reason it does not work is, internally a FreeBSD utility (fetch) is used to transfer the archived file. Junos OS Evolved is based on Linux and the fix or solution is to use a utility (cURL here) that is present in Linux. Example config:

```
user@host# show system archival
configuration {
    transfer-on-commit;
    archive-sites {
        "
ftp://user:host@sgrpca://var/tmp/"

 password "$9$rtneWX7NbY4J-VJUi.zFu0B"; ## SECRET-DATA
    }
}
```

PR1625937

- After a configuration change, the `configd` holds on to the shared pointer in DDS preventing complete cleanup of the deleted Junos OS Evolved object. There is no functional impact.PR1641960

Resolved Issues

IN THIS SECTION

Learn about the issues fixed in these releases 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.

Resolved Issues: 21.4R3

IN THIS SECTION

General Routing

- PTX10003 Layer 2: In scaled Layer 2 network, error logs are printed for MAC Creation. MAC learning works as expected. PR1491933
- The cosd core file might be observed after Routing Engine switchover. PR1620758
- [fabric] [generic_evo] : [[Junos OS Evolved-PTX10008] : PDT: ERB : VxLAN: Aggregated Ethernet lacp member link stuck in detached state on PTX10008. PR1633849

- Traffic loss is seen after VRRP primary role switchover. PR1633986
- MTS-MCAST: [PTX10003] Auto RP base verification fails with multiple RPs with same group range. PR1634982
- NPU util sensor to include FLT consumption for ZX and BT based PTX Series devices. PR1638487
- Multicast packet drop might be seen when the outgoing interface flaps. PR1640294
- [Junos Telemetry Interface] Verification of DB data collection fails after executing the Junos Telemetry Interface decoder. PR1640442
- [Telemetry] Filtering option for components name (CHASSIS, SIB) fails with /components/component sensor subscription. PR1641949
- Junos OS Evolved: In an MPLS scenario upon receipt of a specific IPv6 packet an FPC crashes (CVE-2022-22214). PR1642721
- The interfaces might remain down and loopback wedge error could be seen. PR1645431
- PTX10003 is unable to forward traffic after the Layer 2 topology change. PR1647560
- LLDP fails on the management interface of Junos OS Evolved platforms. PR1647923
- High inter-packet delay and throughput performance degrade for Packet Forwarding Engine sensors. PR1648133
- Junos OS Evolved platforms might throw error logs: **[Error] Jexpr: getDdosTableEntry unsupported proto:0x0**. PR1649034
- Firewall counters might not increment for a longer time. PR1649324
- PTX10008 Junos OS Evolved SyncE clock `hold-off-time` configuration does not work due to incorrectly computed timer value. PR1649358
- PTX Series platforms running Junos Evolved image might experience FPC reload after the device is reboots. PR1649612
- The BFD session might flap in some scaled system with churn. PR1651473
- On PTX platforms, the ECN (Explicit Congest Notification) bits do not get set under congestion situation. PR1651830
- An error might be seen when the member link on an aggregated Ethernet bundle is deleted. PR1651932
- The rpd agent crash might be triggered after the interface flap for the backup Routing Engine. PR1652595

- P2MP traffic loss might be seen when link protected LSP reverts to the primary path. PR1652651
- DCF8: PTX10008: EVPN VXLAN intra-VLAN known unicast traffic floods due to MAC installation failure on Packet Forwarding Engine.PR1652876
- PTX10008 EVO : `show snmp mib get` CLI returns incorrect value on jnxLED MIB OIDs. PR1654455
- When disabling or removing warm standby configuration and enabling or adding NSR, split these into two separate configuration commits. PR1655249
- pkid core file seen and can see interfaces lost. PR1655949
- Wrong transmit hardware priority for CLI `priority medium-low`. PR1656837
- The evo-aftmand-bt crash might be observed on Junos OS Evolved platforms. PR1657532
- PTX10008 Junos OS Evolved : Family MPLS firewall filter does not work on ingress. PR1657584
- The rpd might fail on backup Routing Engine on Junos OS Evolved platforms. PR1657797
- The packetio might generate core file when router reboot or FPC reboot is triggered. PR1658839
- The hwdre core file might be generated after Routing Engine switchover. PR1659377
- The BGP session might on flap on Junos OS Evolved platforms. PR1660805
- Channelized interface might go down if low-light-alarm or low-light-warning is enabled. PR1661215
- The network-instance name for streaming telemetry must be changed from default to DEFAULT to align with CONFIG stanza. PR1662999
- PTX10003 load balance `v4_dscp` and `v6_dscp` is enabled by default. PR1665131
- PTX10000s running Junos Evolved software - SNMP GET does not return the expected value for FPC MIBs. PR1668285
- PTX10008 EVO : CoS generates core files due to invalid snmp index handling missing in iterator. PR1668861
- PTX10008 : `show snmp mib walk` CLI fails at jnxLED MIB if SNMP mib walk is performed with multiple parallel sessions. PR1669624
- Multicast traffic drop might be seen on specific PTX10000 platforms. PR1669740
- The rpd-agent process might restart post primary role switchover PR1669767
- PTX10004 or PTX10008 or PTX10016 Junos OS Evolved : transmit-rate is not achieved on queue and traffic is dropped in oversubscription mode. PR1670859
- Default DDOS rate limit for LLDP packets is 20K PPS. PR1671196

