Release Notes

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Junos OS Evolved Release 23.2R2

Introduction

Use these release notes to find new and updated features, software limitations, and open issues for Junos OS Evolved Release 23.2R2.

For more information on this release of Junos OS Evolved, see Introducing Junos OS Evolved.

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Junos OS Evolved Release Notes for ACX7024, ACX7100-32C, ACX7100-48L, and ACX7509 Devices

IN THIS SECTION

These release notes accompany Junos OS Evolved Release 23.2R2 for ACX7024, ACX7100-32C, ACX7100-48L, and ACX7509 devices. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

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

What's Changed

IN THIS SECTION

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

EVPN

- **Change in options and generated configuration for the EZ-LAG configuration IRB subnet-address statement**—With the EZ-LAG `subnet-address inet` or `subnet-address inet6` options at the `edit services evpn evpn-vxlan irb` *`irb-instance`* `hierarchy`, you can now specify multiple IRB subnet addresses in a single statement using the list syntax `addr1 addr2 ?`. Also, in the generated configuration for IRB interfaces, the commit script now includes default `router-advertisement` statements at the `edit protocols hierarchy level` for that IRB interface.

  [See subnet-address (Easy EVPN LAG Configuration).]

- **Limit on number of IP address associations per MAC address per bridge domain in EVPN MAC-IP database**—By default, devices can associate a maximum of 200 IP addresses with a single MAC address per bridge domain. We provide a new CLI statement to customize this limit, `mac-ip-limit` statement at the **edit protocols evpn** hierarchy level. In most use cases, you don?t need to change the default limit. If you want to change the default limit, we recommend that you don?t set this limit to more than 300 IP addresses per MAC address per bridge domain. Otherwise, you might see very high CPU usage on the device, which can degrade system performance.

  [See mac-ip-limit.]

Infrastructure

- Option to disable path MTU discovery—Path MTU discovery is enabled by default. To disable it for IPv4 traffic, you can configure the no-path-mtu-discovery statement at the edit system internet-options hierarchy level. To reenable it, use the path-mtu-discovery statement.

  [See Path MTU Discovery.]

Interfaces and Chassis

- ACX7509: In the CLI using the command `request chassis feb slot slot-number offline` if you make the primary FEB offline, a traffic loss warning message is displayed and the FEB offline request is rejected. If offline or restart is still intended for primary FEB, use `force` option in addition to the command. WARNING message displayed in the CLI: warning: RCB and FEB work in the paired slot mode. FEB %s offline/restart will result in traffic loss and does not cause a switchover. Please re-try after initiating a mastership switchover using `request chassis routing-engine master switch` CLI.

Junos XML API and Scripting

- **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.

  [See file (JET).]

Network Management and Monitoring

- **Changes to the RPC response for `<validate>` operations in RFC-compliant NETCONF sessions (ACX Series, PTX Series, and QFX Series)**—When you configure the `<rfc-compliant>` statement at the `[edit system services netconf]` hierarchy level, the NETCONF server emits only an `<ok/>` or `<rpc-error>` element in response to `<validate>` operations. In earlier releases, the RPC reply also includes the `<commit-results>` element.

- **NETCONF `<copy-config>` operations support a `file://` URI for copy to file operations (ACX Series, PTX Series, and QFX Series)**—The NETCONF `<copy-config>` operation supports using a `file://` URI when `<url>` is the target and specifies the absolute path of a local file.

  [See <copy-config>.]

Platform and Infrastructure

- Previously, shaping of Layer 2 pseudowires did not work on logical tunnel interfaces. This has been fixed for all platforms except QX chip-based MICs and MPCs.

Routing Protocols

- In Junos OS Evolved platforms, `show route snooping` and `show route forwarding-table` does not show /56 routes in the VPLS address family table.
-
- In older Junos Releases, Data Definition Language (DDL) lists were ordered by the sequence in which the user configured the list items, for example a series of static routes. With this change, the list order is determined by the system with items displayed in numerical sequence rather than by the order in which the items were configured. There is no functional impact to this change.

User Interface and Configuration

- **Viewing files with the `file compare files` command requires users to have `maintenance` permission** — The `file compare files` command in Junos OS and Junos OS Evolved requires a user to have a login class with `maintenance` permission.

  [See Login Classes Overview.]

Known Limitations

IN THIS SECTION

Learn about limitations in this release for ACX Series routers.

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

Interfaces and Chassis

Powering up and configuring data path of 400G-ZR and 400G-ZR-M optics is not instant and takes more time comparatively with the other optics. So, an user has to wait enough time before switching to new speed configuration. If the user switches from one speed to the other speed without waiting, leads to interface down. This is dynamic and subject to change from vendor to vendor and 3PO optics. For Juniper qualified optics 6 to 7 minutes in worst case. PR1635443

Open Issues

IN THIS SECTION

Learn about open issues in this release for ACX Series routers.

