Release Notes

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Junos OS Evolved Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices

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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 21.1R1.

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 ACX7100-48L Devices

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These release notes accompany Junos OS Evolved Release 21.1R2 for the ACX7100-48L routers. They describe new features, limitations, and known problems in the hardware and software.

What's New

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- What's New in 21.1R2 | 2
- What's New in 21.1R1 | 2

Learn about new features introduced in the Junos OS Evolved main and maintenance releases for the ACX7100-48L.

What's New in 21.1R2

There are no new features introduced in Junos OS Evolved Release 21.1R2 for the ACX7100-48L.

What's New in 21.1R1

To view other features supported on the ACX7100-48L, view the Feature Explorer using the following link. To see which features were added in the Junos OS Release Evolved 21.1R1 release, click the Group by Release link. You can collapse and expand the list as needed.

ACX7100-48L

What's Changed

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Learn about what changed in the Junos OS Evolved main and maintenance releases for the ACX7100-48L.

What's Changed in Release 21.1R2

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EVPN

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

  [See Changing Duplicate MAC Address Detection Settings .]

General Routing

- **Enhancement to the default `remnant-holdtime` (Junos OS Evolved platforms: QFX5130-32CD, and QFX5220)**— Starting this release, the default `remnant-holdtime` has been increased from 180 seconds to 300 seconds. This provides sufficient time for protocols to start and sync routes from neighbors in a scaled environment, during rpd restart. You can configure `remnant-holdtime` at the `edit routing-options forwarding-table` hierarchy level.

  See forwarding-table .]

Network Management and Monitoring

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

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

What's Changed in Release 21.1R1

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- Layer 2 Features | 4
- Network Management and Monitoring | 4
- Routing Protocols | 5
- System Management | 5
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Junos XML API and Scripting

- **The `jcs:invoke()` function supports suppression of root login and logout events in system log files for SLAX event scripts (ACX Series, PTX Series, and QFX Series)**—The `jcs:invoke()` extension function supports the `no-login-logout` parameter in SLAX event scripts. If you include the parameter, the function does not generate and log UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages when the script logs in as root to execute the specified remote procedure call (RPC). If you omit the parameter, the function behaves as in earlier releases in which the root UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages are included in system log files.

  [See invoke() Function (SLAX and XSLT).]

- **The `jcs:invoke()` function supports suppression of root login and logout events in system log files for SLAX commit scripts (ACX Series, PTX Series, and QFX Series)**—The `jcs:invoke()` extension function supports the `no-login-logout` parameter in SLAX commit scripts. If you include the parameter, the function does not generate and log UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages when the script logs in as root to execute the specified remote procedure call (RPC). If you omit the parameter, the function behaves as in earlier releases in which the root UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages are included in system log files.

  [See invoke() Function (SLAX and XSLT).]

Layer 2 Features

- **Modification to sync-reset command (ACX Series, PTX Series, and QFX Series)**—Starting from this release, the `sync-reset` command is disabled by default on all the Junos OS Evolved platforms. The `Sync-reset` command enables the device to send the sync bit in the LACP packets on minimum-link failure. Previously the `sync-reset` command was enabled by default on QFX Series, while it was by default disabled on PTX Series and ACX series.

  [See sync-reset.]

Network Management and Monitoring

- **Support for specifying the YANG modules to advertise in the NETCONF capabilities and supported schema list (ACX Series, PTX Series, and QFX Series)**—You can configure devices to emit third-party, standard, and Junos OS native YANG modules in the capabilities exchange of a NETCONF session by configuring the appropriate statements at the `[edit system services netconf hello-message yang-module-capabilities]` hierarchy level. In addition, you can specify the YANG schemas that the NETCONF server should include in its list of supported schemas by configuring the appropriate statements at the `[edit system services netconf netconf-monitoring netconf-state-schemas]` hierarchy level.

  [See hello-message and netconf-monitoring.]

Routing Protocols

- **Recommendation to include the local-address statement when configuring IBGP and multihop EBGP**—When a device peers with a remote device's loopback interface address, use the `local-address` statement at the `[edit protocols bgp group internal-peers]` hierarchy to specify the source information in BGP update messages. Although a BGP session can be established when only one of the paired routing devices has local-address configured, we strongly recommend that you configure `local-address` on both paired routing devices for IBGP and multihop EBGP sessions. The `local-address` statement ensures that deterministic fixed addresses are used for the BGP session end-points.

  [See local-address (Protocols BGP) and BGP Peering Sessions.]

System Management

- **Support for `exclude` option under `file archive` (ACX Series, PTX Series, and QFX Series)**—The `exclude` option is added under the command `file archive` that specifies the file pattern to exclude. This option helps to exclude files that delay compression or files that do not require compression.

  [See file archive.]

User Interface and Configuration

- **Verbose format option to export JSON configuration data (ACX Series, PTX Series, and QFX Series)**—The Junos OS CLI exposes the `verbose` statement at the `[edit system export-format json]` hierarchy level. We changed the default format to export configuration data in JavaScript Object Notation (JSON) from `verbose` to `ietf` in an earlier release. You can explicitly specify the default export format for JSON configuration data by configuring the appropriate statement at the `[edit system export-format json]` hierarchy level. Although the `verbose` statement is exposed in the Junos OS CLI as of the current release, you can configure this statement in earlier releases.
  [See export-format.]

Known Limitations

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Learn about limitations in this release for the ACX7100-48L.

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 egress IP MTU exception and fragmentation are not supported. The outgoing IP packets bigger than the configured interface MTU does not get fragmented. PR1558327
- For ACX7100-48L, on configuring or unconfiguring PTP TC, the interface needs reinitialization and therefore it is expected to see the interfaces go down and come up. PR1558603
- PTP TC on 100G in and 40G out interfaces alone exceed Class C threshold by 1 ns. 2 way time error (TE) and constant time error (cTE) for 100G in and 40G out interfaces meets Class C standards. For other interface speeds, PTP TC meets Class C standards.. PR1562699
- ACX7100-48L :: Multicast : IPv6 multicast traffic loss on downstream receiver along with inconsistent forwarding S,G route entry on the ACX7100-48L device. PR1564654

System Management

- Results from the `show ethernet-switching statistics` command are limited. Only the Current MAC count statistic is displayed. PR1564962

Open Issues

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- User Interface and Configuration | 8

Learn about open issues in this release for the ACX7100-48L.

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

General Routing

- On the ACX7100-48L platforms running Junos OS Evolved, you cannot clear or reset the disk option specified in the scheduled request node reboot command. The node reboots with the disk option last specified. PR1517596
- Errors related to am-l2alm are seen post system coming up after reboot: errors @ **[Layer2: Pil lfbd registry client callback failed for client:am-l2alm ifbd name: and AftLog: Error!! Bad input given to logger!]** seen. There is no functional impact. PR1565831
- Filter statistics do not work after deactivating the unsupported action in the egress direction. PR1568525
- When IPV6 unicast `strict-rpf` is enabled, IPv6 unknown multicast packets like NS/NA and unsolicited multicast packet is dropped. Issue is not fixed in 21.1R1, the workaround is to use static NDP for every IPv6 neighbor. PR1568938
- The traffic distribution on ECMP member links is dependent on input traffic parameters, and the parameters might be polarised on a certain link hence equitable distribution might not be seen. PR1573452
- Occasionally, on a doubly tagged VLAN, OSPF adjacency is not fully established due to MTU mismatch error. PR1579153
- On Junos OS Evolved ACX platforms (ACX7100-48L), if an IRB interface is replaced by another IRB interface in the same VLAN, ARPs might not be resolved on that IRB interface. PR1600209

Routing Protocols

- On Junos OS Evolved platforms, an rpd crash might be seen after reboot of the Junos OS Evolved device when MSDP is enabled. This might cause traffic drop until rpd comes up after the crash and restores all the routes. PR1536593

User Interface and Configuration

- On Junos Evolved platforms, HTTPS URLs are not handled properly in the backend code handling `file copy <https-url> <destination> ..` command. PR1596881

Resolved Issues

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Learn which issues were resolved in the Junos OS Evolved main and maintenance releases for the ACX7100-48L.

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: 21.1R2

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General Routing

- Continuous interface MAC change on the neighbor switch results in evo-pfemand running at high CPU and never returns to normal state. PR1564137
- The IRB logical interface is not created after a sequence of events. PR1565842
- On ACX7100-48L platform, when a large amount of ARP resolutions happen on IRBs in a very short time, the ARPD process usage can shoot to 100%. PR1568206

- ACX7100 :IPv6 ping does not work when strict uRPF enabled. PR1568938
- Router must not boot up with USB installation after selecting the second option **Type reboot** and hit **return**to complete the installation. PR1571930
- Few streams might observe 8-9 seconds traffic drop during ECMP member link flap. PR1573295
- PICD restart or crash might result in junks stats for carrier transition. PR1594253
- ACX7100: No MAC address present in Ethernet table, however ARP is present in the system. PR1597277

Infrastructure

- ToS of self-initiated packets might change unexpectedly. PR1578247

User Interface and Configuration

- The mgd process might crash after performing the commit check. PR1593192

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

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These release notes accompany Junos OS Evolved Release 21.1R2 for PTX10001-36MR, PTX10003, PTX10004, and PTX10008 Packet Transport Routers. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

IN THIS SECTION

- What's New in 21.1R2 | **10**
- What's New in 21.1R1 | **10**

Learn about new features introduced in the Junos OS Evolved main and maintenance releases for the PTX10001-36MR, PTX10003, PTX10004, and PTX10008.

What's New in 21.1R2

There are no new features introduced in Junos OS Evolved Release 21.1R2 for the PTX10001-36MR, PTX10003, PTX10004, and PTX10008.

What's New in 21.1R1

To view other features supported on the PTX platforms, view the Feature Explorer using the following links. To see which features were added in the Junos OS Release Evolved 21.1R1 and earlier releases, click the Group by Release link. You can collapse and expand the list as needed.

- PTX10001-36MR
- PTX10003
- PTX10004
- PTX10008

What's Changed

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Learn about what changed in the Junos OS Evolved main and maintenance releases for the PTX10001-36MR, PTX10003, PTX10004, and PTX10008.

What's Changed in Release 21.1R2

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EVPN

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

  [See Changing Duplicate MAC Address Detection Settings .]

General Routing

- **Enhancement to the show interfaces (Aggregated Ethernet) command (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.]

