

Release Notes

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Junos[®] OS Evolved Release 22.1R3

Introduction

Use these release notes to find new and updated features, software limitations, and open issues for Junos OS Evolved Release 22.1R3.

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

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

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These release notes accompany Junos OS Evolved Release 22.1R3 for ACX7100-32C, ACX7100-48L, and ACX7509 routers. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

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

What's Changed

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

What's Changed in Release 22.1R3-S4

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Juniper Extension toolkit

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

What's Changed in Release 22.1R3-S2

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- [User Interface and Configuration | 2](#)

User Interface and Configuration

- **The file copy command supports only text-formatted output in the CLI (ACX Series, PTX Series, and QFX Series)**—The file copy command does not emit output when the operation is successful and supports only text-formatted output when an error occurs. The file copy command does not support using the | display xml filter or the | display json filter to display command output in XML or JSON format in any release. We've removed these options from the CLI.

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- [Juniper Extension Toolkit \(JET\) | 3](#)
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Learn about what changed in this release for ACX Series routers.

General Routing

- Two new alarms are added and can be seen with MPC11E when 400G-ZR optics are used. High Power Optics Too Warm: warning of the increase in chassis ambient temperature with no functional action taken on the optics Temperature too high for optics power on: New inserted optics when the chassis ambient temperature is elevated beyond the threshold will not be powered on and would need to be reinserted when the ambient temperature is within the acceptable range

Juniper Extension Toolkit (JET)

- Python 3 is the default and only Python version for executing Juniper Extension Toolkit Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing Juniper Extension Toolkit (JET) scripts written in Python. Python 2.7 is no longer supported for executing JET scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices.](#)]

Junos OS API and Scripting

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

[See [file \(JET\).](#)]

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

[See [request extension-service restart-daemonize-app.](#)]

- **Deprecated functions in the libpyvrf Python module (ACX Series, PTX Series, and QFX Series)**—The libpyvrf Python module no longer supports the `get_task_vrf()` and `set_task_vrf()` functions.

[See [How to Specify the Routing Instance in Python 3 Applications on Devices Running Junos OS Evolved](#).]

- **Python 3 is the default and only Python version for executing commit, event, op, and SNMP Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing commit, event, op, and SNMP scripts written in Python. Python 2.7 is no longer supported for executing these types of scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices](#).]

Network Management and Monitoring

- **Python 3 is the default and only Python version for executing YANG action and translation Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing YANG action and translation scripts written in Python. Python 2.7 is no longer supported for executing YANG action and translation scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices](#).]

System Management

- When disk usage for the `run` directory is above 85%, ZooKeeper logs and snapshots in the `/run/zookeeper/conf/default/version-2` directory will be deleted if there are more than 3 files, leaving only the 3 most recent files.

Known Limitations

There are no known limitations in hardware or software in this release for ACX Series routers.

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

Open Issues

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

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

Class of Service (CoS)

- Platform dependency-state error message gets generated on cosd. [PR1649388](#)

EVPN

- On all Junos OS Evolved platforms that support EVPN-MPLS (Ethernet Virtual Private Networks - Multiprotocol Label Switching) services, during switchover or I2-learning restart, some EVPN next hops do not correctly get associated with the routing-instance in the Routing Engine impacting the traffic forwarding. [PR1633344](#)

General Routing

- Interfaces mapped to the same Ethernet PHY flap when any one of the interfaces speed is modified. For example, when you apply or remove 10g on port 5 on the 20xsf56 card, the interface 0-7 flaps. There can be a combination of speed as initial configuration, however, a link flaps within the ports of the port groups if the speeds of any port get reconfigured to other speeds. To avoid such a situation,

all the ports of the port group can have single-speed or do not reconfigure the speed within the port group. [PR1608223](#)

- On ACX7509 devices, after multiple FPC online or offline, FPCs goes in to the Fault state. [PR1616227](#)
- Maximum aggregated Ethernet interfaces software index becomes 128 due to which a failure occurs when you configure with 218 interfaces. To avoid the issue, Maximum aggregated Ethernet interfaces software index is increased to 255. [PR1618337](#)
- On ACX7509 devices on multiple FPC restart, link does not come up and generates FEC errors. [PR1639666](#)