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

General Routing

- HQoS - VoQ Statistics issue during scaled configuration with congestion. In scaled HQOS configuration with congestion across all queues due to unavailability of the system level packet buffers, packets are dropped irrespective of the queue priorities. These dropped packets are not to be accounted as part of queue statistics.PR1674669
- ACX7509: G.8275.1 FPC Dpll status is incorrectly shown in `timingd gencfg ptp centralized` command. PR1685675
- On all Junos OS Evolved platforms, when the destination MAC is not in synchronization in the EVPN-MPLS (Ethernet Virtual Private Network- Multiprotocol Label Switching) network, multiple packets for the unknown MAC broadcast traffic get flooded to the PE (Provider Edge) which is the originator of the MAC address.PR1717283

- For ACX7000 platforms in a scaled setup with SRv6 micro-sid for L3VPN VRFs (~2K) enabled in single commit, few initial VRF might experience traffic outage. PR1726481
- On ACX7024 devices, 1G ports on the ASIC do not support auto-negotiation and hence it is applicable for both SFP-T and SFP-LX/SX sfp's. Auto-negotiation is enabled in the peer device (specially on the peer SFP-SX/Lx SFP's).PR1749393
- On Junos OS Evolved platforms, alarmd error is generated upon configuration commit. PR1797233
- On Junos OS Evolved platforms, when there is Routing Engine switchover due to pfemand crash, it results in FPC (Flexible PIC Concentrator) to be stuck in ONLINING state and traffic impact can be seen. PR1797593

Infrastructure

- DNS resolution is not working for default instance when name server is reachable through mgmt_junos VRF. PR1766212

Interfaces and Chassis

- On the ACX7024 platform, the tear-down rate is low. This is due to system CPU limitations.PR1659593

Resolved Issues

IN THIS SECTION

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

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

Class of Service (CoS)

- Duplicate code points through code-point-aliases under a classifier results in cosd crash.PR1766873

EVPN

- Traffic drop is observed in EVPN-VXLAN CRB scenario. PR1734091

General Routing

- The commit changes do not take effect post software upgrade once the system is rebooted on Junos OS Evolved platforms PR1699699
- ACX reports **/psm/0/ hwdre/0/cm/0/ psm_mcu /psm0/psm_cml_cmd_fault** even though the PSM is in working order. PR1700839
- fibd core file is observed on Routing Engine switchover. PR1710227
- Multiple classification and rewrite support. PR1713158
- Occasional FPC crash and traffic loss is observed with a scaled number of FIB routes. PR1722270
- Post-changing MC-AE mode from active-active to active-standby and vice versa causes incomplete object state and object anomalies in l2ald. PR1722626
- **/lib/systemd/system/docker.socket is marked executable** logs flood after system reboot. PR1727524
- The evo-pfemand process crashes with simultaneous interface delete and statistics retrieval. PR1732077
- IPv6 EBGP sessions might flap or delay in neighbour establishment could be seen due to hold timer Expired Error. PR1732443
- Getting False Alarm **Optics does not support configured speed** for 1G SFP-LX. PR1733956

- Interfaces do not come up after FEB is restarts from CLI on Junos OS Evolved ACX7509 platform. PR1734506
- The inline IPv4 BFD session flaps on Junos OS Evolved platforms when hierarchical-scheduler is set up. PR1735836
- Control plane takes a long time to learn the multicast routes (scaled scenario).PR1736171
- Traffic congestion on control plane in Junos OS Evolved ACX platforms. PR1736892
- After picd restart, traffic is not recovered on MACsec enabled ports. PR1738038
- MPLS tunnel creation failure is observed post continuous network / route churn / IGP flaps on Junos OS Evolved based ACX platforms. PR1739112
- The PFE process crashes on Junos Evolved ACX platforms while deleting interfaces. PR1739175
- DHCP daemon **jdhcpd** doesn't start in the new primary Routing Engine after GRES is performed. PR1740530
- ACX7024: sZTP: System not bootable after `request system zeroize`. PR1740989
- IFD does not not come up whenever optics is removed and inserted on all Junos OS Evolved platforms PR1742772
- Transient multicast traffic drop on ACX Junos OS Evolved device. PR1742792
- ACX Junos OS Evolved sends ICMP unreachable message for received DHCP (Sport67/Dport68) UDP packets. PR1743043
- Reachability for end host fails across layer 2 circuit after enabling ECMP when the device acts as LSR. PR1743393
- Traffic loss observed on interface using ethernet-switching interface-mode trunk. PR1745163
- Traffic loss observed in scenario where default route is received over multiple paths with link protection.PR1747512
- Traffic loss due to unknown multicast control packets getting dropped in non-default VRF.PR1748231
- In ACX7509, FEB 0 gets stuck in **Onlining Standby** after restarting it from CLI post jack out/in. PR1748450
- ARP dependency issue causes issues between IRB and the device. PR1751006
- ARP and ND packets do not get resolved in vlan-based EVPN service on Junos OS Evolved ACX platforms.PR1751135

- GL: 16xSFP56: After ungraceful removal of 16xSFP56 in slot 2,3; packet drops due to congestion seen. PR1752445
- The pfe process crashes on Junos OS Evolved ACX7100 platforms when MACSec is enabled on an interface with unsupported port speed. PR1755883
- Syslogs errors are seen while changing the port 32 to 4x1OG. PR1756606
- FEB-FPC errors are seen on ACX7509 platforms after interface is admin disabled. PR1757125
- MPLS LSP do not come up due to self ping failure on Junos OS Evolved Platforms. PR1757574
- BFD sessions go down on BFDD restart with 1k Scale BFD configuration. PR1757649
- Layer 2 loop can be seen on Junos OS Evolved ACX Series platforms after reboot. PR1765507
- Traffic impact is observed after device reboot or restart of picd on Junos OS Evolved ACX7100-48L.PR1766883
- The xinted generates syslog messages **service ssh, accept: Invalid argument (errno = 22)** with high CPU usage. PR1767072
- ACX7100-32C - ifmon process 100% utilization. PR1768113
- Unknown unicast IPv4 traffic received with UDP destination port 8503 is flooded back to source PE. PR1768729
- IPTV traffic not forwarded to test agent. PR1771527
- IPv6 Neighbor Discovery not working resulting in traffic loss PR1772838
- Multipath in VRF with RIB group for route leaks does not work on Junos OS Evolved ACX Series platforms. PR1773240
- Traffic forwarding is affected over physical interface if an user tries to configure `hierarchical-scheduler` configuration statement on aggregated Ethernet member interface. PR1773980
- In the scaled L2circuit configured with L2circuit redundancy configuration, traffic drops might be observed PR1775809
- Aggregated Ethernet load balancing issue on Junos OS Evolved ACX7000 platforms. PR1775867
- Traffic drop for EVPN-ELAN can be seen when underlay unilist is modified. PR1776945
- [EVO] Name resolution is not happening for 'show arp' output PR1778567
- After swtichover with MPLS FRR with VPLS configured, it is observed that traffic to a few VPLS instances is dropped. PR1779466