- Junos OS Evolved NSR: Do not send unreplicate message to backup during switchover. PR1671458
- JDI-RCT:EVO:PTX10004:PTX10008:PTX10016 - evo-aftmand-bt.fpc core file might be seen. PR1672512
- JDI-REG: [Junos OS Evolved REGRESSION] : [PTX10003] : evo-aftmand-zx.re core file is seen **@JexprStatsGrpcCntrFarm::scan,JexprStatsOverflowMgrInst::scan,JexprStatsOverflowManager::scan, JexprStatsOverflowManager::ovfPeriodic**. PR1674724
- PTX10004 or PTX10008 PTX10016 Junos OS Evolved : LSP Link-protection takes longer time with fix of PR1662467. PR1675282
- PTX10003 `fragment-offset-except firewall` match condition does not work for offset-1 value.PR1675482
- PTX10004 or PTX10008 or PTX10016 Junos OS Evolved : jnxOperatingDRAMSize value displayed in Kilo bytes instead of Bytes. PR1675811
- PTX10000 EVO ZTP : HTTP GET fails in downloading the configuration file. PR1677231

Class of Service (CoS)

- `show class-of-service interface` might not show the classifier bind information on a physical interface with only Inet or Inet6 (without family MPLS or not with any rewrite rules).PR1652342

Infrastructure

- Configuring family MTU explicitly on an interface might cause host traffic to drop. PR1654140
- Traffic drop might be seen due to slow TCP reestablishment after a topology change. PR1661210
- On Junos Evolved platforms, no connectivity between the default routing instance and other routing instance might happen. PR1671024

Interfaces and Chassis

- [PTX10003] SSD DGM28-B56D81BCBQ || RE 0 SSD Primary minimum supported firmware version mismatch. PR1654762

Network Management and Monitoring

- The SNMP counters might get stuck. PR1663713

Routing Policy and Firewall Filters

- The firewalld process might crash when nested filters are used as input list. PR1651411

User Interface and Configuration

- Observing configd object-info anomalies at net::juniper :: config :: interface :: IFDCEtherOptionsCommon. PR1643192
- The ddos-protocol-group might not be listed in ddos-protection protocols violations display xml. PR1647046
- CCL:NGPR: configd generates core file during configd app restart test. PR1658688
- Junos OS Evolved: syslog regex matching backslash and punctuations unable to filter output.PR1663346

Resolved Issues: 21.4R2

IN THIS SECTION

General Routing

- Junos OS Evolved PTX10008, CB 1 becomes **Fault Standby** after `request node power-off re1` PR1581476
- Filter with forwarding-class and destination-class combined might not work. PR1595788
- Layer 2 host injected packets might not go out of IRB interface. PR1602131
- Fix for `show system errors fru detail` does not displaying `reset-pfe` as the cmerror configured action. PR1602726

- Master RE0 reloaded unexpectedly and new-master RE1 does not bring up IS-IS or LDP adjacencies. PR1616114
- The Strict-Priority-Scheduler (SPS) might not work accurately across port queues. PR1616772
- Match on IPv6-prefix for prefix lengths 64 bits does not work. Prefix-lengths of [128-65] works fine. PR1618211
- Junos OS Evolved PTX: **Output bytes** and **Output packets** counter values under transit statistics on `show interfaces extensive` CLI decreases along with sending protocol control packets. PR1618587
- Wrong TX rate for queues configured `mix of high-low tx rates without excess bandwidth` on 10G interface might not work.PR1620284
- [FFT + ISF] Filter: Firewall Counter does not hit with a specific configuration sequence [Commit the FFT + ISF flag before FW spec]. PR1620410
- Incorrect sensor modeling or mapping in the telemetry streaming scenario. PR1621037
- Broadcast, Unknown Unicast, and Multicast (BUM) traffic might be dropped on ESI peer in a VLAN aware service. PR1624677
- JNP10008-SF3, SIB-JNP10004 and JNP10016-SF3 memory errors handling improvement. PR1625305
- The primary transfer might not be triggered on each rpd crashes if switchover-on-routing-crash is configured. PR1625834
- The primary kernel might get crash if NSR is enabled.PR1626040
- Add CLI Packet Forwarding Engine `show cda pipestats` to more releases for serviceability. PR1626687
- IP not-ECN-capable traffic is not RED-dropped in an ECN-enabled congested queue. PR1627496
- Transient JSR replication errors 113 / 115 seen on disabling or enabling OSPF. PR1627625
- PTX10008 Junos OS Evolved : license installation fails with **validation hook evaluation failed** commit error. PR1628733
- PTX Junos OS Evolved : DDoS filter does not classify OSPF packets as OSPF-Hello and OSPF-Data packet. PR1628889
- PTX Junos OS Evolved ddos-protection protocols group arp counters do not show correct values.PR1629097
- Configuration sync failure alarm. PR1629952
- Indirect next-hop (INH) Version ID higher than 255 might cause INH NH FRR session move to down state and drop transit traffic. PR1630215