User Interface and Configuration

- System might ask for password when you try to save the configuration file. [PR1665008](#)

Resolved Issues

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- [General Routing | 6](#)

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

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

General Routing

- On ACX7509 devices, the picd or evo-pfemamd process generates core file occasionally when you restart FPCs with multi-D system scale. [PR1650302](#)
- The classification-override functionality does not work for IPv6 traffic. [PR1650622](#)

- On ACX7100 and ACX7509 devices, the OAM link fault management (LFM) Discovery state does not get displayed correctly. Discovery state is either at Active Send Local or Fault. [PR1651580](#)
- The jdhcpd process generates core file on boot. [PR1658327](#)
- The hwdre and evo-pfemamd applications might crash if idmd, fabtoken and hwdre process restarts immediately after a FEB offline. [PR1669130](#)
- Fixed classification on the aggregated Ethernet interface does not work on system reboot or when the Packet Forwarding Engine restarts. [PR1676103](#)
- On ACX7100-32C devices, the IPv4/IPv6 EP-Type2 intra-vni traffic fails on the leaf device after loading Junos OS Evolved BO profile configurations. [PR1680253](#)
- Single tagged Layer 3 logical interface stops working after configuring double tagged BD/RI logical interface with BD VLAN-ID same as the inner VLAN-ID of logical interface. [PR1687260](#)
- Upgrading from Junos OS Evolved 22.3 to Junos OS Evolved 22.4 causes commit to fail with failed to load external entity "/var/db/scripts/import/junos.xml error message. [PR1680266](#)

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

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These release notes accompany Junos OS Evolved Release 22.1R3 for PTX10001-36MR, PTX10003, PTX10004, PTX10008, and PTX10016 Packet Transport Routers. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

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

What's Changed

IN THIS SECTION

- [What's Changed in Release 22.1R3-S4 | 8](#)
- [What's Changed in Release 22.1R3-S2 | 9](#)
- [What's Changed | 9](#)

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

What's Changed in Release 22.1R3-S4

IN THIS SECTION

- [Juniper Extension toolkit | 8](#)

Juniper Extension toolkit

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

What's Changed in Release 22.1R3-S2

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- [User Interface and Configuration | 9](#)

User Interface and Configuration

- The `file copy` command supports only text-formatted output in the CLI (ACX Series, PTX Series, and QFX Series)—The `file copy` command does not emit output when the operation is successful and supports only text-formatted output when an error occurs. The `file copy` command does not support using the `| display xml` filter or the `| display json` filter to display command output in XML or JSON format in any release. We've removed these options from the CLI.

What's Changed

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Class of Service (CoS)

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

General Routing

- **Change in the `help syslog PFE` command output**—In Junos OS Evolved, the output for `help syslog PFE` command is fixed to be consistent with Junos OS output on PTX10008 device. ERRMSG tags in EVO are named as `SFLOWD_` whereas in Junos they are named as `PFE_SFLOW_`.
- Two new alarms are added and can be seen with MPC11E when 400G-ZR optics are used. High Power Optics Too Warm: warning of the increase in chassis ambient temperature with no functional action taken on the optics Temperature too high for optics power on: New inserted optics when the chassis ambient temperature is elevated beyond the threshold will not be powered on and would need to be reinserted when the ambient temperature is within the acceptable range

Juniper Extension Toolkit (JET)

- **Python 3 is the default and only Python version for executing Juniper Extension Toolkit Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing Juniper Extension Toolkit (JET) scripts written in Python. Python 2.7 is no longer supported for executing JET scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices](#).]

Junos OS API and Scripting

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

[See [file \(JET\)](#).]

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

[See [request extension-service restart-daemonize-app](#).]

- **Deprecated functions in the `libpyvrf` Python module (ACX Series, PTX Series, and QFX Series)**—The `libpyvrf` Python module no longer supports the `get_task_vrf()` and `set_task_vrf()` functions.