- Traffic disruption is seen when IRB is present within ERPS protected bridge domain. PR1782190
- ACX7509 shows PLL alarms after Routing Engine switch. PR1782380
- ACX7024 does not boot after `request system zeroize`. PR1783542
- STP bridge domain or ERPS protected domain configured on the IRB interface causes traffic to be dropped.PR1784990
- Interfaces with QSFP-100GBASE-LR4 optics might not come up after software upgrade or system reboot. PR1788848
- The evo-pfemand process crashes on Junos OS Evolved ACX Series platforms. PR1791199

Interfaces and Chassis

- Junos OS Evolved ACX7024 platform stops transmitting LACP packet due to memory corruption. PR1739254
- Multiple processes crash when more than 150 VLAN entries are configured in vlan-id-list under aggregated Ethernet logical interface. PR1774222

Layer 2 Features

- MAC learning has been rejected due to mismatch between l2ald and Packet Forwarding Engine STP index value in VPLS. PR1766991

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 23.2R2 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

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

What's Changed

IN THIS SECTION

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

EVPN

- **Change in options and generated configuration for the EZ-LAG configuration IRB subnet-address statement**—With the EZ-LAG `subnet-address inet` or `subnet-address inet6` options at the `edit services evpn evpn-vxlan irb` *`irb-instance`* `hierarchy`, you can now specify multiple IRB subnet addresses in a single statement using the list syntax `addr1 addr2 ?`. Also, in the generated configuration for IRB interfaces, the commit script now includes default `router-advertisement` statements at the `edit protocols hierarchy level` for that IRB interface.

  [See subnet-address (Easy EVPN LAG Configuration).]

- **EVPN-VXLAN tracing configuration**— The `set services trace evpn-vxlan` configuration invokes a built-in commit script to generate tracing configurations for troubleshooting EVPN-VXLAN in multiple modules and hierarchies.

  [See trace (EVPN-VXLAN).]

- **Default behavior changes and new options for the easy EVPN LAG configuration (EZ-LAG) feature**—The easy EVPN LAG configuration feature now uses some new default or derived values, as follows:

  - Peer PE device `peer-id` value can only be 1 or 2.

  - You are required to configure the loopback subnet addresses for each peer PE device using the new `loopback peer1-subnet` and `loopback peer2-subnet` options at the **edit services evpn device-attribute** hierarchy level. The commit script uses these values for each peer PE device's loopback subnet instead of deriving those values on each PE device. These replace the `loopback-subnet` option at the **edit services evpn device-attribute** hierarchy level, which has been deprecated.

- If you configure the `no-policy-and-routing-options-config` option, you must configure a policy statement called EXPORT-LO0 that the default underlay configuration requires, or configure the new `no-underlay-config` option and include your own underlay configuration.
- The commit script generates "notice" messages instead of "error" messages for configuration errors so you can better handle **edit services evpn** configuration issues.
- The commit script includes the element names you configure (such as IRB instance names and server names) in description statements in the generated configuration.
- This feature also now includes a few new options so you have more flexibility to customize the generated configuration:
- `no-underlay-config` at the **edit services evpn** hierarchy level—To provide your own underlay peering configuration.
- `mtu overlay-mtu` and `mtu underlay-mtu` options at the **edit services evpn global-parameters** hierarchy level—To change the default assigned MTU size for underlay or overlay packets.

See [Easy EVPN LAG Configuration.]

- **Limit on number of IP address associations per MAC address per bridge domain in EVPN MAC-IP database**—By default, devices can associate a maximum of 200 IP addresses with a single MAC address per bridge domain. We provide a new CLI statement to customize this limit, `mac-ip-limit` statement at the **edit protocols evpn** hierarchy level. In most use cases, you don?t need to change the default limit. If you want to change the default limit, we recommend that you don?t set this limit to more than 300 IP addresses per MAC address per bridge domain. Otherwise, you might see very high CPU usage on the device, which can degrade system performance.

  See [mac-ip-limit.]

General Routing

- **New commit check for MAC-VRF routing instances with the encapsulate-inner-vlan statement configured** —We introduced a new commit check that prevents you from configuring an IRB interface and the `encapsulate-inner-vlan` statement together in a MAC-VRF routing instance. Please correct or remove these configurations prior to upgrading to 23.2R2 or newer to avoid a configuration validation failure during the upgrade.

  [See encapsulate-inner-vlan.]

Infrastructure

- Option to disable path MTU discovery—Path MTU discovery is enabled by default. To disable it for IPv4 traffic, you can configure the no-path-mtu-discovery statement at the edit system internet-options hierarchy level. To reenable it, use the path-mtu-discovery statement.

  [See Path MTU Discovery.]

Interfaces and Chassis

- Starting in Junos OS release 23.2R1 and Junos OS Evolved release 23.2R1-EVO, the output of `show chassis power` command displays the state of the power supply in PTX10003 and QFX10003 platforms.