- BFD session might flap continuously on Junos OS Evolved PTX Series with multicast enabled. PR1630797
- Junos OS Evolved:PTX10008:PCIe Bus Error associate to PTP FPGA device during PTX10016 chassis reboot. PR1631300
- PTX10008 Junos OS Evolved CFM: Transit Loopback(LB) ping or LinkTrace(LT) PDUs not forwarded transparently. PR1632255
- P2MP LSP ping and trace from bud-node might fail when the branch is on another Packet Forwarding Engine. PR1632385
- [fabric] [generic_evo] : [[Junos OS Evolved-PTX10008] : PDT: ERB : VXLAN: aggregated Ethernet lacp member link stuck in detached state on PTX10008.PR1633849
- On Junos OS Evolved PTX10001-36MR, PTX10004, PTX10008, or PTX10016, using CLI Packet Forwarding Engine `show cda qpoll` or get-state while a Packet Forwarding Engine is offline or off sets up evo-cda-bt to crash later, if those commands or get-state is used again when that Packet Forwarding Engine restarts. PR1633850
- Traffic impact might be seen when a firewall filter based policer for MPLS address family is configured on the device. PR1634644
- Label stack might be corrupted after Packet Forwarding Engine restart. PR1635130
- PTX10008 Junos OS Evolved : Frequent syslog **zephyr_clock_get_tod_ext_sync_sample(xxx): READ BT-X tod_sec: xxxxxxxxxx, tod_ns: xxxxxxxxx**PR1635771
- `request node halt` might cause cm-errors. PR1636271
- PTX10008 EVPN E-LAN: Ingress PE does not insert Sh label for BUM traffic received on local EP ESI interface, causing packet duplication on egress PE.PR1637703
- JTI UDP export support for /junos/system/cmerror/configuration and /junos/system/cmerror/counters does not work on chassis based systems like PTX10008/PTX10016. PR1638262
- NPU util sensor to include FLT consumption for ZX and BT based PTX Series devices. PR1638487
- There is a mismatch between user-configured wavelength and actually transmitted wavelength on 400G-ZR wavelength setting with 75GHz spacing. PR1638603
- PTX10008 Junos OS Evolved : `snmp mib get` on jnxLEDxxx generates general error with core file. PR1638768
- FPC start time is incorrect under `show chassis fpc details` CLI command. PR1641515
- [Telemetry] Filtering option for components name (CHASSIS, SIB) fails with /components/component sensor subscription. PR1641949

- The addition of new member to LAG might result in FPC crash. PR1643308
- [fabric] [Junos OS Evolved: PTX10008] : PDT: ERB : VXLAN : Type5 traffic drop for BGP prefix on PTX10008 as remote leaf. PR1644458
- On all Junos OS Evolved platforms, if `switchover-on-routing-crash` configuration statement is configured, the primary role transfer might not be triggered on each rpd crash (by issuing the CLI command `request system core-dump routing fatal` or rpd crashes occur automatically on primary Routing Engine), this might result in traffic loss. PR1645611
- High inter-packet delay and throughput performance degrade for Packet Forwarding Engine sensors. PR1648133
- Junos OS Evolved adding configuration `hash-key family inet layer-4` disables inet Hash-key Protocol. PR1648156
- Jexpr: getDdosTableEntry unsupported proto errors are observed while collecting debug collector logs. PR1649034
- [firewall] [filter_installation] Junos OS Evolved-PTX10004 :: Firewall counters do not increment for almost 4 minutes on adding new term to the existing filter using multiple commits.PR1649324
- PTX10008: Junos OS EVolved : SyncE clock `hold-off-time` configuration does not work due to incorrectly computed timer value. PR1649358
- An error might be seen when the member link on an aggregated Ethernet bundle is deleted. PR1651932
- P2MP traffic loss might be seen when link protected LSP reverts to the primary path. PR1652651
- DCF8: PTX10008: EVPN VXLAN intra-VLAN known unicast traffic flooded due to Mac installation failure on Packet Forwarding Engine. PR1652876
- PTX10008 Junos OS Evolved : `show snmp mib get` CLI returns incorrect value on jnxLED MIB OIDs. PR1654455
- Multicast traffic drop might be observed after performing Routing Engine switchover or rpd restart. PR1593810
- The inet6.0 routing table lookup might result in **NULL**. PR1630235

Infrastructure

- Junos OS Evolved: Specific packets reaching the Routing Engine lead to a counter overflow and eventually a crash (CVE-2022-22195). PR1607769
- Egress TCP RST might not have correctly populated DSCP field. PR1612208

- [bgp] [BGP_attributes] PTX10008 ::Backup Path is not found in ASBR6 FIB Table. PR1618916
- Device can panic with vmcore file in high memory pressure situations where kernel memory allocation fails. PR1646610
- PTX10003 is unable to forward traffic after the Layer 2 topology change. PR1647560

Interfaces and Chassis

- PTX10003 Evo-aftmand process sees memory increasing linerally over days. PR1615000
- snmp walk on jnxLEDTable is fails on PTX10003. PR1620398
- [PTX10003] SSD DGM28-B56D81BCBQ || RE 0 SSD Primary minimum supported firmware version mismatch. PR1654762

Network Management and Monitoring

- False traffic spikes seen SNMP graphs when ifHCOutOctets or ifHCInOctets are used. PR1635958
- Junos OS Evolved: A remote attacker might cause a CPU denial of service by sending genuine traffic to a device on a specific IPv4 port. (CVE-2022-22183) PR1636338

Routing Policy and Firewall Filters

- Services might not work after committing firewall filter counter configuration with similar name of two terms. PR1625168

User Interface and Configuration

- [interface] PTX10001-36MR :: configd publish deleted anomalies seen while running p2mp rsvp eoam test. PR1617667
- Junos OS Evolved: Addition or deletion of gRPC configuration can cause memory leak in EDO app. PR1619974
- CCL:NGPR: configd generates core file during configd app restart test. PR1658688

Resolved Issues: 21.4R1

IN THIS SECTION

Authentication and Access Control

- The ssh process crashes on Junos OS Evolved paltforms. PR1601150
- The root password might not be accepted under su on the Junos OS Evolved platforms. PR1607861

Class of Service (CoS)

- The MPLS fixed classifiers might not work on the Junos OS Evolved platforms. PR1616492

Flow-based and Packet-based Processing

- The msvcsd process might get crashed when youenable the `nexthop-learning` command with the jFlow service. PR1620569

General Routing

- New alarm is reported for three consecutive failures on a particular fan tray (this can be power or fan failure). PR1500920
- The device might run out of service post GRES or unified ISSU. PR1558958