[See [How to Specify the Routing Instance in Python 3 Applications on Devices Running Junos OS Evolved](#).]

- **Python 3 is the default and only Python version for executing commit, event, op, and SNMP Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for

executing commit, event, op, and SNMP scripts written in Python. Python 2.7 is no longer supported for executing these types of scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices](#).]

Network Management and Monitoring

- **Python 3 is the default and only Python version for executing YANG action and translation Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing YANG action and translation scripts written in Python. Python 2.7 is no longer supported for executing YANG action and translation scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices](#).]

System Management

- When disk usage for the `run` directory is above 85%, ZooKeeper logs and snapshots in the `/run/zookeeper/conf/default/version-2` directory will be deleted if there are more than 3 files, leaving only the 3 most recent files.

User Interface and Configuration

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

[See [temperature-sensor](#).]

Known Limitations

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Learn about known limitations in this release for PTX Series routers.

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

Network Management and Monitoring

- Junos OS Evolved has a feature to block or deny all hidden commands. Users can get this feature by configuring `set system no-hidden-commands`. However when this is configured and committed Junos OS Evolved blocks or denies new netconf junoscript XML sessions. As a workaround users can delete `system no-hidden-commands` configuration statement and start the new netconf or junoscript sessions. [PR1590350](#)
- Junos OS Evolved might translate the custom Yang configuration even after disabling the custom Yang package. [PR1599107](#)
- When an ephemeral instance is being edited, if `show ephemeral-configuration merge` command is run from another terminal, then the uncommitted changes in the ephemeral instance being edited also appears in the output of `show ephemeral-configuration merge` command. [PR1629013](#)

Open Issues

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

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

Class of Service (CoS)

- Platform dependency-state error is seen on cosd. [PR1649388](#)
- show class-of-service interface might not show the classifier bind info on a physical interface with only inet or inet6 (without family MPLS or not with any rewrite rules). Show issue, classifier are still present and functional. No impact to traffic. [PR1652342](#)

General Routing

- Support switchover-on-routing-crash configuration statement during abnormal termination of rpd. [PR1561059](#)
- Changing decap-only tunnel destination address configuration after tunnel is up might not work and end up using previously configured tunnel destination address for decapsulation. Once system enters this state any further configuration changes to tunnel configuration are not handled. [PR1575724](#)
- Some of the frequencies shall fail performance for PTP-PTP and PTP-1PPS. [PR1624478](#)
- [timing] [ptp] PTX10008 SynE-PTP & SyncE-1pps noise transfer test : Few input test frequencies are expected to fail. [PR1624502](#)
- PTX10008 FPC: Junos OS Evolved: JNP10K-LC1201 frequently generates `zephyr_clock_get_tod_ext_sync_sample(xxx): READ BT-X tod_sec: xxxxxxxxxx, tod_ns: xxxxxxxxxx` message. [PR1635771](#)
- An improper input validation vulnerability in the Packet Forwarding Engine of Juniper Networks Junos OS Evolved allows an adjacent attacker to cause a Packet Forwarding Engine crash and thereby a Denial of Service (DoS). An FPC crashes and reboots after receiving a specific transit IPv6 packet over MPLS. Continued receipt of this packet creates a sustained Denial of Service (DoS) condition. Refer to <https://kb.juniper.net/JSA69718> for more information. [PR1642721](#)
- PTX10003 load balance v4_dscp and v6_dscp is enabled by default. This default behavior might cause traffic loss or out of order or retransmission to some application. [PR1665131](#)
- Sometimes BGP and RSVP sessions remain down after quick arpd process disable and enable. Whenever customer encounters such scenarios, system can recover from erroneous state by executing `restart routing gracefully` in CLI. [PR1665362](#)