- **Enhancement to the default `remnant-holdtime` (Junos OS Evolved platforms: QFX5130-32CD, and QFX5220)**— Starting this release, the default `remnant-holdtime` has been increased from 180 seconds to 300 seconds. This provides sufficient time for protocols to start and sync routes from neighbors in a scaled environment, during rpd restart. You can configure `remnant-holdtime` at the `edit routing-options forwarding-table` hierarchy level.

  See forwarding-table .]

Interfaces and Chassis

- **Fabric OAM is disabled by default (PTX10003-80C and PTX10003-160C)**—We've disabled the fabric Operation, Administration, Maintenance (OAM) feature. Therefore, the CLI command `set chassis fabric oam detection-disable` is not functional as the feature remains disabled by default in this release. In Junos OS Evolved Release 20.4R1, the fabric OAM feature, which helps in detecting failures in fabric paths, was enabled by default.

  [See Error Handling by Fabric OAM.]

Junos Telemetry Interface

You can enter `zero suppression no-zero-suppression` at the `edit services analytics` hierarchy level to disable zero suppression for gRPC-based sensors. When this feature is enabled, data for a sensor is sent to the collector if the sensor value is zero. All key value pair updates will be streamed to a collector without performing any zero suppression.

To enable `zero suppression` again (the default), delete the configuration by entering `delete services analytics zero-suppression no-zero-suppression`.

Whenever this feature is set or deleted, any existing collector is disconnected.

Network Management and Monitoring

- **Fault alarm generated for feed failure on a DC power supply (PTX10008)**—A fault alarm is generated when only one of the feeds on a DC power supply (A0 and B0 or A1 and B1) is faulty.

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

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

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Authentication, Authorization, and Accounting (AAA)

- **SSH session connection limit and rate limit per connection (PTX Series)**—We have introduced the `connection-limit` and `rate-limit` options at the `set system services ssh` hierarchy levels. The default connection limit value is 75 connections, and the default rate limit value is 3 connections per second. Junos OS measures the rate limit value per minute but Junos OS Evolved measures the rate limit value per second.

General Routing

- **Secure boot disabled alarm is raised (PTX10008)**—The `Secure boot disabled` alarm is raised when the system boots with secure boot disabled in bios.
- **Fault alarm generated for feed failure on a DC power supply (PTX10008)**— A fault alarm is generated when only one of the feeds on a DC power supply (A0 and B0 or A1 and B1) is faulty.

- **Deprecated command `show system buffers`**—This command is not applicable in Junos OS Evolved because the command displays the status of kernel mbufs, which are not used in Linux-based systems like Junos OS Evolved. In releases before it was deprecated, the `show system buffers` command returns NULL.

Interfaces and Chassis

- **PTX10003 routers do not support set chassis fpc fpc-slot power on**—The PTX10003-80C and PTX10003-160C routers do not support the `set chassis fpc` *`fpc-slot`* `power on`command. Executing this command on an FPC which is offline could cause unintended reboots of the router.

- **Warning message when taking an FPC offline**—PTX10003-80C and PTX10003-160C devices do not support the `request chassis fpc slot` *`slot-number`* `online` command. The only way to bring up an FPC (MPC) that is offline is by rebooting the chassis. So, when you take an FPC offline by using the `request chassis fpc slot` *`slot-number`* `offline` command, the screen displays the following message: **'Warning : FPC <slot> cannot be made online using a CLI command. You need to perform router reboot using "request system reboot" to online the FPC <slot>. Do you wish to continue ? [yes,no] (no).'**

  [See request chassis fpc.]

Juniper Extension Toolkit (JET)

- **Python 3 add-on modules (PTX Series)**—Junos OS Evolved includes additional Python 3 libraries and modules, which Python scripts can import and use.

  [See Overview of Python Modules on Devices Running Junos OS.]

Junos XML API and Scripting

- **The `jcs:invoke()` function supports suppression of root login and logout events in system log files for SLAX event scripts (ACX Series, PTX Series, and QFX Series)**—The `jcs:invoke()` extension function supports the `no-login-logout` parameter in SLAX event scripts. If you include the parameter, the function does not generate and log UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages when the script logs in as root to execute the specified remote procedure call (RPC). If you omit the parameter, the function behaves as in earlier releases in which the root UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages are included in system log files.

  [See invoke() Function (SLAX and XSLT).]

- **The `jcs:invoke()` function supports suppression of root login and logout events in system log files for SLAX commit scripts (ACX Series, PTX Series, and QFX Series)**—The `jcs:invoke()` extension function supports the `no-login-logout` parameter in SLAX commit scripts. If you include the parameter, the function does not generate and log UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages when the script logs in as root to execute the specified remote procedure call (RPC). If you omit the parameter,

the function behaves as in earlier releases in which the root UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages are included in system log files.

[See invoke() Function (SLAX and XSLT).]

Layer 2 Features

- **Modification to sync-reset command (ACX Series, PTX Series, and QFX Series)**—Starting from this release, the `sync-reset` command is disabled by default on all the Junos OS Evolved platforms. The `Sync-reset` command enables the device to send the sync bit in the LACP packets on minimum-link failure. Previously the `sync-reset` command was enabled by default on QFX Series, while it was by default disabled on PTX Series and ACX series.

  [See sync-reset.]

- **New commit check for MC-LAG (PTX Series, QFX Series)**—We've introduced a new commit check to check the values assigned to the redundancy group identification number on the MC-AE interface (`redundancy-group-id`) and ICCP peer (`redundancy-group-id-list`) when you configure multichassis aggregation groups (MC-LAGs). If the values are different, the system reports a commit check error. In previous releases, if the configured values were different, the l2ald process would crash.

  [See iccp and mc-ae.]

Network Management and Monitoring

- **Support for specifying the YANG modules to advertise in the NETCONF capabilities and supported schema list (ACX Series, PTX Series, and QFX Series)**—You can configure devices to emit third-party, standard, and Junos OS native YANG modules in the capabilities exchange of a NETCONF session by configuring the appropriate statements at the `[edit system services netconf hello-message yang-module-capabilities]` hierarchy level. In addition, you can specify the YANG schemas that the NETCONF server should include in its list of supported schemas by configuring the appropriate statements at the `[edit system services netconf netconf-monitoring netconf-state-schemas]` hierarchy level.

  [See hello-message and netconf-monitoring.]

- **The `write-file` option at the `monitor traffic interface` hierarchy level takes precedence**—The `write-file` option at the `monitor traffic interface` hierarchy level takes precedence over the `extensive` option when you configure them simultaneously. If you try to configure these options at the same time, Junos OS Evolved gives you a warning message that the options are not compatible, and it only runs the `monitor traffic interface write-file` command.

  [See monitor traffic.]

Operation, Administration and Maintenance

- **Fabric OAM is disabled by default (PTX10003-80C and PTX10003-160C)**—We've disabled the fabric Operation, Administration, Maintenance (OAM) feature, which helps in detecting failures in fabric paths. This release does not support disabling this feature by using the `set chassis fabric oam detection-disable`. In Junos OS Evolved Release 20.4R1, the fabric OAM feature was enabled by default.
  [See Error Handling by Fabric OAM.]

Routing Protocols

- **Recommendation to include the local-address statement when configuring IBGP and multihop EBGP**—When a device peers with a remote device's loopback interface address, use the `local-address` statement at the `[edit protocols bgp group internal-peers]` hierarchy to specify the source information in BGP update messages. Although a BGP session can be established when only one of the paired routing devices has local-address configured, we strongly recommend that you configure `local-address` on both paired routing devices for IBGP and multihop EBGP sessions. The `local-address` statement ensures that deterministic fixed addresses are used for the BGP session end-points.

  [See local-address (Protocols BGP) and BGP Peering Sessions.]

System Management

- **Support for `exclude` option under `file archive` (ACX Series, PTX Series, and QFX Series)**—The `exclude` option is added under the command `file archive` that specifies the file pattern to exclude. This option helps to exclude files that delay compression or files that do not require compression.

  [See file archive.]

User Interface and Configuration

- **Verbose format option to export JSON configuration data (ACX Series, PTX Series, and QFX Series)**—The Junos OS CLI exposes the `verbose` statement at the `[edit system export-format json]` hierarchy level. We changed the default format to export configuration data in JavaScript Object Notation (JSON) from `verbose` to `ietf` in an earlier release. You can explicitly specify the default export format for JSON configuration data by configuring the appropriate statement at the `[edit system export-format json]` hierarchy level. Although the `verbose` statement is exposed in the Junos OS CLI as of the current release, you can configure this statement in earlier releases.
  [See export-format.]

Known Limitations

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Learn about limitations in this release for the PTX10001-36MR, PTX10003, PTX10004, and PTX10008.

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

EVPN

- If a packet with unknown inner ether-type is received at the device over an EVPN-MPLS tunnel, then such packet is dropped. PR1564431

General Routing

- Excess-rate configuration in port schedulers might not be completely honored in certain scenarios. In such scenarios, with explicit excess-rate configuration the actual excess-rate achieved might still be more in proportion to the configured transmit-rate. PR1528124
- Double-fault scenarios are not handled by link auto-heal feature and fabric links remain down if the Routing Engine switchover is attempted while auto-heal recovery is in progress. PR1529599
- When a scheduler-map binding is removed from an interface, then default scheduler-map is bound to the interface. If default scheduler-map is an oversubscribed scheduler map for the interface, then that map is not applied to this interface and all "interface queue" counters for this interface show statistics as 0. PR1539052

- PTX10008: By default IPv6 addressing is configured with /64 subnet irrespective of the subnet configured on the DHCP server side. PR1539839
- On all Junos OS and Junos OS Evolved platforms when the next-hop is added or changed to Packet Forwarding Engine and the same next-hop also forwards nexthop of an indirect route, if ingress Packet Forwarding Engine is fast and egress Packet Forwarding Engine is slow, then this results in packet loss as ingress Packet Forwarding Engine being faster sees new FNH and also the indirect change. However, egress Packet Forwarding Engine being slower does not consume indirect change yet. PR1547432
- On Junos OS Evolved PTX10008 platforms, if multiple SIBs are in offline state and GRES is performed immediately, SIBs might get stuck in offline state for sometime. PR1554423
- UDP encapsulated MPLS packets with explicit null label received on FTI tunnel gets dropped after UDP decapsulation. After UDP tunnel header decapsulation MPLS payload with explicit null label cannot be forwarded as it requires popping MPLS explicit null label and lookup of MPLS inner payload which is not supported in BT ASIC based products without looping back the MPLS payload for additional lookup. We support only scenarios where we decapsulate the tunnel header and forward the packets based on the exposed MPLS Label. PR1580641
- PTX10003 interface queue and voq does not report drops when the low priority queue is oversubscribed. PR1581490

Interfaces and Chassis

- In PTX10003-80C or PTX10003-160C, when there is over-subscription traffic across Packet Forwarding Engines and one of the Fabric ASICs (ZF) goes bad, the software takes an automatic action to recover the system by issuing an automatic SIB offline and then online. However, if the egress traffic is at line-rate, the traffic would take time to converge till which there are fabric drops. PR1580376
- For 25G speed channelisation, due to ASIC limitation in PTX10003 no two neighbouring channels (1-2, 3-4) can be configured with different FEC mode else the link remains down. PR1580717

MPLS

- If all the Routing Engines are not rebooted after a network service configuration change (for example, changing the range of MPLS labels), the rpd process might crash. PR1461468

Routing Protocols

- On all platforms with dual Routing Engines running Junos OS or Junos OS Evolved, BGP Nonstop-Routing replication might be stuck in a rare and timing case. BGP session(s) on the primary Routing Engine are stuck in "SoWait" state, and BGP session(s) on the backup Routing Engine cannot sync with the primary Routing Engine. From the BGP peer side, the BGP session(s) break after hold-time expiry (90 seconds by default).