- `request system zeroize` command does not delete snapshot images from the backup hard disk drive. PR1569294
- The static MACs configured over the aggregated Ethernet interface might not get programmed while forwarding after the FPC restarts. PR1581325
- Certain fields in the GNMI extension header and `show network-agent statistics` command display incorrect values if the input subscription path contains the `:` character. PR1581659
- Packet might be lost during global repair of FRR. PR1586122
- The `RPD_KRT_KERNEL_BAD_ROUTE` error message might be generated in certain scenarios when the rpd restarts or GRES when you enable NSR, which has no functional impact. PR1586466
- Removing SIB without switching it to the `Offline` mode might impact traffic. PR1586820
- Telemetry leaves `used-power` and `allocated-power` under the **/components** file do not display correct value. PR1587184
- On PTX10008 routers, the error message that gets generated when you issue the `request chassis cb slot 1 offline` command needs to be corrected before the node goes offline. PR1589433
- Duplicate Junos Telemetry Interface leaf `oper-status` tag for IFD index 16386 displays mismatched value. PR1592468
- The l2cpd-agent process might become unresponsive after starting the telemetry service. PR1592473
- After the Routing Engine switchover, the error message `JexprSlowCntrRead - Unable to get the plct Inst for pfeIdx: 255, User-type: OVFM_OFFCHIP_NEXTHOP_CNTR` gets generated. PR1593079
- The TCP connections to the telemetry server might be become unresponsive in the `CLOSE_WAIT` state. PR1593113
- The BFD session for MPLS LSP goes down after enabling ultimate-hop-popping. PR1594621
- PTX10008 routers:: Inconsistent component name for FPC CPU. PR1595109
- On PTX10008 routers, the `application error` alarms gets generated and the trace-writer process generates core file due to defunct rcp zombie. PR1595409
- Layer 2 VPN stops forwarding when you change the interface encapsulation to VLAN circuit cross-connect (VLAN CCC) from ethernet- circuit cross-connect (Ethernet CCC) and back. PR1595455
- Some TCP sessions might not be established after you issue the `request system snapshot` command. PR1595470
- [Error]Jexpr: cannot find ifToken for counterType:12. PR1597355

- The aftmand process might generate core file on Junos OS Evolved platforms. PR1597649
- On PTX10016 routers, the `Major Host # Ethernet Interface Link Down` false alarm gets generated. PR1597763
- On PTX10001-36MR routers, there is inconsistency in the platform name that gets used in multiple places, version, and snmp mibs. PR1597999
- Master-only IP address in the old primary Routing Engine (new backup) and the device become inaccessible after the Routing Engine switchover. PR1598173
- On PTX10008 routers, the BFD sessions do not go down after adding the input or output filter to block the BFD IPv4 or IPv6 packets. PR1599257
- On PTX10008 routers, the FTC status LED and SIB power LED are unlit or off. PR1600178
- The `config interface ip remove` command does not work correctly. PR1600932
- On PTX10008 routers, the `set chassis redundancy routing-engine 1 master` command does not change the default Routing Engine election priority. PR1601430
- After you delete the old VLAN and then add new VLAN, the lag interface is not learnt by the static VLAN. PR1601915
- On PTX10008 routers, the aftman process generates core files at `jexpr_if_logical_l2d_alloc` while you power off or on all the Packet Forwarding Engines across all FPCs. PR1602035
- On PTX10003 routers, the IRB ping fails after you power off or on the underlying Packet Forwarding Engine for the aggregated Ethernet child member. PR1602181
- On PTX10003 routers, the GRE keepalive packet with recursion control bit set get dropped. PR1602353
- On PTX10008 routers, powering off the Packet Forwarding Engine generates the `Jexpr: deleteFdbEntry: Null` error messages. PR1602670
- The `show system errors fru detail` command does not display `reset-pfe` as the cmerror configured action. PR1602726
- The evo-aftmand-bt process generates the `[Error] IfStats:map entry not present for ifl:1039` error message. PR1604334
- The channel 0 IFDs does not come up after adding the correct speed configuration. PR1604810
- Remote aggregated Ethernet interface member failure (trough disable or laser-off) might cause high tail drop that results in a high traffic loss. PR1604823

- The host loopback wedge might be detected in the Packet Forwarding Engine when you delete the aggregated Ethernet interface bundle configuration. PR1605599
- On PTX10008 routers, the `Fan Tray Controller removal/absence` alarm gets generated. PR1605987
- Segment Routing License issue might occur when you use the default chained-composite-next-hop configuration. PR1606377
- On PTX10008 routers, around 500ms to 800ms of traffic might be lost with one of the aggregated Ethernet interface member links of p2mp LSP branches down. PR1606839
- Memory might leak on the l2cpd process when you perform certain LLDP operations. PR1608699
- On PTX10000 routers, defunct rcp processes increase that might cause the primary Routing Engine to reboot. PR1608776
- On PTX10008 routers, the evo-aftmand-bt.fpc_x86_64 process generates core file at `jexpr_pile_malloc` with LSR core profile configuration. PR1608999
- High priority queue might not get the expected bandwidth on Junos OS Evolved platforms. PR1609823
- The `show pfe statistics traffic` command does not display the host bound traffic. PR1611115
- After PICD restarts, the interface goes into the `Down` state in the channelized 100G link. PR1611379
- The IS-IS session might not come up when the network type is p2p for IRB interface. PR1612606
- Some of the fabric links might go into the `Faulty` state after swapping the FPC LC1201 with LC1202. PR1612624
- Mitigate false wrap gets drops statistics when IFDs move into or out-of an aggregated Ethernet interface while IFD drops excess traffic. PR1613889
- On PTX10016 routers, SIBs and FPCs go into the `Active` or `Online` state twenty-two minutes after loading the Junos OS Evolved Release image 21.2R1-S1-202108130158.0-EVO. PR1614489
- Line cards might become unstable due to the continuous memory usage of the evo-cda-bt application. PR1614952
- Twenty-seven percent traffic loss appears at the 221B packet size in Junos OS Evolved Release 21.4 as compared to Junos OS Evolved Release 21.2R1. PR1615524
- On PTX10008 routers, after FPC becomes offline, minor cm-errors might occur for ZFI block on other FPCs. PR1616179
- Inconsistent error counts appears in the `show interfaces brief` and `show interfaces extensive` command. PR1616765