  [See **show chassis power**

- While running request system snapshot recovery command on all VMHost based Routing Engines, disable or stop reporting any warning message.

- **Enhanced DDoS status operational command (PTX Series)**—We've enhanced the aggregate DDoS status output field to display the aggregate count of all sub packet types.

  Earlier to this release, the aggregate DDoS status output displayed only the packet type level output information.

  [See **show ddos-protection protocols**.]

- On PTX10004, PTX10008, and PTX10016 routers, after executing the `request node offline` command, you must wait at least 180 seconds to execute the `request chassis cb offline` command.

- **Enhanced DDoS statistics operational command (PTX Series)**—We've enhanced the aggregate DDoS statistics output field to display the aggregate statistics for BFD and DHCP protocols. The enhanced DHCP statistics output displays the collective DHCPv4 and DHCPv6 statistics for DDoS.

  Earlier to this release, the aggregate DDoS statistics output displayed 0 for aggregate BFD and the aggregate DHCPv4v6.

  [See show ddos-protection protocols

- When all the members of the AE have the same speed (x) and no mixed speed configured. If you change the speed value of any member of the AE to a value other than x, the commit succeeded in earlier releases. From this release, the commit fails. When there are et interfaces with different speeds and you want them to be part of an AE interface. If you change the speed of all the members

of the interfaces to be the same speed (x), configure the AE interface, and commit, the commit failed in earlier releases. From this release, such commits succeed.

Junos XML API and Scripting

- **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.

  [See file (JET).]

Network Management and Monitoring

- **Changes to the RPC response for `<validate>` operations in RFC-compliant NETCONF sessions (ACX Series, PTX Series, and QFX Series)**—When you configure the `<rfc-compliant>` statement at the `[edit system services netconf]` hierarchy level, the NETCONF server emits only an `<ok/>` or `<rpc-error>` element in response to `<validate>` operations. In earlier releases, the RPC reply also includes the `<commit-results>` element.

- **NETCONF `<copy-config>` operations support a `file://` URI for copy to file operations (ACX Series, PTX Series, and QFX Series)**—The NETCONF `<copy-config>` operation supports using a `file://` URI when `<url>` is the target and specifies the absolute path of a local file.

  [See <copy-config>.]

- **gNOI `OS` RPCs use the software version string instead of the package filename (PTX Series)**—The `version` field in the `gnoi.os.OS` `Activate()`, `Install()`, and `Verify()` RPCs uses the software version string (as displayed in `/system/state/software-version`) instead of the package name.

Platform and Infrastructure

- Previously, shaping of Layer 2 pseudowires did not work on logical tunnel interfaces. This has been fixed for all platforms except QX chip-based MICs and MPCs.

Routing Protocols

- In Junos OS Evolved platforms, `show route snooping` and `show route forwarding-table` does not show /56 routes in the VPLS address family table.
- Starting in Junos OS Evolved 23.4R1, we have enabled the `process-non-null-as-null-register` configuration statement under `edit protocols pim rp local` by default. For earlier releases, you must configure this statement explicitly.
- Before this change most list were ordered by the sequence in which the user configured the list items, for example a series of static routes. After this change the list order is determined by the system with items displayed in numerical sequence rather than by the order in which the items were configured. There is no functional impact to this change.
- **Optimized mesh group routes (ACX Series, QFX5130, QFX5700 and ACX Series)**— `show route snooping` for inet.1/inet6.1 table and `show route snooping table inet.1/inet6.1` will display only CE mesh group routes for platforms that support EVPN-MPLS or EVPN-VxLAN multicast. In earlier releases, other mesh groups like the VE mesh group were also displayed.

User Interface and Configuration

- **Viewing files with the `file compare files` command requires users to have `maintenance` permission** — The `file compare files` command in Junos OS and Junos OS Evolved requires a user to have a login class with `maintenance` permission.

  [See Login Classes Overview.]

VPNs

- **Increase in revert-delay timer range**— The `revert-delay` timer range is increased to 600 seconds from 20 seconds.

  [See min-rate.]

- **Configure min-rate for IPMSI traffic explicitly**— In a source-based MoFRR scenario, you can set a min-rate threshold for IPMSI traffic explicitly by configuring `ipmsi-min-rate` under `set routing-instances protocols mvpn hot-root-standby min-rate`. If not configured, the existing `min-rate` will be applicable to both IPMSI and SPMSI traffic.

  [See min-rate.]

Known Limitations

IN THIS SECTION

Learn about limitations in this release for PTX Series routers.

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

General Routing

- Powering up and configuring data path of 400G-ZR and 400G-ZR-M optics is not instant and takes more time comparatively with other optics. So, user has to wait enough time before switching to new speed config. If user switches from one speed to other speed without waiting will lead to interface down. PR1635443

Open Issues

IN THIS SECTION

Learn about open issues in this release for PTX Series routers.