  This defect could be seen after the following series of events happen:

  1. BGP NSR replication starts while primary Routing Engine (BGP session) is busy reading packets (that is, protocol data unit).
  2. Primary Routing Engine (BGP session) requests to stop reading at PDU boundary.
  3. While BGP session on primary Routing Engine waits to read complete packet (remaining bytes), the TCP sync connection (between primary and backup BGP) flaps (that is., PDU boundary is not read before the flap.PR1581578

System Management

- Results from the `show ethernet-switching statistics` command are limited. Only the Current MAC count statistic is displayed. PR1564962

Open Issues

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Learn about open issues in this release for the PTX10001-36MR, PTX10003, PTX10004, and PTX10008.

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 **irp_intr_smp_trap** error messages are seen on PTX10003 console while bouncing the IGP protocols and restarting the routing daemon. PR1422881
- Currently in Junos OS Evolved platforms, the missing FRUs are not shown as absent or empty in `show chassis environment`. Therefore, we might not get the total FRUs supported in that platform. PR1505536
- When VSTP vport scale crosses 3500, it leads to VSTP convergence issues due to BPDU drops in packetio of Packet Forwarding Engine. This issue can be solved by adding DDOS configuration to support the increased scale. PR1509685
- With multiservices scaled configuration and Junos Telemetry Interface monitoring running after routing-restart, protocols or services remains down and rpd does not respond or recover.PR1520977
- Last occurred timestamp of system errors must show actual clock time in addition to milliseconds ago. PR1524907
- In Junos OS Evolved 20.3, fabsopke-fchip core might be seen if fabsopke-fchip restarts and sib offline happens one after the other within the same minute. Any previous alarm does not get cleared. PR1525577
- When global port-mirroring is configured on the device and queried for xml info, everything works as expected. When that global port-mirroring configuration is deactivated and xml is queried, the display info misses the port-mirroring-instance info. PR1529413
- Each filter contains one or more filters terms. Each filter term might contain counters. If traffic hits the filter term then counter (packets/bytes) increments. If a user tries to modify the unsupported scaled filter, then counters (Packets/Bytes) in filter terms are cleaned up which means the counters do not retain the original values before the modification. PR1530597

- Inconsistent core.python2.7.mpc0 core is seen with stacktrace @ea_wi_precl,@ea_macsec_receive(). PR1534568
- In a scaled setup it is possible that during GRES operation, the rpd on new primary Routing Engine can receive an ifstates update (DEL and CHANGE) and these are not expected during rpd re-syncing in such case the rpd generates a core file and recovers automatically. PR1537947
- On the Junos OS Evolved platforms with MPLS EXP rewrite rules configured, if the router performs PHP (Penultimate Hop Popping), the EXP rewrite does not take effect on the exposed label. Due to this, the packets might get into the wrong queue and even get dropped during a network congestion situation. PR1538918
- GRES is not supported, when FPCs are restarted. PR1539685
- Issue the CLI command `show system fabric app-status` to see a list of fabric applications that run in the system and fetch the application status using the right application name. PR1540706
- PTX10008 JNP10K-LC1202 : When applications crash on the FPCs, these applications generate core files in a rare scenario that are not transferred to the Routing Engine. This is because the script that transfers cores from FPC to Routing Engine fails to create directory on the Routing Engine. This happens when a file with the same name exists on the location. PR1540807
- PTX10003-80C configuration archival might not work. PR1540843
- Intermittent license-check.core observed during the device initialization. License daemon restarts and start providing the required support. There is no service impact. PR1545175
- In scenario of queue congestion, interface enable ordisable or in PFC mode this interrupt can come on this release. PR1553943
- There is traffic loss on some SRv6 flows post FPC restart. PR1562066
- This is a day one issue. When a new p2mp template (say template1) is added, it overwrites the default_p2mp template for the LSPs. When we update from template1 to template2, the change does not take effect. The issue has a workaround by removing p2mp template for template1 and then re-adding the template2. PR1564795
- The `request system zeroize` command does not cleanup file-system on backup disk. PR1569294
- Changing decap only tunnel destination address configuration after tunnel is up is not handled and uses previously configured tunnel destination address for decapsulation. Once system enters this state any further changes to tunnel configuration is not handled. PR1575724
- Junos OS Evolved jkeys matches Junos OS jkeys util-asic-to-host-packet-rate -> util-wan-and-host-inject-pps-rate.PR1578134

- PTX10008: CB 1 becomes Fault Standby after issuing `request node power-off re1` on primary re0. PR1581476
- sflow ingress sampling does not work for user IPv6 traffic with aggregated Ethernet ECMP case at last hop router with UHP LSP. PR1582960
- In Junos Evolved when jflow is configured, more number of states (compared to without jflow configuration) needs to be re-synced after routing is restarted, leading to increased resync time for routing protocol daemon. This might cause adjacencies in different routing protocols to timeout, defeating graceful restart feature. The graceful restart hold timers for protocols need to be increased when jflow is configured, the exact values to be determined based on testing. PR1583029
- Traffic loss is observed after picd restart with Layer 2 circuit, Layer 2 VPN and Layer 3 VPN and no traffic loss is observed in stead state. PR1584301
- During rpd restart and GRES scenario, when an interface is deleted and the corresponding nexthop is about to be deleted, we can see the following error message **RPD_KRT_KERNEL_BAD_ROUTE: krt unsolic client.: lost ifl 0 for route**. This message does not have any functional impact. This is a corner case and the probability of occurrence is low. The error happens when rpd is re-playing the route whose nexthop's interface was just delinked and linked to a local interface. PR1586466
- Junos OS Evolved-NSR: VM core file is observed once while performing switchover (42nd iteration). PR1590372
- Application error alarms and trace-writer core files are generated on Junos OS Evolved PTX10008 due to defunct rcp zombie. PR1595409
- On all Junos OS Evolved platforms, if the primary-only address configured on the device, when Routing Engine switchover, the primary-only address keeps in the old primary (new backup) and the new master Routing Engine's primary (physical interface device) is not generated, the device might be inaccessible. PR1598173
- Fan tray controller status LED and SIB PWR LED are unlit/off on PTX10008 Junos OS Evolved. PR1600178
- In PTX10008, at times, MVRP enabled trunk ports can go into blocked or designated state if the peer connected to the interface has no VLANS configured in its trunk port. PR1601915
- On PTX10003, the GRE keepalive packet with recursion control bit set gets dropped if the GRE header check is enabled. PR1602353

Infrastructure

- Rebooting the PTX10003 during a broadcast storm on the management port might cause a fault on the PTX10003. PR1423216
- When using a source IP address as the management address of the box to ping a network address on a peer, the response for the ICMP ping from the peer, can end up on the management interface of the box, which is dropped by the Linux kernel as the RPF check is set to strict by default on the Linux kernel used on Junos OS Evolved. The Linux kernel expects the path to the peer to be on the WAN side and so drops the packet when it is received on the management interface from the peer when the RPF check for the management interface is set to strict. PR1498255
- The GRES triggered through `request chassis routing-engine master switch` starts showing connector driver overlay messages: **{master} root@ptx10004-05-re0> [1185.081257] gpio-jnx-i2cs gpio-jnx-i2cs.50: Asserting power_status irq 59 [1185.125182] OF: overlay: overlay_is_topmost: #9 clashes #10 @/ftc0/i2c-bus/i2cs@54/fan_hwmon [1185.125183] OF: overlay: overlay #9 is not topmost**PR1539232

Interfaces and Chassis

- When routing instance primary IFF does not have an address, ping packets do not have source filled. As a result, the ping packet reply is not received. As a workaround, configure the lo0 address. PR1547622
- On PTX10003 or PTX10008 platforms running Junos OS Evolved releases, the SIB (Switch Interface Board) might be stuck at an "offlining" state after performing offline and online operations if one of the Packet Forwarding Engines on FPC is in a fault state. PR1591076
- The `show platform object-info anomalies summary` CLI command might time out after the system is up for some time. This does not affect normal operation of the system but this debug command does not work. PR1598337

Juniper Extension Toolkit (JET)

- jsd core file might be seen during NSR on rare occasions. This has no impact on JET/telemetry service. PR1566945

- In a network where there are high packet drops, if the peer end (grpc collector/client) gets closed, the TCP sessions are held in established state in the device. The issue is not seen in a normal network. PR1592542

Layer 2 Features

- It is observed rarely that issuing `request system zeroize` does not trigger zero-touch provisioning. A workaround is to re-initiate the ZTP. PR1529246

MPLS

- The in-progress change of weighted ECMP to ECMP and vice versa does not take full effect for all routes using the LSPs until all those LSPs currently signaled with non zero bandwidth have gone through at least one of the MBB or clear or disable event. The traffic distribution is not as expected until all the LSPs finish the transition. This is because without any of those triggers, the LSP does not automatically update the next hop based on weighted ECMP configuration, next-hop content of each participation LSP affects the traffic distribution among ECMP paths. The weighted ECMP distribution ratio is not as expected until the adjustment of all LSPs are finished. PR1501860