- On PTX10008 Junos OS Evolved, STS(Status) LED on backup RCB goes off and never turns on when backup Routing Engine is rebooted. [PR1681609](#)
- On Junos OS Evolved PTX Series platforms, system reboot can be seen with certain conditions. When there is a large-scale firewall filter with scaled prefix (greater than 8000 prefixes) for IPv4 and IPv6 using the `apply-path` configuration statement which is referenced by the `import-policy` and there is an event such as adding another destination IP in the firewall filter which leads to change in the firewall filter processing. This results in a crash of the `evo-aftamnd` process which manages all Packet Forwarding Engines and eventually the system reboots. The process crash is triggered by the high-memory utilization of the Alpha-KHT (Kernel Hash Table) which is used for the firewall filter processing in the NPU (Network Processing Unit) of the Packet Forwarding Engine. The **aftmand** crash can be seen by the command `show system core-dumps` and the memory utilization can be seen by the command `show npu memory info | match alpha` [PR1682898](#).

Infrastructure

- On all Junos OS Evolved platforms, near-end port is not within RFC or IANA standards as ephemeral or dynamic port range has been modified. [PR1602717](#)

Interfaces and Chassis

- The memory usage of the `rpd` process on the backup Routing Engine might increase indefinitely due to leak in `krt_as_path_t`. [PR1614763](#)
- On Junos OS Evolved platforms during `lcpd` process restart, child physical interface indexes from the port options physical interface based data which gets stored in kernel by `lcpd`, might not get reused due to old indexes that are not freed. When this occurs, new indexes might be generated repeatedly which could cause the port numbers exhaustion problem in aggregated Ethernet interface bundle. [PR1647145](#)

Juniper Extension Toolkit (JET)

- In Junos OS Evolved, there are two different gRPC Python files for each JAPI file. The names of the files are **pb2_grpc.py** and **pb2.py**. The stub creation functions are present in **pb2_grpc.py**. [PR1580789](#)

- Until Junos OS Evolved 21.3 mgd is 32-bit binary. libsi can only be linked with 64-bit binaries. To access data or WAN ports in Junos OS Evolved we need libsi to be linked with the binary. By default the shell on the Junos OS Evolved device includes libsi, but is not available to CLI commands as CLI makes mgd invoke cscript to run a Python script through CLI. [PR1603437](#)

Network Management and Monitoring

- When `maximum-password-length` is configured and the user tries to configure password whose length exceeds configured `maximum-password-length`, error is thrown, along with error `<ok/>` tag is also emitted. (Ideally `<ok/>` tag should not be emitted in an error scenario.) The configuration does not get committed. [PR1585855](#)
- The mgd can crash when an invalid value is configured for `identityref` type leafs/leaf-lists while configuring openconfig or any other third-party YANG, problem happens with json and xml loads. [PR1615773](#)

Routing Protocols

- On all Junos OS Evolved platforms, when configuring the network instance for openconfig, an error might be observed while executing a commit if the configured network instance type is `default_instance` but the instance name is not default. [PR1644421](#)

User Interface and Configuration

- When `evo-cda-bt` is killed, FPC is restarted. The agentd crash might be due to ungraceful FPC restarts. This issue is not seen in a normal working scenario and is seen only upon ungraceful FPC restarts. Issue is seen when an important application is brought down and due to which FPC also goes down. Since FPC goes down there might be traffic loss. [PR1655441](#)
- The system might ask for your password when you try to save the configuration file. [PR1665008](#)
- `Configd-streamer` generates core files during commit of wild-carded groups related configuration. The core file is only seen with the wild-carded configuration which is used in the reported fusion test case. [PR1674890](#)

Resolved Issues

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

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

General Routing

- PTX10003 L2: In scaled Layer 2 network, error logs are printed for MAC Creation. `mac-learning` works as expected. [PR1491933](#)
- MTS-MCAST: [PTX10003] Auto RP base verification fails with multiple RPs with same group range. [PR1634982](#)
- IPv6 primary-only IP address does not move to the new primary Routing Engine after a switchover. [PR1648371](#)
- The classification-override functionality does not work for IPv6 traffic. [PR1650622](#)
- After configuring `rpf-check` on lag interface , the lag interface goes down. [PR1652623](#)
- The protocol state sync on backup Routing Engine is affected. [PR1655249](#)
- UEFI BIOS Key synchronization tool **efitools.service** fails after optics diagnostics test. [PR1655537](#)
- Wrong transmit HW priority for CLI priority `medium-low`. [PR1656837](#)
- `rpm-postinst` fails on boot. [PR1657278](#)