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Class of Service

- If classifier/rewrite has imported rules from a parent, and has its own rules on top of it. If the import is deleted, the imported rules are not cleaned up. This applies to both rules that add to the parent's base rules, and to those rules that overwrite the parent's base rules. PR1787101

General Routing

- Some of the frequencies shall be failing performance for PTP-PTP and PTP-1PPS. PR1624478
- Below is the expected performance for this 21.4. Profile Freq (Hz) NoiseTransfer_0_00391_Results PASS PASS NoiseTransfer_0_00781_Results FAIL FAIL NoiseTransfer_0_01563_Results FAIL FAIL NoiseTransfer_0_03125_Results FAIL FAIL NoiseTransfer_0_06156_Results FAIL FAIL NoiseTransfer_0_12313_Results FAIL FAIL NoiseTransfer_0_24625_Results PASS PASS NoiseTransfer_0_4925_Results PASS PASS NoiseTransfer_0_985_Results PASS PASS NoiseTransfer_1_985_Results PASS PASS NoiseTransfer_3_985_Results PASS PASS NoiseTransfer_7_985_Results PASS PASS. PR1624502
- Layer 2 related daemons - lacpd, ifmand, and arpd - when patched using JSU might cause the Junos OS Evolved device to not boot up. PR1676132
- G.8273.2 Synce to PTP and SyncE to 1PPS transient response test fails. PR1681527
- Class B performance as per G.8273.2 fails for SyncE to PTP and SyncE to 1pps Noise transfer for lower frequencies. PR1681884
- In high scaled (beyond 14,000 sg routes - 7000 ipv4 and 7000 ipv6)NGMVPN SPMSI scenarios, core might be seen on PTX10003 platforms due to memory getting exhausted. PR1708454
- On Junos OS and Junos OS Evolved platforms, the dcpfe (Dense Concentrator Packet Forwarding Engine) process crash will be observed due to memory fragmentation issue. This is a very rare case and would impact traffic as due to dcpfe failure the PFE restarts, so the interfaces will flap. PR1711860
- On all Junos OS and Junos OS Evolved platforms BGP traceoptions configuration will have an impact on the CPU, threads will be busy and will take time to recede in spite of disabling it. It is important we enable a specific trace flag and disable it when the CPU goes high. It is also important not to

perform switchover and other triggers which can add load to the CPU during traces are enabled. Traces must be enabled discretely. PR1724986

- On all Junos OS Evolved platforms, VMcores are seen when MACsec (Media Access Control Security) key-chains and BGP(Border Gateway Protocol) configurations are applied through Netconf. PR1732611
- On PTX10000 Junos OS Evolved platforms, the FPC MEZZ board state becomes unknown with **Too many open files** error messages due to an FD (File Descriptor) leak in picd (Physical Interface Card Daemon) process. PR1738854
- On all Junos OS Evolved platforms configured with SR-ISIS and with gRPC/gNMI telemetry, subscription to the path: **/junos/services/segment-routing/sid/usage/** will not work and the output could not be proper. The issue could happen only in scaled configuration (approximately, 4000 or more per-sid ingress sensors and 4000 or more IPv4/IPv6 per-sid egress sensors are configured).PR1745615
- On all Junos OS Evolved PTX10008, PTX10004, and PTX10016 platforms, when a fan-tray is removed followed by an insertion, it leads to fan-tray failures.PR1767111
- On Junos Evolved OS PTX10001-36MR with coherent optics QSFP56-DD-400G-ZR-M, QSFP56-DD-400G-ZR or QSFP56-DD-400G-ZR-HP, if the optics present in the first three ports draw combined power of 50w or more the power rail will experience fault, resetting the Control Board (CB) and Flexible PIC Concentrators (FPC). The entire device traffic will be impacted when CB and FPC go for a reset.PR1775320
- Both SIB PWR/STAT H/W LEDs become Unlit/OFF by Routing Engine switchover on PTX10004, PTX10008, PTX10016 Junos OS Evolved platforms. PR1749781
- On all Junos Evolved PTX platforms, RIB (Routing Information Base) and FIB (Forwarding Information Base) tables are not synchronized properly, causing the P2MP (Point-to-Multipoint) LSP (label-switched-path) traffic outage when executing the CLI command `clear rsvp session`.PR1757635
- On Junos OS Evolved platforms, duplicate IPv4 address detection error is not logged on syslog. PR1775981

Infrastructure

- Symptom request routing-engine login other-routing-engine failure Root Cause evo_ssh did not have an internal port defined Exposed versions: with fix of 1693858 evo:20.4R3-S6-EVO evo:21.2R3-S4-EVO evo:22.2R2-S1-EVO evo:22.2R3-EVO evo:22.3R2-EVO evo:22.4R1-EVO evo:22.4R2-EVO evo:23.1R1-EVO junos:22.3R2. PR1712705

MPLS

- Trace route in MPLS OAM on SR over IPv6 may fail in ECMP case if Junos OS Evolved box is in topology. This is because linux kernel in Junos OS Evolved puts an auto flow label on every IPv6 packet. This flow label is transparent to daemon process, which uses a null value for it and calculates the NH details. PFE 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 trace route to fail. PR1710285

Routing Policy and Firewall Filters

- Family-Any support is available only from 22.4-Junos OS Evolved. Only Inet6 family is supported previous to that release. PR1740412
- On all Junos OS Evolved platforms, the firewall policer rate, bandwidth limit, committed-information-rate, peak-information-rate, burst-size-limit are increased through this PR.PR1743233
- Maximum configurable value of policer if-exceeding **bandwidth-limit** is 100Gbps on PTX10004 Junos Evolved OS. It is 25.6Tbps on PTX10001-36MR, PTX10008 and PTX10016 platforms. PR1798975