- The aftmand process generates core files at `RtIfaHandler::notifyCommand,EalIfaHandler::registryClientCommand ,EalIfaHandler::OnAdd (this=0x7f2ffe40e9a0 EalIfaHandler::instance()::handler, ifah=...) at ../../src/EalIfaHandler.cpp:222`. PR1616909
- While migration from Junos OS to Junos OS Evolved, you must delete the chassis redundancy failover or disable the chassis redundancy failover. PR1617720
- Multicast traffic to a mixed high-priority and low-priority OQs of a busy port might suffer drops of higher-priority multicast. PR1618026
- On PTX10001-36MR routers, issuing `request system snapshot` command does not capture the snapshot message in the **/etc/motd** file. PR1618946
- InputIntf is reported incorrectly for the MPLS-IPv4 and MPLS-IPv6 ingress sampling in case of Layer 3 VPN. PR1619052
- The hwdre process might crash when an FPC gets pulled out or some FPC power failure occurs. PR1619102
- The **/interfaces/interface/subinterfaces/subinterface/state/counters** are not exported during the initial synchronization for an on-change. PR1620160
- PIC becomes unnresponsive in the `Offline` state when you issue the `Offline` command right after the transceiver plugin. PR1621694
- ZTP does not work properly on all the PTX Series routers if you use an EX Series switch as a DHCP server. PR1621987
- On PTX10008 routers, interface goes into the `Down` state while performing `Custom Optics Profile` validation for low power mode in the non-channelized mode. PR1624228
- On PTX10008 routers, the continuous information level `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` syslog message might be generated. PR1624375
- The `show pfe route ip` command times out when the route table size is large. PR1624629
- Need to add the `show cda pipestats` command to more Junos OS Evolved Releases for serviceability. PR1626687
- Junos OS Evolved-based PTX platforms observes incomplete objects anomalies with scale beyond 16,000 logical interfaces in the system. PR1573994
- On PTX10008 routers, CB 1 goes in to the `Fault Standby` state after issuing the `request node power-off re1` command. PR1581476
- On PTX10008 routers, the EVPN-VXLAN shared tunnel commands must be removed. PR1598142

- GNMI Set RPC does not work with multiple operations. PR1609436
- The CDA-BT process generates a core file when turn FPC offline. PR1615343
- Device does not respond to traceroute while checking traceroute over VPN. PR1615677
- The Strict-Priority-Scheduler (SPS) might not work accurately across the port queues. PR1616772
- Limitation with fast-lookup-filter (FFT) usage in the ISF mode exist. PR1616804
- SNMP get for MIB value for jnxRedundancyConfig does not work as expected. PR1621101
- SNMP get for MID ID for jnxRedundancySwitchoverReason does not work as expected. PR1621103
- Telnet service might be enabled when you disable the service. PR1596411
- The evo-aftmand process might crash in a scaled configuration scenario. PR1597988
- Telemetry data collection does not work on the FPC:PIC:PORT component if you configure telemetry on Junos OS Evolved platforms. PR1599665
- The following error message gets generated after the FPC restarts:

  ```
  Nexthop: Comp_nh: 181429 Child nh count zero, do not create state181429
  ```

  PR1600642
- Software validation or upgrade might fail on the Junos OS Evolved platforms. PR1603479
- The telnet or ssh session might not be established on the PTX Series platforms running Junos OS Evolved. PR1605753
- The aggregated Ethernet interfaces with 32 or more member-links might observe larger load-balance deviation between the member-links. PR1607708
- Power consumption report does not display correct values. PR1608607
- IPv6 reachability fails in management-instance. PR1608619
- Session connections might reset if the backup Routing Engine with NSR configured on Junos OS Evolved platforms. PR1611520
- The hwdfpc process might crash on all Junos OS Evolved platforms. PR1624841
- The IP not-ECN-capable traffic does not get RED-dropped in an ECN-enabled congested queue. PR1627496

- Indirect next-hop (INH) version ID higher than 255 might cause INH NH FRR session in to the `Down` state and drop the transit traffic. PR1630215

Infrastructure

- Egress TCP RST might not correctly populate the DSCP field. PR1612208
- The `Host 0 Active Disk Usage Exceeded` alarm might be generated due to a large number of files under the **/var/log/journal** file, which were held by the eventd daemon. PR1601251
- ICMP tunneling might not work. PR1605465
- The `default-address-selection` command might not work on all Junos OS Evolved platforms. PR1608877

Interfaces and Chassis

- The sensor of the Junos Telemetry Interface optics alarm data type changes from `bool_val` to `str_val`. PR1580113
- SIB might become unresponsive at the `Offlining` state after performing offline and online operations. PR1591076
- The 25G interfaces with FEC91 goes in the `Down` state on a few configurations. PR1594740
- On PTX10003 routers, the `show platform object-info anomalies summary` command times out. PR1598337
- The LACP system priority might take a value of 0 and cause an LACP interoperability issue. PR1602724
- A few links on the channelized interface goes in the `Down` state after oir_enable and oir_disable in 4X25G. PR1606644
- IRB VGA MAC IP is missed if you configure the IRB logical interface first with a mac-address. PR1611559

MPLS

- The rpd process generates core file in the backup Routing Engine at `mirror_process_recvd_data_queue` with the MLDP NSR configuration. PR1594405
- Static LDP P2MP might fail after NSR switchover. PR1598344
- SNMP traps does not get generated for the second trap group. PR1623201
- Traffic loss might occur in some SR-TE scenario. PR1602127