- In corouted bidirectional RSVP (Resource Reservation Protocol) LSP (Label-Switched Path) scenario `set protocols mpls label-switched-path` *`lsp name`* `corouted-bidirectional` is configured on the ingress router), when the upstream interface of the transit corouted LSP is bounced by modifying the `maximum-labels` configuration statement on the corresponding interface on the upstream router, the transit LSP gets reset. The rpd process might crash on this transit router during the LSP reset and traffic loss might be seen. PR1544890

Routing Protocols

- On Junos OS Evolved platforms, an rpd crash might be seen after reboot of the Junos OS Evolved device when MSDP is enabled. This might cause traffic drop until rpd comes up after the crash and restores all the routes. PR1536593

- On all Junos OS and Junos OS Evolved platforms with `static defaults` configured under `routing-options` hierarchy, if IPv4 static route configuration is added, and then deleted, the IPv4 static route is not removed from the routing table and still forwards traffic unexpectedly due to this issue. PR1599084

User Interface and Configuration

- When a user tries to deactivate the mpls related configuration, the commit fails on the backup Routing Engine. PR1519367
- If an inet filter is configured with or without a `family` statement then changing its configuration to remove or add a `family` statement might cause the filter process (firewalld) to restart unexpectedly. PR1556426
- The `connection-limit` and `rate-limit` configuration statements are missing in Junos OS Evolved under `system services netconf ssh` hierarchy whereas the same is available at `system services ssh` level.PR1562205
- The `scp` command does not work from CLI. Users can use `file copy` CLI command instead of `scp` CLI command as a workaround. PR1582916
- On Junos Evolved platforms, HTTPS URLs are not handled properly in the backend code handling `file copy <https-url> <destination> ..` command.

  PR1596881

Resolved Issues

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- Resolved Issues: 21.1R2 | **26**
- Resolved Issues: 21.1R1 | **33**

Learn which issues were resolved in the Junos OS Evolved main and maintenance releases for the PTX10001-36MR, PTX10003, PTX10004, and PTX10008.

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: 21.1R2

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General Routing

- Ungraceful SIB failures result in transient loss of traffic. PR1497212
- VCCV type 1 connectivity verification is not supported. PR1503724
- **mpls-label** not getting reaped out when configured for SR-sid ingress sensors. PR1516811
- [Junos OS Evolved PTX10008]: PDT: DCDCEdge-VPNTunnelMulticastL3L2:serviceability :core file creation failure, aftmand core is stuck at `/var/lib/ftp/in/`] PR1522404
- User might not be able login to PTX10001-36MR after multiple abrupt power cycles or reboots. PR1523238
- Set of Info level ORPHAN (no passwd entry) cron logs is displayed every 1 minute. PR1527266
- FPC vmcore files can be stored at `/var/lib/ftp/in/fpc_slot/` on Routing Engine0/Routing Engine1. PR1531214
- `show chassis alarms` should be redirected to `show system alarm`. PR1536020
- Port mirroring stops working for FTI interface when GRE source is changed. PR1536223
- PTX10001-36MR : PTX10001-36MR :: `show ddos-protection protocols bgp statistics brief` is throwing error - communication failure with /re0/evo-aftmand-bt/ PR1547491

- **CoS WRED Curve: Create Expr Curve: No curve data points** errors are seen when interpolate is configured under drop profile. PR1554220
- PTX10008 : PTX10008 PFC: Global Ethernet Flow-control should be disabled when PFC CNP is enabled on an Interface. PR1554345
- The output of `show interface queue <>` always show `forwarding classes: 16 supported, 4 in use` with customized configuration. PR1554370
- Junos OS Evolved-PTX10003-80C and PTX10003-160C :: firewalld:Anomalies are seen in firewalld app for Publish publish-deleted.PR1559046
- Junos OS Evolved-PTX10008: Zero suppression disable for 20.4R2. PR1559882
- Telemetry might not work after reboot or upgrade on Junos OS Evolved platforms. PR1560496
- Traffic drop might be seen after Packet Forwarding Engine restart. PR1560901
- Timingd-lc errors, **CdaExprClient: grpc api call ExprServerInfoGet failed" and "CdaExprClient: Failed to fetch server info error:5** seen on all FPCs after restarting the router or FPC restart. PR1561362
- CPU utilization of evo-aftman process goes to 100% in a certain scenario on Junos OS Evolved PTX Series devices. PR1562328
- The ARP might not resolve and traffic might be dropped on Junos Evolved platforms. PR1563684
- The evo-cda-bt might crash in large scaled configuration scenario. PR1565427
- Observed license-check core on RE-1 during runtime removal of CB[0] SAM FPGA from PCie device. PR1567066
- Drop counts in `show interfaces voq ae0` might not match with `show interfaces queue` when `clear interface` command is issued while traffic is flowing. PR1567598
- Routes learned through IRB interface might not be reachable in IBGP setup. PR1568566
- Junos OS Evolved:JDI_FT_REGRESSION: Line card (PTX10000-LC1202-36MR) [firewall] [filter_installation] PTX10008/PTX10004 :: scu-class-name is taking more than 60 seconds to come up with scaled aggregated Ethernet configuration. PR1568957
- The firewalld crash might be seen if GRES is executed as soon as the firewall is activated (for example, commit is done). PR1569427
- PTX10008: User script output should be logged during ZTP execution for determining failure in the logs. PR1570167
- Interface hold-time down feature might not work in some conditions. PR1570204

- The ZTP state machine might be stuck on the management interface for about 12 minutes. PR1570598
- Traffic loss time more than link failover time might be seen on PTX10008. PR1570665
- Certain leaves in /components/component[name='FPC1:CPU']/properties/property/cpu-utilization-total is not in Junos OS Evolved 20.4R2. PR1571502
- The log and syslog action does not work along with port-mirror or sample in PTX10003-80C, PTX10003-160C and PTX10008. PR1572239
- FPCs get restarted automatically after ungraceful removal of SIBs. PR1572431
- [Junos Telemetry Interface] PTX10008:: NPU Memory KHT DLU IDB value.PR1572704
- Junos OS Evolved: Specially crafted packets might cause the AFT manager process to crash and restart. PR1572969
- The `hash-key label-1-exp` CLI configuration statement does not take effect. PR1573109
- Junos OS Evolved:JDI_FT_REGRESSION: PTX10008 [jflow][Firewall]: Counter value from sampling firewall fails while validating IPv4 and IPv6 egress sampling with static routes. PR1573969
- Traffic might not get load balanced after setting and deleting the hash-seed value. PR1574108
- All queues do not get correct rate as per committed when more than one queue are configured with `transmit-rate remainder`. PR1574121
- Junos OS Evolved-PTX10008, CLI timout Error `communication failure with /fpc0/evo-aftmand-bt/` and traffic loss seen. PR1574513
- Some error messages might be seen when performing continuous aggregated Ethernet deactivate or activate on PTX Series. PR1574714
- The rpd might continuously crash if deleting forwarding-class policy with discard action. PR1575177
- Huge invalid stats shown in `show interface statistics` when an interface is removed and added from the aggregated Ethernet bundle. PR1575623
- The distribution of buffer with buffer-size remainder is not correct on Junos OS Evolved PTX Series. PR1575798
- Loss on IPv6 traffic streams might be observed after NSR SWO. PR1576369
- Clock status holdover when configured for free-run. PR1576487
- On PTX10008 Junos OS Evolved, incorrect capacity value is shown on JNP10K-PWR-AC2 /JNP10K-PWR-DC2 PSM. PR1578682

- The kernel might hang if multiple Routing Engine primary switchovers are performed in a short span of few seconds. PR1578693
- FPC Status LED are not turn RED with power fault. PR1579466
- The Packet Forwarding Engine function might break down on all FPCs after performing Routing Engine switchover on Junos OS Evolved platform. PR1579683
- FPC is stuck in online state and seen continuously rebooting during unified ISSU. PR1580374
- The l2cpd process might crash on Junos OS Evolved platforms with dual Routing Engines. PR1580479
- Junos Telemetry Interface properties missing after HwD app restart. PR1580735
- In certain scenarios, shapers applied on a 10G interface might drop the traffic more than the configured max-rate. PR1580795
- Streaming over IPv6 fails in Junos OS Evolved. PR1581341
- [mpls] PTX10004 :: PDT - after disabling the active path, forcing FRR, we see large traffic loss, also we see that the irp.core.trapcode.cfg_err counter increased. PR1582170
- The CLI `show chassis craft-interface` not showing correct PSM LED status on PTX10008 Junos OS Evolved. PR1582444
- Node locked license addition fails in Junos OS Evolved. PR1582704
- Junos Telemetry Interface: Interfaces: Missing Leaves - Transceiver/state. PR1583076
- New primary might be struck with **switchover is in transition, please wait** after primary reboot test case if the switchover happens back-to-back within 2-3 seconds. PR1583347
- The system might crash if configuring IPv6 FBF with prefix < /88 on all Junos OS Evolved platforms. PR1583374
- The FRR convergence number is high with ALB enabled on aggregated Ethernet bundle. PR1583866
- The ospf-hello ddos stats pktCnt is listed as 0. PR1584458
- After PIC offline and online, `show interfaces queue <intf>` shows large values for cumulative tail-drop and RED-drop packets and bytes. PR1585552
- Packet loss might be seen during global repair of FRR. PR1586122
- PTX10008: NPU HBM statistics. PR1586148
- Remove SIB without going offline, initially it might cause traffic impact. PR1586820

- The FPC on Junos Evolved PTX10004 or PTX10008 platforms might crash. PR1587676
- The exported header of the NPU Sensors is changed to match Junos OS. Npu Sensor: **components-memory** to **components** PR1588242
- Traffic loss observed on global repair after disabling of active path forcing FRR. PR1589803
- If a system has power shortage, then post switchover we see unexpected FPCs or SIBs go down on the new primary. FPCs that were down on the previous primary might be online if they are discovered earlier in the powerManager on the new primary. PR1592004
- PTX10008 Serviceability: picd log floods when there is **optics does not support configured speed** system alarm. PR1592165
- ZTP occasionally fails to apply user configuration after the system upgrade. PR1592281
- Duplicate Junos Telemetry interface leaf **oper-status** tag for physical interface index 16386 has mismatch value. PR1592468
- The firewall filter might not take into effect on Junos Evolved PTX Series platforms. PR1592500
- Port related component sensor does not get exported when subscribed to `/components/component/state/` path. PR1593031
- Port mirroing instance down with mirrored output as tagged interface. PR1593276
- On Junos OS Evolved platforms, "type" leaf value for "FPC3:PIC0:PORT0:XcvrX" displays XCVR as opposed to TRANSCEIVER displayed in Junos OS. PR1595103
- Some TCP sessions might not be established after performing the `request system snapshot` command. PR1595470
- Post switchover if `show chassis hardware` shows entries for removed PSMs then reinserting these PSMs will not power back the offlined FPCs. PR1597076
- The channel 0 physical interfaces does not come up after adding the correct speed configuration. PR1604810