Resolved Issues

IN THIS SECTION

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

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

General Routing

- The commit changes will not take effect post software upgrade once the system is rebooted on Junos OS Evolved platforms. PR1699699
- Small memory leak is seen on whenever anomalies command `show platform object-info anomalies` is executed all Junos OS Evolved platforms. PR1706565
- The fibd core is observed on Routing Engine switchover. PR1710227
- Multiple sys logs error are seen in script during various triggers with FPC restart and node reboot. PR1717727
- Traffic loss is observed with FTI over IRB as underlay. PR1717782
- The evo-aftmand-bt process might restart when an app exit. PR1719739
- System calls for shutdown after Routing Engine switchover. PR1720259
- Application failure would occur on Routing Engine switchover. PR1720276
- Occasional FPC crash and traffic loss is observed with a scaled number of FIB routes. PR1722270
- PTX Junos OS Evolved - esmc transmit interfaces may not be listed in `show synchronous-ethernet esmc transmit` CLI with generating clksyncd core by replacing `interface name` with `replace pattern` CLI. PR1725260
- The **/lib/systemd/system/docker.socket is marked executable** logs flood after system reboot. PR1727524
- Auto-sw-sync doesn't trigger upgrade/restart of routing engine. PR1731877
- SFLOW not able to extract the correct interface name. PR1732005
- Junos OS Evolved: PTX10003 Series: MAC address validation bypass vulnerability (CVE-2023-44189). PR1732283
- Traffic drop under strict-priority queue before low priority queue. PR1732461
- In TCP flow, the initial SYN+ACK packet will not be marked with specified CoS related action on Junos OS Evolved platforms. PR1733509

- DNS resolution over a routing-instance fails. PR1733616
- PTP will get stuck in acquiring state which leads to improper time synchronization after system reboot. PR1734235
- The traffic rate for member of aggregated ethernet with class-of-service configured does not apply the policer. PR1735087
- Junos OS Evolved: PTX10001, PTX10004, PTX10008, PTX10016: MAC address validation bypass vulnerability (CVE-2023-44190). PR1735224
- Junos OS Evolved PTX10003: Network outage is seen due to system reboot with PFE restart when IPv6 Multicast groups configured. PR1735288
- BGP session flaps due to hold time expiration. PR1736428
- PTX10K Junos OS Evolved - BITS port LED color of Physical/CLI/MIB do not match. PR1738022
- FTC X FTC FPGA minimum supported firmware version mismatch alarm raised by OIR FTC. PR1739842
- Error/warning message is missing for unsupported speed in syslog file. PR1740145
- Ultron sZTP: System not bootable after request system zeroize. PR1740989
- Fans might stop working after removal and insertion of Fan Tray. PR1742174
- IFD does not not come up whenever optics is removed and inserted on all Junos OS Evolved platforms. PR1742772
- In P2MP-MPLS-LSP set-up traffic drop/traffic blackhaul/label swap/ttl being set to 0 seen due to ARP timeout. PR1743034
- PTP disruption is seen as the slave goes re-acquiring on GM CC change from 7->6. PR1744746
- Untagged control traffic on Layer 3 interface will be dropped on Junos OS Evolved based PTX platforms. PR1745528
- The hwdre application restarted due to memory leak. PR1745749
- PTX10001-36mr: no debug logs created post Boot of the DUT. PR1746103
- Control board is stuck in present state. PR1747567
- Child interfaces deleted from AE interfaces are still shown as part of AE. PR1748236
- The picd crash can be seen on all Junos OS Evolved platforms. PR1748505

- The default lo0 firewall filter is not used for traffic sent from a Routing Instance to a host when there is no lo0 configured under the RI. PR1751076
- PTX10000 Junos OS Evolved - CMerror not raised post LAH(link auto-heal) fails during training failure. PR1751581
- TTL value of the explicit null label is ignored on certain PTX platforms. PR1752262
- Traffic blackholes due to next-hops are stuck in the pending-delete in evo-aftmand. PR1752267
- The automatic software synchronization mechanism does not function as expected. PR1755616
- FPC unreachable due to running out of Guid space. PR1756452
- PTX10004/PTX10008/PTX10016 Junos OS Evolved - Mezz board status of all FPCs becomes **unknown** post Routing Engine switchover by `request node` CLI. PR1758265
- License-service crash is seen on Junos OS Evolved platforms. PR1759618
- Traffic loss is observed in a scaled scenario of node-link-protected LSP. PR1759664
- Interface queue statistics are not displayed on `show interfaces queue` CLI command. PR1760134
- Sflow functionality will report packets source subnet mask as 0 for the sampled copy. PR1761350
- CFM DMM with AE might not work with PTX10001-36mr. PR1763629
- Idmdsensor process might spontaneously crash if the standby Routing Engine has been frequently crashing. PR1764408
- Transit traffic loss during P2MP LSP change. PR1764775
- CCM interval change and rollback resulting in possible traffic loss. PR1766560
- The xinted generates syslog messages "service ssh, accept: Invalid argument (errno = 22)" with high cpu usage. PR1767072
- FPCs experiences crash and restart whenever the network encounters either an MPLS LSP flap or a LAG flap. PR1767747
- PCS errors on Ethernet interface on certain PTX platforms running Junos OS Evolved. PR1768453
- FPC offline causes PTX10003-160C to reboot. PR1768610
- L2TPV3 load-balancing not working properly and create out of order packet flow. PR1769545
- Unexpected evo-aftmand-bt error logs: Jexpr: Invalid HwScId 0, Jexpr: Invalid pfeId 32 while route updated. PR1770432
- MPLS traffic flow might not be as expected after PFE restart. PR1770859

- The `show interfaces extensive | no-more` command is taking a longer time to display the output. PR1773428
- Interfaces stay in link DOWN when using third party optics. PR1776596
- The orchestratord core dump during JSU. PR1776669
- PTX10001-36MR: epp_epc_intr_shmem_err seen in logs. PR1777003
- [Junos OS Evolved] Committed configuration files are not preserved post software version rollback operation. PR1779593
- License key is not installed after USB upgrade, through `set system license keys key`. PR1783509
- On Junos OS Evolved PTX10016 platforms, performing back to back SIB offline results in traffic loss and context deadline exceeded error. PR1784766
- Port-mirroring issue observed when adding or deleting interface with port-mirror configuration. PR1796517
- The rpd process will crash if too many trace options are initialised. PR1732786
- Observed **MCNHMBB index availability** alarm when system is subjected to heavy PIM Join/Prune churn. PR1792740