Network Management and Monitoring

- The syslog archival transfer fails if you configure the archive site URL with an IPv6 address. PR1603342
- Incorrect IF-MIB::ifHCInUcastPkts and ifHCInBroadcastPkts statistics gets displayed. PR1621606
- Syslog messages might be lost partially in case of excess messages generated to the eventd process. PR1612535

Routing Policy and Firewall Filters

- The dfwd-junos-relay process might generate core file during the Routing Engine switchover. PR1597853
- The configuration check fails if you configure more than eight FCs and enable CBF. PR1600544
- The dfwd process crashes when the `no-decrement-ttl` filter match condition and action is sent from the control plane to the Packet Forwarding Engine. PR1602645
- The firewalld process might crash if you configure the fragment-offset out of the range (fragment-offset 1-900000000000). PR1605805
- Filters in openconfig acl execute terms in the order of their definition and not based on sequence-ids. PR1621620
- Services might not work after committing the firewall filter counter configuration with similar name of two terms. PR1625168

Routing Protocols

- The IPv4 static route might still forward traffic unexpectedly even when the static route configuration has already been deleted. PR1599084

User Interface and Configuration

- Updates to the system login configuration might not reflect after a commit. PR1589858
- The `file copy` command does not accept the HTTPS URIs. PR1596881
- Configuration transfer-on-commit does not work if you commit through netconf. PR1602331
- Authentication fails while logging on Junos OS Evolved platform through SSH. PR1594327
- The file copy failure occurs through the Netconf or operation script. PR1597550

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

IN THIS SECTION

These release notes accompany Junos OS Evolved Release 21.4R3 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

IN THIS SECTION

There are no new features or enhancements to existing features in this release for QFX Series routers.

What's New in 21.4R3

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.4R3 for QFX Series switches.

What's New in 21.4R2

There are no new features or enhancements to existing features in Junos OS Evolved Release 21.4R2 for QFX Series switches.

What's New in 21.4R1

What's Changed

IN THIS SECTION

Learn about what changed in these releases for QFX Series switches.

What's Changed in Release 21.4R3-S4

IN THIS SECTION

Junos XML API and Scripting

- **Ability to restart restart daemonized applications**—Use the `request extension-service restart-daemonize-app` *`application-name`* command to restart a daemonized application running on a Junos device. Restarting the application can assist you with debugging and troubleshooting.

  [See request extension-service restart-daemonize-app.]

Network Management and Monitoring

- **`operator` login class is restricted from viewing NETCONF trace files that are `no-world-readable` (ACX Series, PTX Series, and QFX Series)**—When you configure NETCONF tracing options at the `[edit system services netconf traceoptions]` hierarchy level and you restrict file access to the file owner by setting or omitting the `no-world-readable` statement (the default), users assigned to the `operator` login class do not have permissions to view the trace file.

What's Changed in Release 21.4R3-S3

IN THIS SECTION

Juniper Extension toolkit

- Ability to commit `extension-service file` configuration when application file is unavailable]--When you set the `optional` option at the `[edit system extension extension-service application file` *`file-name`*`]` hierarchy level, the operating system can commit the configuration even if the file is not available at the **/var/db/scripts/jet** file path.

What's Changed in Release 21.4R3

IN THIS SECTION

General Routing

- **New ARP and NDP packet classification (QFX10002, QFX10008, and QFX10016)**—We've introduced two CP classes for ARP and NDP packets received over VTEP interface. When your device identifies a packet as ARP or NDP, it performs an ingress port check which verifies whether the VTEP interface receives these packets. If VTEP interface receives the packet, datapath re-writes the CP class to the newly defined values. Based on this new CP class, the system performs the remaining packet processing and forwards the packets toward the host path. The system adds a separate DDoS policer to this ARP traffic, which ensures that the ARP traffic is not triggering underlay ARP DDoS violation.

- **Change in in unnumbered-address support for GRE tunnel**—Starting in Junos OS Release 24.4R1, there is a behavioural change in unnumbered-address support for GRE tunnel with IPV6 family and display donor interface for both IPV4 and IPV6 families of GRE tunnel. You can view interface donor details under show interfaces hierarchy level.

  [See show interfaces.]

- **sFlow configuration**— sFlow configuration is allowed only on et, xe, and ge interfaces in Junos OS Evolved-based platforms. All other interfaces are blocked for configuring sFlow on Junos OS Evolved-based platforms. A CLI error will be thrown if sFlow is configured on any other interface other than et, xe or ge interface.

Interfaces and Chassis

- **Display the donor details of the IPv6 borrower interface**—The output for the `show interfaces` command now displays the donor details of the IPv6 borrower interface.

  [See show interfaces].

MPLS

- Starting with Junos OS and Junos Evolved release 21.4R3 a CSPF LSP uses a new instance ID when attempting to re-signal a down LSP.

- The MPLS EXP bits transmitted in self ping messages are set based on the DSCP/ToS setting of the corresponding IP packet.

Network Management and Monitoring

- **Changes to the NETCONF <edit-config> RPC response (ACX Series, PTX Series, and QFX Series)**—When the <edit-config> operation returns an error, the NETCONF server does not emit a <load-error-count> element in the RPC response. In earlier releases, the <edit-config> RPC response includes the <load-error-count> element when the operation fails.

OpenConfig

- OpenConfig container names for Point-to-Multipoint per interface ingress and egress sensors are modified for consistency from "signalling" to "signaling".

Routing Protocols

- When the krt-nexthop-ack statement is configured, the RPD waits for the next hop to get acknowledged by PFE before using it for a route. Currently, only BGP-labeled routes and RSVP routes support this statement. All other routes ignore this statement.

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.