- Routes in RIB and FIB table might go out of sync on all Junos OS Evolved platforms and causes a traffic impact. [PR1658426](#)
- The license might get out of sync between the primary and backup Routing Engines. [PR1658869](#)
- The BGP session might flap on Junos OS Evolved platforms. [PR1660805](#)
- The network-instance name for streaming telemetry to be changed from default to DEFAULT to align with CONFIG stanza [PR1662999](#)
- Junos OS Evolved: PTX Series: An attacker can cause a kernel panic by sending a malformed TCP packet to the device (CVE-2022-22192). [PR1663201](#)
- PTX10008 running Junos OS Evolved SNMP GET does not return the expected value for FPC MIBs. [PR1668285](#)
- The icmpd application might crash and generate a core file post assert being raised. [PR1669088](#)
- The hwdre and evo-pfemamd applications might crash if idmd, fabtoken and hwdre are restarted immediately after a FEB offline. [PR1669130](#)
- The process fabspoked-pfe crash might be observed while executing CLI commands for fabric statistics. [PR1669435](#)
- Traffic loss might be seen when multicast route changes. [PR1669498](#)
- PTX10008: show snmp mib walk command fails at jnxLED mib if SNMP mib walk is performed with multiple parallel sessions. [PR1669624](#)
- Multicast traffic drop might be seen on specific PTX10000 platforms. [PR1669740](#)
- The rpd-agent process might restart post primary role switchover. [PR1669767](#)
- PTX10004/PTX10008/PTX10016 Junos OS Evolved : transmit-rate is not achieved on queue and traffic is dropped in oversubscription mode. [PR1670859](#)
- Fragment frames errors are seen on the 400G interface. [PR1671065](#)
- Default DDOS rate limit for LLDP packets is 20K PPS .[PR1671196](#)
- The unreplicated message might not be sent from the primary to backup if there is an rpd restart. [PR1671458](#)
- JDI-RCT:Junos OS Evolved:PTX10004:PTX10008:PTX10016 - evo-aftmand-bt.fpc core file seen.[PR1672512](#)
- The new primary Routing Engine could self-reboot after the kernel crashes on an old primary. [PR1673306](#)

- Reporting-interval in show jvision sensor info is stuck at 65,000 when configured reporting rate is changed from 65000 to 68000. [PR1673476](#)
- CoS drops seen for priority traffic on some PTX Series platforms. [PR1673738](#)
- Crash is observed when many Packet Forwarding Engines go down at the same time. [PR1674724](#)
- PTX10004/PTX10008/PTX10016 Junos OS Evolved: LSP Link-protection takes longer time with fix of [PR1662467](#). [PR1675282](#)
- The fragment-offset-except match condition does not work with some values. [PR1675482](#)
- PTX10004/PTX10008/PTX10016 Junos OS Evolved : jnxOperatingDRAMSize value displayed in Kilo bytes instead of Bytes. [PR1675811](#)
- GNOI rpc stat incorrect permission value. [PR1676942](#)
- PTX10008 Junos OS Evolved ZTP : HTTP GET fails in downloading configuration file. [PR1677231](#)
- Unexpected storage media consumption caused by system application log. [PR1677295](#)
- Routing Engine reboot, rpd crash, etc. can be seen if the volume of zookeeper logs is high on Junos OS Evolved platforms. [PR1678880](#)
- gnoi-system generates core files during ping requests. [PR1680004](#)
- PTX Junos OS Evolved : Major alarm **Application ztp fail on node Re0** appears about one day later post system zeroize. [PR1683964](#)

Infrastructure

- Traffic drop might be seen due to slow TCP reestablishment after a topology change. [PR1661210](#)
- On Junos Evolved platforms, no connectivity between the default routing instance and other routing instance might happen. [PR1671024](#)