Class of Service (CoS)

- Duplicate code points through code-point-aliases under a classifier results in cosd crash. PR1766873

EVPN

- Traffic drop is observed in EVPN-VXLAN CRB scenario. PR1734091
- In the EVPN-MPLS scenario traffic between CE devices will drop. PR1786959

Infrastructure

- Upon kernel panic on a dual Routing Engine system mastership relinquishment will take longer than 5 seconds causing FPC restart. PR1759541

Interfaces and Chassis

- Changing speed and adding to aggregate Ethernet in the same commit fails. PR1743461
- Traffic loss will be observed when an invalid IPv6 link-local address is configured. PR1774767

MPLS

- MPLS LSP stats will not increment post the rpd restart. PR1719162

Network Management and Monitoring

- Syslog filter not functioning with generating /etc/syslog.conf+ file after syslog config is deactivated and re-activated. PR1726925
- The snmpd-subagent crash seen upon upgrading or rebooting. PR1732325
- The snmpd crash is observed after FPC restart. PR1737682
- Custom scripts might fail in Junos OS Evolved single Routing Engine platforms. PR1753283
- The snmpd-subagent core is generated if snmpwalk is executed on SNMP server for jnxLED mibs while the system is rebooting. PR1755599
- The snmpd-subagent cored. PR1760937

Routing Policy and Firewall Filters

- Commit error seen **Fast-lookup-filter <filter name> cannot be configured with next-header match condition**. PR1753514
- Firewall modification will cause the AFTman crash. PR1760210

User Interface and Configuration

- hasGlobalIP: Attribute GLOBALIPOWNER does not exist is reported on primary Routing Engine when commit synce to backup RE. PR1741284

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

IN THIS SECTION

These release notes accompany Junos OS Evolved Release 23.2R2 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

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

What's Changed

IN THIS SECTION

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

EVPN

- **Default behavior changes and new options for the easy EVPN LAG configuration (EZ-LAG) feature**—The easy EVPN LAG configuration feature now uses some new default or derived values, as follows:
  - Peer PE device `peer-id` value can only be 1 or 2.
  - You are required to configure the loopback subnet addresses for each peer PE device using the new `loopback-subnet peer1-subnet` and `loopback peer2-subnet` options at the `[edit services evpn device-attribute]` hierarchy level. The commit script uses these values for each peer PE device's loopback subnet instead of deriving those values on each PE device. The `loopback-subnet` option at the `[edit services evpn device-attribute]` hierarchy level has been deprecated.
  - If you configure the `no-policy-and-routing-options-config` option, you must configure a policy statement called EXPORT-LO0 that the default underlay configuration requires, or configure the new `no-underlay-config` option and include your own underlay configuration.
  - The commit script generates "notice" messages instead of "error" messages for configuration errors so you can better handle `[edit services evpn]` configuration issues.
  - The commit script includes the element names you configure (such as IRB instance names and server names) in description statements in the generated configuration.

- This feature also now includes a few new options so you have more flexibility to customize the generated configuration:

  - `no-underlay-config` at the `[edit services evpn]` hierarchy level—To provide your own underlay peering configuration.

  - `mtu overlay-mtu` and `mtu underlay-mtu` options at the `[edit services evpn global-parameters]` hierarchy level—To change the default assigned MTU size for underlay or overlay packets.

  [See Easy EVPN LAG Configuration.]

- **Change in options and generated configuration for the EZ-LAG configuration IRB subnet-address statement**—With the EZ-LAG `subnet-address inet` or `subnet-address inet6` options at the `edit services evpn evpn-vxlan irb` *`irb-instance`* `hierarchy`, you can now specify multiple IRB subnet addresses in a single statement using the list syntax `addr1 addr2 ?`. Also, in the generated configuration for IRB interfaces, the commit script now includes default `router-advertisement` statements at the `edit protocols hierarchy level` for that IRB interface.

  [See subnet-address (Easy EVPN LAG Configuration).]

Junos XML API and Scripting

- **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.

  [See file (JET).]

Network Management and Monitoring

- **Changes to the RPC response for `<validate>` operations in RFC-compliant NETCONF sessions (ACX Series, PTX Series, and QFX Series)**—When you configure the `rfc-compliant` statement at the `[edit system services netconf]` hierarchy level, the NETCONF server emits only an `<ok/>` or `<rpc-error>` element in response to `<validate>` operations. In earlier releases, the RPC reply also includes the `<commit-results>` element.

- **NETCONF `<copy-config>` operations support a `file://` URI for copy to file operations (ACX Series, PTX Series, and QFX Series)**—The NETCONF `<copy-config>` operation supports using a `file://` URI when `<url>` is the target and specifies the absolute path of a local file.

[See <copy-config>.]

- **Limit on number of IP address associations per MAC address per bridge domain in EVPN MAC-IP database**—By default, devices can associate a maximum of 200 IP addresses with a single MAC address per bridge domain. We provide a new CLI statement to customize this limit, `mac-ip-limit` statement at the **edit protocols evpn** hierarchy level. In most use cases, you don?t need to change the default limit. If you want to change the default limit, we recommend that you don?t set this limit to more than 300 IP addresses per MAC address per bridge domain. Otherwise, you might see very high CPU usage on the device, which can degrade system performance.

  [See mac-ip-limit.]

Platform and Infrastructure

- Previously, shaping of Layer 2 pseudowires did not work on logical tunnel interfaces. This has been fixed for all platforms except QX chip-based MICs and MPCs.