What's Changed in Release 21.4R2-S2

IN THIS SECTION

Network Management and Monitoring

- sFlow configuration is allowed only on et, xe, and ge interfaces in Junos OS Evolved based platforms. All other interfaces are blocked for configuring sFlow on Junos OS Evolved platforms. A cli error is thrown if sFlow is configured on any other interface other than et, xe or ge interface.

What's Changed in Release 21.4R2

IN THIS SECTION

EVPN

DSCP rewrite on EVPN VXLAN NNI ports (QFX5130 and QFX5700)-- QFX5130 and QFX5700 platforms support DSCP rewrite on EVPN VXLAN NNI ports with limitations.

[See Implementing CoS on VXLAN Interfaces (Junos OS Evolved).]

Multicast

- Changes to `show mvpn c-multicast` and `show mvpn instance` outputs]-- The FwdNh output field displays the multicast tunnel (mt) interface in the case of Protocol Independent Multicast (PIM) tunnels.

  [See show mvpn c-multicast.]

Network Management and Monitoring

- 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.

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 21.4R1-S2

IN THIS SECTION

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.

What's Changed in Release 21.4R1-S1

IN THIS SECTION

User Interface and Configuration

- 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 21.4R1

IN THIS SECTION

Class of Service

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

EVPN

- **Community information no longer included in VRF routing table**—The QFX series switches will 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.
- **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.
- **Support for displaying SVLBNH information**— You can now view shared VXLAN load balancing next hop (SVLBNH) information when you display the VXLAN tunnel endpoint information for a specified ESI and routing instance by using `show ethernet-switching vxlan-tunnel-end-point esi` *`esi-identifier`* `esi-identifier instance` *`instance`* `svlbnh`.
- **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.]
- **Changes to the show evpn instance command** — The output for show evpn instance extensive has been modified. Information for bridge domains can now be view by using `show evpn instance bridge-domain` or the `show mac-vrf routing instance bridge-domains` commands.

- **Ethernet tag ID set to 0 for EVPN Type 6 and EVPN Type 7 routes**— For VLAN bundle and VLAN-based services, Junos OS now automatically sets the Ethernet tag ID (VLAN ID) to zero for EVPN Type 6 and EVPN Type 7 routes per RFC 7432. In earlier releases, Junos OS used the VXLAN Network Identifier (VNI) as the Ethernet tag ID.

  To interoperate with devices that uses the VNI as the Ethernet tag ID, `set routing-instances routing-instance-name protocols evpn smet-etag-carry-vid`.

- **Minimum auto-recovery time reduced for duplicate MAC address detection**— 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

- In Junos OS Release 21.4R1 and later, ssh is enabled by default on all the routers with VM host support.

- **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 (Junos OS Evolved)**— 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. Previously, the source and destination address pair had to be unique across all encapsulation type.

Junos OS API and Scripting

- **Limits increased for the `max-datasize` statement (ACX Series, PTX Series, and QFX Series)**—The `max-datasize` statement's minimum configurable value is increased from 23,068,672 bytes (22 MB) to 268,435,456 bytes (256 MB), and the maximum configurable value is increased from 1,073,741,824 (1 GB) to 2,147,483,648 (2 GB) for all script types. Furthermore, if you do not configure the `max-datasize` statement for a given script type, the default maximum memory allocated to the data segment portion of a script is increased to 1024 MB. Higher limits ensure that the device allocates a sufficient amount of memory to run the affected scripts.

  [See max-datasize.]

- **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 cli` 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

- **SNMP support for MIB**—Operational command `show snmp mib walk system now` shows the latest software version and doesn't 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).]

- **The configuration accepts only defined identity values for nodes of type identityref in YANG data models (ACX Series, PTX Series, and QFX Series)**—If you configure a statement that has type identityref in the corresponding YANG data model, the device accepts only defined identity values (as defined by an identity statement) as valid input. In earlier releases, the device also accepts values that are not defined identity values.

- **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.]

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

Software Installation and Upgrade

- **Series profile1 image deprecation**—Starting in Junos OS Evolved 21.4R1, we've deprecated the Series Profile1 software image (also referred to as the lean rpd profile image) for QFX5130 and QFX5220 series devices. All other software image packages continue to be available for those devices.

  [See Junos OS Evolved Installation Packages.]

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 or software in Junos OS Evolved Release 21.4R3 for QFX 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.

Open Issues

IN THIS SECTION

Learn about open issues in Junos OS Evolved Release 21.4R3 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 QFX5700 platforms few interfaces are not coming up after removing channelization through single commit,that is by using **delete interfaces**. PR1592238
- On QFX5700 devices, 400G DAC flap might be seen after OIR, FPC restart, device reboot enable or disable interface. PR1618488
- On QFX5700 devices, ungraceful removal (OIR) of FPC or an FPC fault might result in a PCIE MAJOR alarm **PCI Uncorrected error on dev 0000:00:03.0** which does not get cleared. The only way to clear this alarm is reboot of the device. There are 2 situations in which this alarm can be seen: 1. FPC is faulty: In rare FPC fault cases, the PCI Uncorrected error alarm may be seen along with FPC going to a Fault state as indicated by the `show chassis fpc` command. This will be accompanied by other FPC Major alarms. Once the faulty FPC is replaced with a good one, the alarm will still be seen, and a reboot is required to clear this alarm. Post identification of the fault and FPC replacement, this alarm is harmless, and FPC state can be confirmed through the `show chassis fpc` command. 2. Ungraceful OIR: The ungraceful removal of FPCs is not recommended on QFX5700. This operation might result in PCI Uncorrected Error alarm. Please use one of the following two methods to do a graceful FPC OIR removal: a. Execute the `request chassis fpc slot <slot #> offline` command from the CLI. b. Press the Offline Button for 1 second on the FPC to offline the FPC. Once the FPC is gracefully offlined both LEDs - PWR and STS will go off. The FPC can be removed at this point. PR1620197