Network Management and Monitoring

- The snmpd core file might be observed with filter-duplicates configuration. [PR1669510](#)

Routing Policy and Firewall Filters

- The firewall process might crash when nested filters are used as input list. [PR1651411](#)
- lo0 egress filter with next-header option not supported. [PR1672315](#)
- The aftmand process crash might be observed. [PR1683361](#)

User Interface and Configuration

- Junos OS Evolved: syslog regex matching backslash and punctuations unable to filter output. [PR1663346](#)

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

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These release notes accompany Junos OS Evolved Release 22.1R3 for QFX5130-32CD, QFX5220-32CD, QFX5220-128C, and QFX5700 switches. They describe new and changed features, limitations, and known and resolved problems in the hardware and software.

What's New

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

What's Changed

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

What's Changed in Release 22.1R3-S4

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Juniper Extension toolkit

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

What's Changed in Release 22.1R3-S2

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User Interface and Configuration

- The `file copy` command supports only text-formatted output in the CLI (ACX Series, PTX Series, and QFX Series)—The `file copy` command does not emit output when the operation is successful and supports only text-formatted output when an error occurs. The `file copy` command does not support using the `| display xml` filter or the `| display json` filter to display command output in XML or JSON format in any release. We've removed these options from the CLI.

What's Changed

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

EVPN

- Starting in Junos OS Evolved Releases 22.1R3, 22.2R2, and 22.3R1, QFX5130 switches don't copy the Type of Service (ToS) field when encapsulating a VXLAN packet by default. You can enable copying the ToS field upon VXLAN encapsulation using the `vxlan-tos-copy-filter` statement at the `edit forwarding-options` hierarchy. This statement copies both the DSCP and ECN values in the ToS field from the IP header of a packet to the outer IP header of the VXLAN packet.

General Routing

- Two new alarms are added and can be seen with MPC11E when 400G-ZR optics are used. High Power Optics Too Warm: warning of the increase in chassis ambient temperature with no functional action taken on the optics Temperature too high for optics power on: New inserted optics when the chassis ambient temperature is elevated beyond the threshold will not be powered on and would need to be reinserted when the ambient temperature is within the acceptable range

Juniper Extension Toolkit (JET)

- **Python 3 is the default and only Python version for executing Juniper Extension Toolkit Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing Juniper Extension Toolkit (JET) scripts written in Python. Python 2.7 is no longer supported for executing JET scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices.](#)]

Junos OS API and Scripting

- **Deprecated functions in the libpyvrf Python module (ACX Series, PTX Series, and QFX Series)**—The libpyvrf Python module no longer supports the `get_task_vrf()` and `set_task_vrf()` functions.

[See [How to Specify the Routing Instance in Python 3 Applications on Devices Running Junos OS Evolved.](#)]

- **Python 3 is the default and only Python version for executing commit, event, op, and SNMP Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing commit, event, op, and SNMP scripts written in Python. Python 2.7 is no longer supported for executing these types of scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices.](#)]

Junos XML API and Scripting

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

[See [file \(JET\).](#)]

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

[See [request extension-service restart-daemonize-app](#).]

Network Management and Monitoring

- **Python 3 is the default and only Python version for executing YANG action and translation Python scripts (ACX Series, PTX Series, and QFX Series)**—Junos OS Evolved supports only Python 3 for executing YANG action and translation scripts written in Python. Python 2.7 is no longer supported for executing YANG action and translation scripts, and we've deprecated the `language python` statement at the `[edit system scripts]` hierarchy level.

[See [Understanding Python Automation Scripts for Junos Devices](#).]

System Management

- When disk usage for the `run` directory is above 85%, ZooKeeper logs and snapshots in the `/run/zookeeper/conf/default/version-2` directory will be deleted if there are more than 3 files, leaving only the 3 most recent files.