Routing Protocols

- In Junos OS Evolved platforms, `show route snooping` and `show route forwarding-table` does not show /56 routes in the VPLS address family table.
- Optimized mesh group routes (QFX5130 and QFX5700)— `show route snooping` for inet.1/inet6.1 table and `show route snooping table inet.1/inet6.1` display only CE mesh group routes for platforms that support EVPN-MPLS or EVPN-VxLAN multicast. In earlier releases, other mesh groups like the VE mesh group were also displayed.
- Before this change most list were ordered by the sequence in which the user configured the list items, for example a series of static routes. After this change the list order is determined by the system with items displayed in numerical sequence rather than by the order in which the items were configured. There is no functional impact to this change.
- The primary routing instance then starts index (hrStorageIndex) at 1, incrementing each time after assigning index to an entry in this list. If a mount is unmounted, the other mount's indices will not shift. hrstoragetable indices persist during the lifetime of mib2d. When a new mount is detected, it is assigned the next free index in the system. If there is no free index, it is assigned the last index +1.

Software Installation and Upgrade

- **The `request system software validate-restart` command output indicates the upgrade method (QFX5220-32D)**—The `request system software validate-restart` command output summarizes the method required to perform the indicated upgrade, for example, an application restart, an in-service kernel warm restart, or a system reboot. [See request system software validate-restart (Junos OS Evolved).]

User Interface and Configuration

- **Viewing files with the `file compare files` command requires users to have `maintenance` permission** — The `file compare files` command in Junos OS and Junos OS Evolved requires a user to have a login class with `maintenance` permission.

  [See **Login Classes Overview**.]

Known Limitations

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

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

Open Issues

IN THIS SECTION

Learn about open issues in this release for QFX Series switches.

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

General Routing

- L2 related daemons - lacpd, ifmand, and arpd - when patched using JSU might cause the Junos OS Evolved router to not boot up.PR1676132
- On QX5700, MKA session establishment might be delayed by up to 15 seconds after the configuration commit. PR1705117
- On a rare scenario, platforms having vendor PHY (88x7121P) such as ACX7348, QFX5700, ACX7100-32C, ACX7100-48L etc, intermittently traffic gets dropped on line side Tx/Rx, when device is is fully loaded/populated with optics/DAC cables and is rebooted.PR1708773
- The journald service might take a long time to complete logging resulting in a watchdog timeout along with generation of systemd-journald crash files. PR1740739
- On QFX5230-64CD 400G DAC cable of 2.5m and 4X100G DAC break out might not link up with some peer devices. This issue is not seen with all peer devices. The recommendation for this release is to use 1m DAC cable or supported 400G Optics. PR1747315

Interfaces and Chassis

- Enhancement in Junos OS Evolved platform for the commands `monitor interface` and `show interface` include interface description.PR1762065

User Interface and Configuration

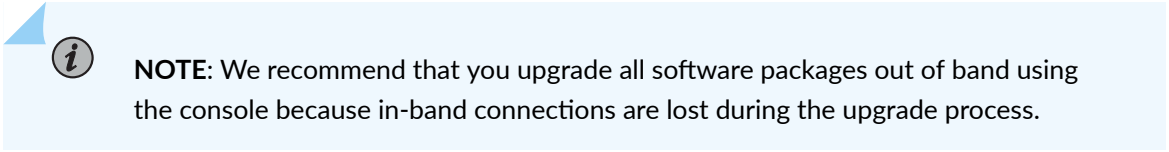
- Commit of `openconfig-interfaces:interfaces interface <> config openconfig-vlan:tpid <>` configuration fails with commit scripts error on QFX5130-32CD.

Upgrade Your Junos OS Evolved Software

Products impacted: ACX7024, ACX7100-32C, ACX7100-48L, ACX7509, PTX10001-36MR, PTX10003, PTX10004, PTX10008, PTX10016, QFX5130-32CD, QFX5220-32CD, QFX5220-128C, and QFX5700.

Follow these steps to upgrade your Junos OS Evolved software:

1. Using a Web browser, navigate to the All Junos Platforms software download URL on the Juniper Networks webpage: https://www.juniper.net/support/downloads/
2. In the Find a Product box, enter the Junos OS platform for the software that you want to download.
3. Select Junos OS Evolved from the OS drop-down list.
4. Select the relevant release number from the Version drop-down list.
5. In the **Install Package** section, select the software package for the release.
6. Log in to the Juniper Networks authentication system using the username (generally your e-mail address) and password supplied by a Juniper Networks representative.
7. Review and accept the End User License Agreement.
8. Download the software to a local host.
9. Copy the software to the device or to your internal software distribution site.
10. Install the new package on the device.



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

For more information about software installation and upgrade, see 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/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit https://www.juniper.net/support/warranty/.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

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

- Find CSC offerings: https://www.juniper.net/customers/support/
- Search for known bugs: https://prsearch.juniper.net/
- Find product documentation: https://www.juniper.net/documentation/
- Find solutions and answer questions using our Knowledge Base: https://kb.juniper.net/
- Download the latest versions of software and review release notes: https://www.juniper.net/customers/csc/software/

- Search technical bulletins for relevant hardware and software notifications: https://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: https://www.juniper.net/company/communities/
- Create a service request online: https://myjuniper.juniper.net/

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

Creating a Service Request with JTAC

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

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

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

Revision History

23 September 2025—Revision 3, Junos OS Evolved Release 23.2R2

5 April 2024—Revision 2, Junos OS Evolved Release 23.2R2

29 March 2024—Revision 1, Junos OS Evolved Release 23.2R2