Class of Service

- The cosd crash might be observed on Junos OS Evolved platforms. PR1566161
- The cosd core can be seen on the issue of `run show class-of-service` PR1580573
- The user-defined cos might not get applied on the interface on setting the class-of-service interface **all**. PR1592900

EVPN

- Sometimes Broadcast, Unknown Unicast, and Multicast (BUM) traffic that comes through evpn-mpls tunnel gets dropped or duplicated when going out of aggregated Ethernet interface after tunnel termination when aggregated Ethernet members are spanned across multiple Packet Forwarding EnginesPR1578314
- PTX10001-36MR: EVPN missing option under routing-instances <> protocols.PR1581821

General Routing

- Silent switchover might be triggered on executing restart routing. PR1570993
- The rpd agent crashes during interface flapping. PR1572940
- [rpda] PTX10004 : :: PDT: rpdagent crash seen in the primary Routing Engine @NHTable::insert , comp_nh_rts_handler after fourth GRES with GR enabled. PR1593104

Infrastructure

- Uncompressed vmcore with no backtrace. PR1564506
- ZTP over IPv6 on a management interface is not functional on all Junos OS Evolved platforms. PR1567967
- The backup router might get stuck in the idle state during the NSR replication for IBGP single hop peers. PR1569696
- Next-hop incorrectly associated with lo0 in the forwarding table when the interface is configured as unnumbered. PR1570918
- Ftp ipv6 server function may be failure on all Junos OS Evolved platforms. PR1591733
- The TCP-based protocol sessions might remain down after multiple Routing Engine switchovers .PR1593580
- `detail` and `write-file` options for CLI command `monitor traffic interface` are incompatible with each other when used simultaneously. PR1596188

Interfaces and Chassis

- [hostpath] [hostpathtag] Junos OS Evolved-PTX10003 : :: "picd" Publish-deleted anomolies seen for the type "net::juniper::hwd::serdesDfeTuneStatusE". PR1547484

- **show interface description** display order is different from Junos OS and Junos OS Evolved. PR1576224
- Junos Telemetry Interface optics sensor's alarm data type changed from " bool_val" to "str_val". PR1580113
- PTX10008: ifmand core seen on configuring primary-only on the non-duplicate address. PR1583681
- When changing the Micro BFD session's address from IPv4 to IPv6 or vice versa, the BFD session and aggregated Ethernet interfaces go down. PR1584853
- Some interface units description are missing from the output of **show interfaces description** on certain PTX Series platforms running Junos OS Evolved. PR1591340
- PTX10003-80C and PTX10003-160C [Interfaces] [Channelization]:25G interfaces with FEC91 goes down on few configurations. PR1594740
- PTX10003-160C Junos OS Evolved, interface is not programed in routing-instance. PR1596768

Network Management and Monitoring

- The SNMP hostname does not match the configured hostname on Junos OS Evolved based device. PR1567835

Routing Policy and Firewall Filters

- Toggle of the interface-specific field of filter already bound to interface is not allowed. PR1571654
- The firewalld might crash if configuring fragment-offset out of the range (fragment-offset 1-900000000000).PR1605805

Routing Protocols

- JDI_Regression_EVO_PTX10008: rpdagent core seen while testing BFD state replication. PR1571824

User Interface and Configuration

- shell-init: error retrieving current directory: getcwd: cannot access parent directories: No such file or directory. PR1549479
- The LACP might stop working after disabling lacp sync-reset. PR1576146

Resolved Issues: 21.1R1

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Authentication and Access Control

- Junos OS Evolved versus Junos OS: The `strict-authorization` configuration option is missing under `set system tacplus-options`. PR1557052

Class of Service (CoS)

- PTX10008: scheduler with all queues oversubscribed, maximum latency is different on different queues 21ms ~ 29ms. PR1478811
- While configuring WRED profile to a scheduler, you can use either of the following: any or any not-any or not-any combination of protocol and loss priority. PR1524259
- The cosd process might not come up after FPC restart.PR1544531
- When configuring Class of Service on a Junos OS Evolved system, the cosd process might restart unexpectedly. PR1548014
- cosd crash might be observed with classifier and rewrite bindings. PR1566161

General Routing

- LSP statistics CLI is slow in a scaled scenario during installation time. PR1416363
- Differences in XML tags for `show system virtual-memory`. PR1438110

- Differences in XML tags for `show system processes`. PR1438129
- On PTX10008 routers, the subsystem within the Packet Forwarding Engine continues to monitor the ASIC for new interrupts even for the ASIC for which all the interfaces are disabled. On an ASIC that has all the interfaces disabled due to a fatal error, all the new interrupts that are reported after the fatal event should be ignored. PR1470391
- Rate-limiting might not work for J-Flow-sampled traffic on PTX10008. PR1473844
- PTX10008: No cmerror is raised for certain PIO errors when accessing the Packet Forwarding Engine ASIC. PR1491130
- The interface might not be added to BD after VLAN change.PR1504374
- Junos OS Evolved versus Junos OS (serviceability):Resilient hash seed configuration is not supported in Junos OS Evolved Release on PTX10003 or PTX10008. PR1504544
- Transit v4 traffic forwarding over BGP SR-TE might not work. PR1505592
- On a Junos OS Evolved platform, the output of aggregated Ethernet (AE) interface statistic does not include its member links' statistics. PR1505596
- OSPF might flap when the line rate traffic is sent at smaller packet sizes. PR1511563
- Incorrect warning message for the `show chassis fabric errors` command. PR1511915
- Junos OS Evolved (PTX10008): observing reboot delay in software add reboot, rollback reboot commands. PR1525286
- PTX10001-36MR :: Junos OS Evolved :JDI-RCT:clockd.default anomalies are seen at producer:re0::clockd::50331749 for the type net::juniper::resild::errorItem. PR1527309
- Host path corruption might be observed after output filters are configured on some Junos OS Evolved devices. PR1528368
- PTX10008 - FPC reboots if DDoS violations are seen during FPC restart. PR1529847
- [PTX10001-36MR] When the fabric hub process is restarted with the blackhole detection disable and fabric degrade detection enable configuration, it might result in traffic loss. PR1530484
- `show pfe statistics error` should print counters for meaningful errors. PR1530710
- After FPC restart traffic drop is observed for multicast streams sent to the PTX10008 device from other nodes. PR1531429
- PTX10008: Need support for `show chassis fabric summary` output.

  PR1532163

- Traffic loss might happen after performing GRES in the Junos OS Evolved enabled chassis-based systems.PR1532446
- Interfaces might take longer to come up after loading baseline and rollback configurations. PR1534996
- SNMP get-next request does not work properly when partial indices are given on PTX Series platforms running Junos OS Evolved. PR1535204
- PTX10008: Multicast - After FPC restart, both traffic flood and loss are observed toward downstream aggregated Ethernet receiver interfaces. PR1535545
- CLI issues are observed under the `show system` and `show chassis` hierarchies. PR1535880
- The physical interface does not come up after configuration changes at the peer end. PR1536270
- The cosd might crash when multiple configuration changes are made in a single commit. PR1536320
- The `show chassis environment` command reports ZF-based switch fabric internal temperatures as 0 degrees celsius. PR1536497
- cosd core file is generated while configuring duplicate code point bits/alias. PR1537289
- On a PTX10008 running Junos OS Evolved, running PIM Dense Mode (DM) might cause an FPC to restart unexpectedly. PR1537700
- Next-hop addCollision errors are seen with scaled multicast routes. PR1538849
- On RE0 CLI node reboot, the rpd process is unable to connect to snmpd and hence we see scheduler slips in rpd and the protocol sessions flap. PR1539705
- On PTX10001-36MR on ports et-0/1/2 and et-0/2/2, channel 1 does not come up on channelizing 100-Gbps to 2x50-Gbps speed. PR1539795
- On PTX10001-36MR ping fails on all channels when some ports with 400GbE DAC are channelized to 8x25GbE and 8x50GbE. PR1539859
- On PTX10001-36MR traffic might not flow through channels 2 and 3 of some ports with 40G optics that are channelizing to 4x10GbE PR1539864
- Multicast traffic silent packet drop on downstream adjacent node seen for approximately 5-6 seconds as dlu.ucode.inv_start_pc trap after aggregated Ethernet member link deleted or added on PTX10008 node. PR1539912
- PTX10003: Multicast traffic drops after port is converted from trunk to access for a Layer 2 bridging case. The unicast and broadcast traffic are not affected. PR1540495

- In PTX10008, for some temperature sensors the threshold temperature to return cooling fans to normal speed is 0 degrees celsius. PR1540576
- PTX10008: Core file generated when a combination of hop limit and packet length is configured in the filter. PR1540625
- Installed licenses are getting deleted after an image upgrade. PR1540881
- PTX10008: Component Upgrade: Software rollback timed out when moving from image based on Junos OS Evolved Release 20.3R1 (mod in some apps) to any other Junos OS Evolved Release. PR1541509
- DHCP discover packet might be dropped if DHCP inform packet is received first. PR1542400
- [cos] [scheduler] : PTX10008: Junos OS Evolved CoS: The `show interfaces voq ae2 non-zero` command does not display the non-zero queue statistics, whereas the other aggregated Ethernet bundle ae1 displays it correctly (both ae1 and ae2 have 4x400G member links each from the same BT chip). PR1543034
- PTX10008: Junos OS Evolved picd generates a core file in reboot scenarios. PR1543045
- Any modification made in the middle of an existing firewall filter might lead to all the host-bound traffic getting discarded. PR1544502
- PTX10001-36MR - IP-IP: Routing Engine initiated tracroute packets are not using IP-IP encapsulation. PR1545049
- PTX10008:PTX10K-LC1202-36MR: PTX10001-36MR:L2:classifier classifier on aggregated Ethernet interface does not work correctly (cos_l2_cls_combine_mts_004.robot). PR1546150
- [PTX10008]: For 2x100G QSFP-DD optics, CTLE settings are not getting applied sometimes. PR1546236
- Backup RE vmcore may be seen due to absence of NH ACK Infra. PR1547164
- PTX10001-36MR:: `show ddos-protection protocols bgp statistics brief` throws error **communication failure with /re0/evo-aftmand-bt/**. PR1547491
- The drop profile (WRED) feature under class of service might not work on PTX Series Junos OS Evolved platforms. PR1549007
- With a firewall policer configured, after GRES, the firewalld application might crash. firewalld restores itself after the crash. PR1549856
- On Junos OS Evolved PTX10001-36MR, PTX10004, or PTX10008 devices, some host-received packets are handled in a different host path queue than the one being assigned due to the host-path queue default setting.PR1551154

- Traffic drops might be seen after egress FPC restarts and comes back online. PR1551363
- SNMP MIB jnxOperatingRestartTime output is in string format instead of OCTET string. PR1553533
- Junos OS Evolved:PTX10008:INDB:Compatible: Offline FPCs with user option no ends after the FPC is brought online after the upgrade with sysman as one of the apps. PR1553667
- The filter behavior is unchanged after deactivating the filter on the management port. PR1553791
- jnxFruLastPowerOn value is incorrect for FPCs. PR1553924
- CoS WRED Curve: Create Expr Curve: No curve data points. Errors are seen when interpolate is configured under drop profile.