Network Management and Monitoring

- An improper access control vulnerability in Juniper Networks, Junos OS Evolved allows a network-based unauthenticated attacker who is able to connect to a specific open IPv4 port, which in affected releases must otherwise be unreachable, to cause the CPU to consume all resources as more traffic is sent to the port to create a Denial of Service (DoS) condition. PR1636338

Routing Policy and Firewall Filters

- On QFX5700 devices, when we issue `clear firewall all` command, policer statistics are not cleared. User defined policer statistics are removed. PR1581867

User Interface and Configuration

- File delete with regex might fail, if you use the filename without regex it works. PR1624562

EVPN

- On a Junos OS Evolved system with EVPN VXLAN enabled, if there is a default route in primary instance pointing to management interface, it could result in anomalies in Junos OS Evolved database. PR1622035

Infrastructure

- Enabling MPLS traffic engineering will cause 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 will solve this issue. PR1617629

Network Management and Monitoring

- CHEF: hitting SSL: Chef client creation is failing when trying to connect chef-node to chef-server.PR1648066

Resolved Issues

IN THIS SECTION

Learn about the issues fixed in these releases 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: 21.4R3

IN THIS SECTION

General Routing

- On QFX5220 and QFX5130 devices Layer 2: In scaled Layer 2 network, error logs are printed for MAC creation. MAC learning works as expected. PR1491933
- Unified led scheme for QFX5220 and QFX5130. PR1616209
- QFX5220 platform might experience system reboot or shutdown in rare cases. PR1638961
- Non standard optics causes pcid core file issue. PR1649925
- On QFX5130 devices, a few MACs are missing from the `show ethernet-switching table`. PR1650329
- On QFX Junos OS Evolved devices **EvoPfemand-main** process memory leaks. PR1652873
- On QFX5700 devices, packets get dropped after channelization on 16x100G FPC card. PR1656065
- On QFX Junos OS Evolved devices, transit NTP packets are trapped to CPU. PR1661855

- White space in optics serial number in `show chassis hardware display xml or json`. PR1665229
- QFX5130 sends a flow sample with the wrong value of **flow record** in sflow sampled packet. PR1666434
- After executing **clear ipv6 neighbors**, the device might not re-learn those IPv6 Neighbours. PR1671730
- The interface does not come back to default port speed when ZTP is aborted. PR1672101

Infrastructure

- On QFX5220, change in the output for L3VPN.inet6 route table in `show route forwarding-table summary | display xml` command. PR1653182

Resolved Issues: 21.4R2

IN THIS SECTION

General Routing

- FIPS mode is not supported.PR1530951
- Filter with forwarding-class and destination-class combined might not work. PR1595788
- Junos OS Evolved, adding configuration `hash-key family inet layer-4` disables inet Hash-key Protocol. PR1648156
- On QFX5700 devices, packets are getting dropped after channelization on 16x100G FPC card. PR1656065

Infrastructure

- Tunnel interface might fail to come up if configured at the same time as its routing instance. PR1616920

- On QFX5220 devices, change in the output for L3VPN.inet6 route table in `show route forwarding-table summary | display xml` command. PR1653182

Network Management and Monitoring

- False traffic spikes seen SNMP graphs when ifHCOutOctets or ifHCInOctets are used . PR1635958
- On all QFX platforms running Junos OS Evolved, the remote attacker might cause a CPU Denial of Service by sending genuine traffic to a device on a specific IPv4 port.PR1636338

Resolved Issues: 21.4R1

IN THIS SECTION

General Routing

- If more than 512 OSPF neighbors are configured, all the OSPF routes might not be learned unless the MTU of the IRB interface is modified.PR1570498
- 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
- Traffic loss might be observed when evo-pfemand is restarted. PR1608004
- In QFX5700 FPC, QSFP port reset signal to be inverted in the software. PR1608849
- The egress traffic is dropped due to the egress queue buffer stuck on 400G interfaces. PR1618147
- 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 were already marked as deleted. PR1601251

User Interface and Configuration

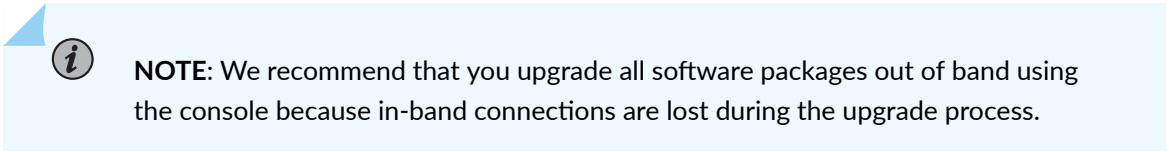
- The `file copy` command is not accepting HTTPS URLs. PR1596881

Upgrade Your Junos OS Evolved Software

Products impacted: ACX7100-32C, ACX7100-48L, ACX7509, PTX10001-36MR, PTX10003, PTX10004, PTX10008, PTX10016, QFX5130-32CD, QFX5220-32CD, QFX5220-128C, 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.
9. Copy the software to the device or to your internal software distribution site.
10. Install the new package on the device.



For more information about software installation and upgrade, see Software Installation and Upgrade Overview (Junos OS Evolved). 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/

Requesting Technical Support

IN THIS SECTION

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/content/dam/www/assets/resource-guides/us/en/jtac-user-guide.pdf.
- Product warranties—For product warranty information, visit https://support.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://support.juniper.net/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://support.juniper.net/support/downloads/
- 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

28 March 2025—Revision 3, Junos OS Release 21.4R3.

20 July 2023—Revision 2, Junos OS Release 21.4R3.

13 September 2022—Revision 1, Junos OS Release 21.4R3.