Known Limitations

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

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

Open Issues

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- [General Routing | 24](#)
- [User Interface and Configuration | 24](#)

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

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

General Routing

- 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](#)
- QFX5700 - Ungraceful removal (OIR) of FPC or an FPC fault might result in PCIE MAJOR alarm **PCI Uncorrected error on dev 0000:00:03.0** that does not get cleared. [PR1620197](#)

User Interface and Configuration

- The system might ask for your password when you try to save the configuration file. [PR1665008](#)

Resolved Issues

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- [General Routing | 25](#)

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

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

General Routing

- In scaled Layer 2 network, error logs are printed for MAC Creation. `mac-learning` works as expected. [PR1491933](#)
- Unified led scheme for QFX5220 or QFX5130. [PR1616209](#)
- QFX5130-32CD, QFX5220-32CD : Unexpected carrier transitions are seen on JNP-100G-2X50G-xM after plug out and plug in [PR1642744](#)
- QFX5130: Few macs are missing from `show ethernet-switching table`. [PR1650329](#)
- TOS(DSCP+ECN) bits are not copied from the inner Layer 3 header to outer VXLAN header. [PR1658142](#)
- QFX Junos OS Evolved : Transit NTP packets are trapped to CPU. [PR1661855](#)
- High cpu utilization for `evo-pfemamd` process. [PR1663737](#)
- QFX5130 sends a flow sample with the wrong value of `flow record` in `sflow` sampled packet [PR1666434](#)
- On QFX5130-32CD and QFX5700 platforms, IPv6 neighborships fail to establish if IPv6 loopback filters are configured. [PR1671730](#)
- Post ZTP, QFX5220 needs a reboot for routes to be seen in `mgmt_junos.inet.0` table. [PR1672097](#)
- The interface does not come back to default port speed when ZTP is aborted. [PR1672101](#)
- QFX Junos OS Evolved: vlan tag of transit IGMP report is removed when `igmp-snooping` is enabled. [PR1687475](#)

Upgrade Your Junos OS Evolved Software

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

Follow these steps to upgrade your Junos OS Evolved software:

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

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

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

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

Licensing

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

The major components of the framework are:

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

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

Finding More Information

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

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

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

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

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

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

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

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

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

Requesting Technical Support

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Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active Juniper Care or Partner Support Services support contract, or are

covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the JTAC User Guide located at <https://www.juniper.net/content/dam/www/assets/resource-guides/us/en/jtac-user-guide.pdf>.
- Product warranties—For product warranty information, visit <https://support.juniper.net/support/warranty/>.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

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

- Find CSC offerings: <https://support.juniper.net/support/>
- Search for known bugs: <https://prsearch.juniper.net/>
- Find product documentation: <https://www.juniper.net/documentation/>
- Find solutions and answer questions using our Knowledge Base: <https://supportportal.juniper.net/s/knowledge>
- Download the latest versions of software and review release notes: <https://support.juniper.net/support/downloads/>
- Search technical bulletins for relevant hardware and software notifications: <https://supportportal.juniper.net/s/knowledge>
- Join and participate in the Juniper Networks Community Forum: <https://www.juniper.net/company/communities/>
- Create a service request online: <https://supportportal.juniper.net/>

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

Creating a Service Request with JTAC

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

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

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

Revision History

10 August 2023—Revision 2, Junos OS Release 22.1R3 for the ACX7100-32C, ACX7100-48L, ACX7509, PTX10001-36MR, PTX10003, PTX10004, PTX10008, PTX10016, QFX5130-32CD, QFX5220, and QFX5700 Devices.

20 July 2023—Revision 2, Junos OS Release 22.1R3 for the ACX7100-32C, ACX7100-48L, ACX7509, PTX10001-36MR, PTX10003, PTX10004, PTX10008, PTX10016, QFX5130-32CD, QFX5220, and QFX5700 Devices.

7 December 2022—Revision 1, Junos OS Release 22.1R3 for the ACX7100-32C, ACX7100-48L, ACX7509, PTX10001-36MR, PTX10003, PTX10004, PTX10008, PTX10016, QFX5130-32CD, QFX5220, and QFX5700 Devices.

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