  PR1554220
- PTX10008 PFC: This is a display issue. Global Ethernet flow-control must be disabled when PFC CNP is enabled on an interface. PR1554345
- The output of `show interface queue` always shows **Forwarding classes: 16 supported, 4 in use** with customized configuration. PR1554370
- MACsec session remains down after the CA name is changed to a newer name. PR1555736
- Cleaning up the unsupported configuration statement `set chassis redundancy keepalive-time and failover` from Junos OS Evolved software as it is not yet supported in Junos OS Evolved. PR1556600
- Upgrade or downgrade: Serviceability: In case of upgrade failure, the log files capturing upgrade fail reason do not give meaningful information to user. PR1556807
- The device might not boot up after performing the cleanup operation. PR1557020
- The configuration command `set routing-instances inst1 l3-interface` is not supported on PTX10008. PR1558285
- PTX10008-Error messages are seen @Error] Jexpr: CoS Scheduler Express Handle: Destructor: Interface Physical Handle is NULL. streamIndex:1147 schedNodeToken:4508 while executing 2000 static SRTE scale in PTX10008. PR1558328
- [firewall] [filter_installation] : Junos OS Evolved-PTX10003 :: firewalld:Anomolies are seen in firewalld app for Publish publish-deleted.PR1559046
- The FPC might reboot in a high-scale configuration scenario on Junos OS Evolved PTX10008 platform. PR1560757
- PTX10008: After sync all followed by rollback and then reboot, RE1 booted on snapshot. PR1562189

- Complete ingress multicast traffic loss might be seen on interfaces that are flapped using Packet Forwarding Engine offline/online command. PR1562452
- Interface loopback might not work if there are no optics connected to the port on PTX10008. PR1562471
- For topologies involving high ingress and transit LSP scale, error messages can be seen in journalctl when tearing down the ingress and transit LSPs. This also leads to slow memory leak. PR1562503
- FPC is not powered on using `request node power-on fpc`. PR1562981
- PTX10001-36MR - In scaled logical interface scenario when an interface connecting the customer with many logical interfaces in the same port is flapped, ARP might not resolve and the traffic might be dropped. PR1563684
- PTX10008: RE0 went into reboot loop continuously during validate restart (INDB unsupported). PR1563742
- The issue happens when there are multiple FPCs. Any of the FPCs might have scale configuration. While restarting an FPC (fpc[x]), it syncs configuration from other FPCs in the system. Evo-aftmand on fpc[x] takes a lot of time (depending on the scale) in reconciling the huge number of objects. It can only create the IFD, after it has reconciled the existing objects. The issue is in the infrastructure code, which takes a lot of time in reconciliation of the objects. PR1564156
- MACsec-Encrypted packets counter displays 0 under **Secure Association transmitted** of MACsec statistics output when AN rollovers with `sak-rekey-interval` is configured. PR1566665
- User folders are not created when snapshot is taken. PR1567880
- Minor memory leak in ndpd (NDP daemon) when `show ipv6 neighbors` or `clear ipv6 neighbors` is executed or on subscribing for '/nd6information' from collector using telemetry. PR1568370
- The firewalld crash might be seen if GRES is executed as soon as the firewall is activated (for example, commit is done). PR1569427
- Junos Telemetry Interface: PTX10008 :: NPU Memory KHT DLU IDB value. PR1572704
- The hash-key label-1-exp CLI configuration statement does not take effect. PR1573109
- Silent switchover is triggered on restarting routing with the CLI configuration: `set system processes routing failover other-routing-engine` and `set system switchover-on-routing-crash`. PR1570993

Infrastructure

- PTX10008 - with graceful-restart enabled (IS-IS or LDP or BGP), packet loss is observed during RE switchover. PR1518609

- Continuous log messages: ttp_update_with_mark_tlv:390] loss priority not supported yet. PR1536732
- When the CLI is launched, the system generates a syslog message at the notice level stating **cli[<pid>]: 32-bit application cli is not compatible with SI**. This message does not indicate a functional problem and can be ignored.. PR1553897
- [mgd_infra] [mgdtag] : Junos OS Evolved-PTX10003 :: Default multicast ff00::/8 route not available while verifying IPv6 multicast routes.
- The local port specified in an address-less bind() call is not applied on a TCP socket that issues a connect(). PR1569696

Interfaces and Chassis

- [Junos OS Evolved Changes]: XML tags mismatch for the command `show interfaces diagnostics optics`. PR1529316
- [Junos OS Evolved] [PTX10008] ALB scan-interval configuration not taking effect. PR1538854
- FTI tunnel commit fails for MTU change on its family (inet, inet6). PR1540431
- CLI command `show interface descriptions` does not show Link and admin status of the logical interfaces in routers running affected Junos OS Evolved release. PR1545787
- The `set chassis fpc power on` command in PTX10003 is removed as it is not supported. PR1550862
- Logs not being written in /var/log/messages on certain PTX Series platforms running Junos OS Evolved. PR1551374
- PTX10001-36MR: Control logical interface might not be present for ports et-0/0/11 and et-0/2/11. PR1566752
- Junos OS Evolved-PTX10003 :: Junos Telemetry Interface (JTI) optics sensor's alarm data type changed from `bool_val` to `str_val`. PR1580113
- Dynamic and persistent aggregated Ethernet MAC address allocation changes. PR1575131

MPLS

- On all Junos OS Evolved platforms, the rpd crash might be observed in a rare scenario when the configuration statement `no-propagate-ttl` is configured under the apply-groups along with link protection for static LSP. This issue is seen when activating or deactivating the MPLS configuration and might lead to traffic loss. PR1528460

Network Management and Monitoring

- A memory leak in the mib2d and snmpd processes might result in SNMP being unresponsive to SNMP queries on platforms running the affected Junos OS Evolved image. PR1543508
- The syslog messages might not be sent with the correct port. PR1545829
- When SNMP polling from NMS is in progress and the policy prefix configuration associated with SNMP community client-list-name is modified to add or delete a prefix, then snmpd may generate a core file. snmpd comes up fine after the core file is generated and no action is required from the user.PR1548595
- FTI: IP-in-IP tunneling: SNMP: ifMtu is wrong in snmp mib walk against fti0 interface. PR1549220
- Core file for trace-relay process is seen. PR1556040

Routing Policy and Firewall Filters

- [pfe_firewall] [policer] PTX10008 :: A 100 pps traffic is seen if two color policers are applied with a pps limit and burst limit of 1 pps. PR1541194
- BGP-LU fallback-reject event is not generating error messages.PR1550023
- Firewall: Use of filter configured without address-family as nested filter causes the configuration commit to fail. PR1552641
- Junos OS Evolved - changing the interface-specific field of the referenced filter in a single commit is not supported. PR1556982
- Syslog as an action of filter by default dump logs in syslog in Junos OS Evolved which is different from Junos OS. PR1564088
- Error while applying the filter as an output-list with DSCP action. PR1569691

Routing Protocols

- The rpd might crash after reboot when MSDP is configured. PR1536593

User Interface and Configuration

- The firewall filter for both IPv4 and IPv6 might not work when it is applied through apply-groups. PR1534858
- The Junos OS Evolved operational state would be incorrect on the system and CoS schedulers configuration change might not take effect. PR1536615

- File archive source /var/log/* destination /var/log/.tgz is not working in Junos OS Evolved. PR1549340
- CLI command `show system uptime` throws error: **invalid xml tag (date: invalid date '@#') from command-handler daemon** on certain PTX Series platforms running Junos OS Evolved. PR1566166

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

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These release notes accompany Junos OS Evolved Release 21.1R2 for QFX5130-32CD, QFX5220-32CD and QFX5220-128C switches. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

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- What's New in 21.1R2 | 42
- What's New in 21.1R1 | 42

Learn about new features introduced in the Junos OS Evolved main and maintenance releases for the QFX5130-32CD and QFX5220.

What's New in 21.1R2

There are no new features introduced in Junos OS Evolved Release 21.1R2 for the QFX5220-32CD, QFX5220-128C, and QFX5130-32CD.

What's New in 21.1R1

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Hardware

- We haven't introduced new QFX Series hardware in Junos OS Evolved 21.1R1. Use the following table to learn about some of the new features supported on the QFX5130-32CD switch.
  "Table 1" on page 42 summarizes the features added to the QFX5130-32CD in Junos OS Evolved Release 21.1R1

  Table 1: Feature Support Added to the QFX5130-32CD Switches

Feature	Description
Class of service (CoS)	• Support for priority-based flow control (PFC) of untagged traffic at Layer 3 using DiffServ Services Code Points (DSCPs). This enables lossless traffic across Layer 3 routers that connect Layer 2 subnets. DSCP-based PFC is required to support Remote Direct Memory Access over Converged Ethernet version 2 (RoCEv2). [See Understanding PFC Using DSCP at Layer 3 for Untagged Traffic.]

Table 1: Feature Support Added to the QFX5130-32CD Switches *(Continued)*

Feature	Description

Forwarding options	• Support for storm control, which enables the switch to:
	  • Monitor traffic levels.
	  • Drop broadcast, multicast, and unknown unicast (BUM) packets before they can cause a traffic storm.
	[See Understanding Storm Control.]

Layer 2 features	• Support for Q-in-Q tunneling with a service-provider-style configuration in addition to the enterprise style that is already supported. You can enable the configuration for a physical interface using the `set encapsulation flexible-ethernet-services` command. Q-in-Q tunneling with service-provider-style configuration has these restrictions: • Untagged traffic is supported only if you use the `native-vlan-id` command for the physical interface. Untagged traffic will egress the network-to-network interface (NNI) or service VLAN interface as a single-tagged S-VLAN.

Table 1: Feature Support Added to the QFX5130-32CD Switches *(Continued)*

Feature	Description
	• Insertion of `native-vlan-id` as the inner tag is not supported. The `input-native-vlan-push` configuration command is not supported. • Swap-push/pop-swap operations on single-tagged interfaces and swap-swap operations on double-tagged interfaces are not supported. • Multiple user-to-network interfaces (UNIs, or C-VLAN interfaces) with different VLAN IDs or with different Q-in-Q operations on the same bridge-domain are not recommended. C-VLAN traffic on one logical interface might leak into another. • Swap operation with the `inner-vlan-id` configuration command on the UNI is not supported. • Custom Tag Protocol Identifier (TPID) configuration and translation is not supported. • IRB logical interfaces and C-VLAN (UNI) logical interfaces cannot coexist on the same VLAN. • The `vlan-id-list` configuration is supported only on interfaces with valid I/O maps. • [See Flexible Ethernet Services Encapsulation and Configuring Q-in-Q Tunneling.]
Timing and synchronization	• Support for Precision Time Protocol (PTP) transparent clock. [See Understanding Transparent Clocks in Precision Time Protocol.]

MPLS

- **Install prefixes for RSVP-TE LSPs using PCEP (QFX Series)**–Starting in Junos OS Evolved Release 21.1R1, you can configure different prefixes for Path Computation Element (PCE)-initiated and PCE-delegated RSVP-TE LSPs using the Path Computation Element Protocol (PCEP). Prior to this feature, for PCE-initiated LSPs, you could install prefixes as routes through templates and map the templates

to the LSPs. For Path Computation Client (PCC)-configured LSPs, although you could install prefixes on the device, this information was not reported to the PCE.

With this feature, you can install prefixes for external RSVP-TE LSPs through PCEP communication, and enable the PCC to report installed prefixes for all local RSVP-TE LSPs to the PCE . This support provides you better traffic engineering capabilities and allows Junos OS to interoperate with other vendor's PCC or PCE.

[See Support of the Path Computation Element Protocol for RSVP-TE Overview.]

Multicast

- Support for IGMP and IRB elaboration snooping. You can configure IGMP snooping with IGMPv1, IGMPv2, and IGMPv3 and IRB. [See IGMP Snooping Overview and Integrated Routing and Bridging.]

Routing Protocols

- **Support for relaxing BGP router ID format from /32 to a nonzero ID per RFC 6286 (QFX5220)**—You can establish a BGP connection using a BGP ID that is a 4-octet, unsigned, nonzero integer. The ID must be unique only within the autonomous system (AS) per RFC 6286.

  [See router-id]

Services Applications

- **Support for Packet Forwarding Engine DDoS protection (QFX5220)**—Starting in Junos OS Evolved Release 21.1R1, you can configure and install policers at the Packet Forwarding Engine (PFE) level for defense from DDoS attacks. By default, DDoS protection is enabled for many protocols on QFX5220-32CD and QFX5220-128C switches. You can disable DDoS protection or change default policer parameters for a protocol group or supported packet types in a protocol group. You can also configure the bandwidth or burst limit at the protocol level.

  [See Configuring Control Plane DDoS Protection Aggregate or Individual Packet Type Policers, show ddos-protection statistics, and show ddos-protection version.]

What's Changed

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- What's Changed in Release 21.1R1 | 47

Learn about what changed in the Junos OS Evolved main and maintenance releases for the QFX5130-32CD and QFX5220.

What's Changed in Release 21.1R2

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- General Routing | 46
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EVPN

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

  [See Changing Duplicate MAC Address Detection Settings .]

General Routing

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

  [See show interfaces extensive.].

- **Enhancement to the show interfaces (Aggregated Ethernet) command (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.]

- **Enhancement to the default `remnant-holdtime` (Junos OS Evolved platforms: QFX5130-32CD, and QFX5220)**— Starting this release, the default `remnant-holdtime` has been increased from 180 seconds to 300 seconds. This provides sufficient time for protocols to start and sync routes from neighbors in a scaled environment, during rpd restart. You can configure `remnant-holdtime` at the `edit routing-options forwarding-table` hierarchy level.

  See forwarding-table.]

Layer 2 Features

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

  [See relay-option-82..]

Network Management and Monitoring

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

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

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Authentication, Authorization, and Accounting (AAA)

- **SSH session connection limit and rate limit per connection (QFX Series)**—We have introduced the `connection-limit` and `rate-limit` options at the `set system services ssh` hierarchy levels. The default connection limit value is 75 connections, and the default rate limit value is 3 connections per second. Junos OS measures the rate limit value per minute but Junos OS Evolved measures the rate limit value per second.

EVPN

- **Unresolved hosts identified in MAC-IP address entries (QFX5130-32CD, QFX5220)**—When you use the show ethernet-switching mac-ip-table command to display the MAC-IP entries in the Ethernet switching table, unresolved hosts are identified with a Ur flag.

General Routing

- **SSH session connection limit and rate limit per connection (PTX Series and QFX Series)**—We have introduced SSH `connection-limit` and `rate-limit` options at the **edit system services ssh** hierarchy levels to enable SSH connection limit and rate limit per connection. The default connection limit value is 75 connections and there is no default value associated with rate limit.

  [See Configuring Sub Line Cards and Assigning Them to GNFs.]

Junos XML API and Scripting

- **The `jcs:invoke()` function supports suppression of root login and logout events in system log files for SLAX event scripts (ACX Series, PTX Series, and QFX Series)**—The `jcs:invoke()` extension function supports the `no-login-logout` parameter in SLAX event scripts. If you include the parameter, the function does not generate and log UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages when the script logs in as root to execute the specified remote procedure call (RPC). If you omit the parameter, the function behaves as in earlier releases in which the root UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages are included in system log files.

[See invoke() Function (SLAX and XSLT).]

- **The `jcs:invoke()` function supports suppression of root login and logout events in system log files for SLAX commit scripts (ACX Series, PTX Series, and QFX Series)**—The `jcs:invoke()` extension function supports the `no-login-logout` parameter in SLAX commit scripts. If you include the parameter, the function does not generate and log UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages when the script logs in as root to execute the specified remote procedure call (RPC). If you omit the parameter, the function behaves as in earlier releases in which the root UI_LOGIN_EVENT and UI_LOGOUT_EVENT messages are included in system log files.

  [See invoke() Function (SLAX and XSLT).]

Layer 2 Features

- **Modification to sync-reset command (ACX Series, PTX Series, and QFX Series)**—Starting from this release, the `sync-reset` command is disabled by default on all the Junos OS Evolved platforms. The `Sync-reset` command enables the device to send the sync bit in the LACP packets on minimum-link failure. Previously the `sync-reset` command was enabled by default on QFX Series, while it was by default disabled on PTX Series and ACX series.

  [See sync-reset.]

- **New commit check for MC-LAG (PTX Series, QFX Series)**—We've introduced a new commit check to check the values assigned to the redundancy group identification number on the MC-AE interface (`redundancy-group-id`) and ICCP peer (`redundancy-group-id-list`) when you configure multichassis aggregation groups (MC-LAGs). If the values are different, the system reports a commit check error. In previous releases, if the configured values were different, the l2ald process would crash.

  [See iccp and mc-ae.]

- **Unresolved hosts identified in MAC-IP address entries (QFX5130-32CD and QFX5220)**—When you use the `show ethernet-switching mac-ip-table` command to display the MAC-IP entries in the ethernet switching table, unresolved hosts are identified with a Ur flag.

Network Management and Monitoring

- **Support for specifying the YANG modules to advertise in the NETCONF capabilities and supported schema list (ACX Series, PTX Series, and QFX Series)**—You can configure devices to emit third-party, standard, and Junos OS native YANG modules in the capabilities exchange of a NETCONF session by configuring the appropriate statements at the `[edit system services netconf hello-message yang-module-capabilities]`. In addition, you can specify the YANG schemas that the NETCONF server should include in its list of supported schemas by configuring the appropriate statements at the `[edit system services netconf netconf-monitoring netconf-state-schemas]` hierarchy level.

  [See hello-message and netconf-monitoring.]

Routing Protocols

- **Recommendation to include the local-address statement when configuring IBGP and multihop EBGP**—When a device peers with a remote device's loopback interface address, use the `local-address` statement at the `[edit protocols bgp group internal-peers]` hierarchy to specify the source information in BGP update messages. Although a BGP session can be established when only one of the paired routing devices has local-address configured, we strongly recommend that you configure `local-address` on both paired routing devices for IBGP and multihop EBGP sessions. The `local-address` statement ensures that deterministic fixed addresses are used for the BGP session end-points.

  [See local-address (Protocols BGP) and BGP Peering Sessions.]

System Management

- **Support for `exclude` option under `file archive` (ACX Series, PTX Series, and QFX Series)**—The `exclude` option is added under the command `file archive` that specifies the file pattern to exclude. This option helps to exclude files that delay compression or files that do not require compression.

  [See file archive.]

User Interface and Configuration

- **Verbose format option to export JSON configuration data (ACX Series, PTX Series, and QFX Series)**—The Junos OS CLI exposes the `verbose` statement at the `[edit system export-format json]` hierarchy level. We changed the default format to export configuration data in JavaScript Object Notation (JSON) from `verbose` to `ietf` in an earlier release. You can explicitly specify the default export format for JSON configuration data by configuring the appropriate statement at the `[edit system export-format json]` hierarchy level. Although the `verbose` statement is exposed in the Junos OS CLI as of the current release, you can configure this statement in earlier releases.
  [See export-format.]

Known Limitations

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Learn about limitations in this release for the QFX5130-32CD and QFX5220.

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

General Routing

- On the QFX5130-32CD platform, the port status LED remains off for a channelized interface, when one of the channels in the channelized port is down or is disabled. The port LED is lit only when all the channels that are part of the port are up. PR1526532
- The `show chasis fpc` CLI command does not display all statistics as seen in the following output: `root@host> show chassis fpc Temp CPU Utilization (%) CPU Utilization (%) Memory Utilization (%) Slot State (C) Total Interrupt 1min 5min 15min DRAM (MB) Heap Buffer 0 Online`. PR1563506

Routing Protocols

- On all Junos OS Evolved platforms, when multicast stream has IRB (Integrated Routing and Bridging) as receivers with IGMP/MLD snooping is enabled in the particular bridge/VLAN there can be traffic loss for 3 mins by default up to 5 minutes (based on GR configuration for MCSNOOPD) when snooping configuration is removed. The Multicast traffic streams will recover and flooding for IRB receiver in the VLAN will be seen as expected. PR1550523

Open Issues

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- Layer 2 Ethernet Services | **52**
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Learn about open issues in this release for the QFX5130-32CD and QFX5220.

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 QFX5220-32CD, VLANs between 3968 and 4095 are reserved for Layer 3 interfaces by default. So, these VLANs cannot be used for Layer 2 interfaces. As of now there is no commit check added for this purpose. You need to take care of this while configuring VLANs for Layer 2. PR1423468
- On the QFX5130-32CD platform running Junos OS Evolved, you cannot clear or reset the disk option specified in the scheduled request node reboot command. The node reboots with the disk option last specified. PR1517596
- When the evo-pfemand process is re-started due to any error conditions, the channelized interfaces (if configured) will flap two times (once during the initialisation) and the second time after the configuration is programmed. PR1526984
- On all QFX devices that support Junos OS Evolved, if scaled OSPF neighbors (e.g 512 neighbors) are formed over IRB interfaces with layer 2 interfaces in the interface-mode trunk, the OSPF routes might be not learned from the neighbors. The issue results in traffic loss. PR1570498
- QFX5220-32CD: Rarely, a picd daemon core seen after bootup. This doesn't affect the functionality as the device recovers itself automatically by restarting picd daemon. PR1583164
- In the latest 21.1R1 release, regression script can trig PTP BC of QFX5220-32cd platform ran into freerun state (expected Phasee Aligned). It seems below configuration sequence can pontentially trigger the issue: (1) config PTP BC, then commit; (2) config IP address on interface, then commit; The workarund to avoid this happening in the release, follow below config sequence: (1) config PTP BC; (2) config IP address on interface; (3) commit; The key workaround is that don't do seperate commit and do commit once. PR1604699
- On Junos OS Evolved platforms when NDP (neighbor discovery protocol) entries are scaled to 32000 over IRB in one shot, ndp process might reach to 100% CPU utilization and unicast nexthops for all 32000 entries might not be present. This will result in traffic drops for entries for which unicast nexthop is not present. PR1551644

Layer 2 Ethernet Services

- It was observed rarely that issuing a `request system zeroize` does not trigger Zero Touch Provisioning (ZTP). A workaround is to re-initiate the ZTP. PR1529246

Routing Protocols

- On Junos OS Evolved platforms, an rpd crash might be seen after reboot of the Junos Evolved device when MSDP is enabled. This might cause traffic drop until rpd comes up after the crash and restores all the routes. PR1536593

User Interface and Configuration

- On Junos Evolved platforms, HTTPS URLs are not handled properly in the backend code handling `file copy https-url destination ..` command. PR1596881

Resolved Issues

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- Resolved Issues: 21.1R2 | 53
- Resolved Issues: 21.1R1 | 54

Learn which issues were resolved in the Junos OS Evolved main and maintenance releases for the QFX5130-32CD and QFX5220.

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: 21.1R2

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General Routing

- QFX5130-32CD Junos OS Evolved-pfemand binding queue complete-deleted objects are seen with hwd::pcsE. PR1531820
- **ICMP destination unreachable** message is not sent from the QFX5130 when a firewall filter action rejects the packet. PR1563404
- Routes learned via IRB interface might not be reachable in IBGP setup. PR1568566
- The BGP sessions might intermittently flap if the egress sFlow sampling is enabled at a high sampling rate. PR1571636
- ZTP must overwrite configuration derived from dhcp options with configuration from downloaded configuration file. PR1577004
- QFX5130 and QFX5220 object anomalies seen with PTP TC configuration. PR1577375
- The traffic related to native VLAN might be dropped. PR1581075
- Routing Engine policing status is updated correctly in the `DDoS-protection show` command outputs. PR1588556
- Local Port-Mirroring doesn't work on interfaces with non-zero unit. PR1593276
- The interface may not learn mac-address if it is configured with vlan-id-list starting with VLAN id 1 and native-vlan-id. PR1597013

Infrastructure

- ToS of self-initiated packets may get changed unexpectedly. PR1578247

User Interface and Configuration

- The port_speed configuration details not present in the picd configuration for ports et-0/0/128 and et-0/0/129. PR1510486

Resolved Issues: 21.1R1

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Interfaces and Chassis

- Provision control logical interface when none is configured for auto neighbor discovery. PR1507347

Network Management and Monitoring

- Trace file is not created under SNMP. PR1546784

Routing Protocols

- The virtual-router option is not supported under a routing-instance in a lean rpd image. PR1494029
- The IPv6 traffic might get null-route filtered when falling back from IP-in-IP tunnel to inet.0/inet6.0. PR1508631
- The rpd might crash after reboot when MSDP is configured. PR1536593

System Management

- Differences in XML tags for `show system virtual-memory`. PR1438110
- Differences in XML tags for `show system processes`. PR1438129
- QFX5220 does not support the following matches, which were supported on QFX5200: `first-fragment`, `tcp-established`, `Is-fragment`, and `hop-limit`. PR1499009
- The interface might not be added to BD after VLAN change. PR1504374
- In QFX5130-32CD, the dscp action configured in firewall filter does not work and does not rewrite the dscp bits. PR1514580
- In QFX5130-32CD, when a policer is configured as an action for a loopback filter, it does not take effect. PR1514601
- The **aggregate member links** field in the `show interfaces extensive` command output for aggregated Ethernet interfaces does not reflect the number of member-links. PR1517841

- On the QFX5130-32CD platform, when the management port speed is configured to 100 Mbps, the port's status LED does not light up. However, the port forwards traffic normally. PR1521510
- On QFX5130-32CD platforms with a large amount of ARP resolutions happening on IRBs in a very short time, the ARPD process usage can shoot to 100%. This issue does not happen with Layer 3 interfaces. PR1523300
- Ingress policer scale is limited to 128 due to a known issue in the Junos OS Evolved Release 20.3R1. PR1525525
- On the QFX5130-32CD platform, the Encapsulated Remote Switch Port ANalyzer (ERSPAN) status continues to show status as "Up" even when the destination IP address is unreachable. PR1527505
- 160,000 MAC flushing with traffic running takes close to 35 minutes after `clear ethernet-switching table`, without traffic flushed in 3-4 minutes. PR1528511
- On the QFX5130-32CD platform, the CLI option to configure a range of VLANs as the input for the analyzer is not supported in this release. PR1529419
- The cosd might crash when multiple configuration changes are made in a single commit. PR1536320
- The evo-pfemand process might keep crashing on the QFX5220-32CD or QFX5220-128C platforms. PR1536588
- The interfaces might not come up in some instances after a power cycle or a soft reboot. PR1538284
- With port mirror, evo-pfemand might restart unexpectedly on QFX Series platforms running Junos OS Evolved. PR1538626
- QFX5130-32CD: DHCPv6 packets are going to unknown multicast queue instead of DHCP queue, and DHCPV6 relay is not working. PR1545754
- When the system has a scaled number of ARP entries learned over IRB and the underlying logical interface of IRB is flapped, traffic drop is expected to happen for sometime for the ARP destinations and arpd is expected to exhibit 100% CPU for some time. PR1554151
- The device might not boot up after performing the cleanup operation. PR1557020
- EVO:: JDI_FT_REGRESSIONS:: QFX5130:: Tunnel:: GRE:: tunneld core hit at unneld core was hit at IflibCommonData. PR1563399
- "ICMP destination unreachable" message is not sent from the QFX5130 when a firewall filter action rejects the packet. PR1563404

User Interface and Configuration

- The EVO operational state would be incorrect on the system and CoS scheduler configuration change might not take effect. PR1536615

Licensing

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

The major components of the framework are:

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

For information about the list of supported products, see Juniper Flex Program.

Finding More Information

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

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

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

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

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

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

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

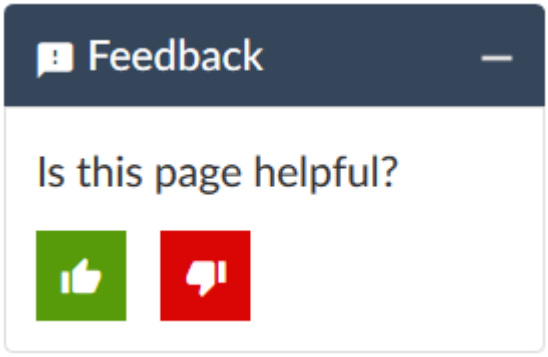
- **Juniper Networks Compliance Advisor**—Review regulatory compliance information about Common Criteria, FIPS, Homologation, RoHS2, and USGv6.

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

Documentation Feedback

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

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

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

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

Requesting Technical Support

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- Creating a Service Request with JTAC | 60

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/.

Upgrade Your Junos OS Evolved Software

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

Follow these steps to upgrade your Junos OS Evolved software:

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

8. Download the software to a local host.

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

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

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

For more information about software installation and upgrade, see 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/.

Revision History

24 November 2022—Revision 15, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

29 July 2022—Revision 14, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

12 May 2022—Revision 13, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

5 May 2022—Revision 12, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

28 April 2022—Revision 11, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

28 January 2022—Revision 10, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

7 October 2021—Revision 3, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

19 August 2021—Revision 2, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

9 August 2021—Revision 1, Junos OS Release 21.1R2 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

24 June 2021—Revision 7, Junos OS Release 21.1R1 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

17 June 2021—Revision 6, Junos OS Release 21.1R1 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

24 May 2021—Revision 5, Junos OS Release 21.1R1 for the ACX7100-48L, PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

22 April 2021—Revision 4, Junos OS Release 21.1R1 for the PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

16 April 2021—Revision 3, Junos OS Release 21.1R1 for the PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

12 April 2021—Revision 2, Junos OS Release 21.1R1 for the PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.

26 March 2021—Revision 1, Junos OS Release 21.1R1 for the PTX10001-36MR, PTX10003, PTX10004, PTX10008, QFX5130-32CD, and QFX5220 Devices.