

JUNOS Release Notes for Juniper Networks EX Series Ethernet Switches

16 November 2009

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New Features in JUNOS Release 10.1 for EX Series Switches

New features in Release 10.1 of JUNOS Software for EX Series switches are described in this section.

Not all EX Series software features are supported on all EX Series platforms in the current release. For a list of all EX Series software features and their platform support, see EX Series Switch Software Features Overview.

New features are described on the following pages:

- Hardware on page 3
- Access Control and Port Security on page 4
- Bridging, VLANs, and Spanning Trees on page 4
- Infrastructure on page 4
- Interfaces on page 5
- Layer 2 and Layer 3 Protocols on page 5
- Management and RMON on page 5
- MPLS on page 5
- Packet Filters on page 5

Hardware

- **EX2200 switch**—The EX2200 switch is a fixed-configuration switch that is available in four models—24-port or 48-port models with either all ports equipped for Power over Ethernet (PoE) or none of the ports equipped for PoE.

All EX2200 models provide network ports that have 10/100/1000Base-T Gigabit Ethernet connectors and uplink ports that support 1-gigabit small form-factor pluggable (SFP) transceivers for use with fiber connections and copper connections. For information about software features supported on the EX2200 switch, see the EX Series Switch Software Features Overview.

The following optical interfaces are supported on the EX2200 switch:

- EX-SFP-1GE-T (1000Base-T, 100m)
- EX-SFP-1GE-SX (1000Base-SX, 220 m, 275 m, 500 m, or 550 m)
- EX-SFP-1GE-LX (1000Base-LX, 10 km)
- EX-SFP-1GE-LH (1000Base-LH or 1000Base-LH, 70 km)
- EX-SFP-1FE-FX (100Base-FX, 2 km)
- EX-SFP-FE20KT13R15 (100Base-BX-U, 20 km)
- EX-SFP-FE20KT15R13 (100Base-BX-D, 20 km)

- **New optical transceiver support**—The 8-port 10-Gigabit Ethernet SFP+ line card in EX8200 switches now supports one new optical transceiver: EX-SFP-10GE-ER (10GBase-ER, 40 km).

Access Control and Port Security

- **Captive portal authentication**—Captive portal authentication allows you to authenticate users on EX Series switches by redirecting Web browser requests to a login page that requires users to input a username and password before they are allowed access to the network. In addition to using the feature to control network access by requiring users to provide information that is authenticated against a RADIUS server database, you can also use it to display an acceptable-use policy to users before they access your network. An authentication whitelist allows you to specify MAC addresses that are allowed to bypass authentication.

Bridging, VLANs, and Spanning Trees

- **Proxy ARP**—Proxy ARP can be configured on a per-VLAN basis, in either restricted or unrestricted mode.
- **IPv6 unicast VRF support**—EX Series switches now support IPv6 unicast VRF traffic.

Infrastructure

- **IPv6 support on EX8200 switches**—EX8200 switches now support configuration of IPv6 addresses.
- **Automatic refreshing of scripts**—Allows you to refresh commit, event, and op scripts automatically using operational mode commands.

Interfaces

- **Unicast reverse-path forwarding support**—Unicast reverse-path forwarding (RPF) is available on EX8200 switches. The unicast RPF feature can be enabled on specific interfaces on EX8200 switches and supports ECMP traffic.

Layer 2 and Layer 3 Protocols

- **IPv6 Layer 3 multicast routing and forwarding**—EX3200 and EX4200 switches now support IPv6 Layer 3 multicast routing and forwarding, which includes Multicast Listener Discovery version 1 (MLDv1) and MLDv2 to manage multicast group membership; reverse-path forwarding (RPF) to enable multicast routers to correctly forward multicast traffic to other multicast routers; Protocol Independent Multicast sparse mode (PIM SM) and PIM source-specific multicast (PIM SSM) protocols; and static rendezvous point (RP), bootstrap RP, and embedded RP to manage RP information for multicast groups.

Management and RMON

- **Real-time performance monitoring (RPM) support on EX8200 switches**—RPM is supported on EX8208 and EX8216 switches.
- **J-Web interface dashboard for EX2200 switches**—The J-Web interface dashboard page displays details of the EX2200 switch.
- **SNMP MIB enhancements**—The SNMP agent polls and gets details of all MIBs on EX2200 switches.

MPLS

- **MPLS enhancements**—MPLS supports class of service (CoS), MPLS over IP, and fast reroute to reroute the label-switched path in case of link failure.

Packet Filters

- **IPv6 support for firewall filters on EX3200 and EX4200 switches**—On EX3200 and EX4200 switches, you can apply match conditions to IPv6 traffic on Layer 3 interfaces, aggregated Ethernet interfaces, and loopback interfaces.

The following are the match conditions applicable to IPv6 traffic: destination-address, destination-port, destination-prefix-list, icmp-code, icmp-type, interface, next-header, packet-length, source-address, source-port, source-prefix-list, tcp-established, tcp-flags, tcp-initial, and traffic-class.

The following are the actions and action modifiers applicable to IPv6 traffic: accept, discard, routing-instance, analyzer, count, forwarding-class, loss-priority, and policer.

- **Enhancement to the interface match condition on EX8200 switches**—On EX8200 switches, you can now specify aggregated Ethernet interfaces as match

conditions using the interface match condition. You can configure an ingress or egress firewall filter with an aggregated Ethernet interface as a match condition and apply the firewall filter to ports, VLANs, and Layer 3 interfaces.

- Related Topics**
- Changes in Default Behavior and Syntax in JUNOS Release 10.1 for EX Series Switches on page 6
 - Limitations in JUNOS Release 10.1 for EX Series Switches on page 7
 - Outstanding Issues in JUNOS Release 10.1 for EX Series Switches on page 9
 - Resolved Issues in JUNOS Release 10.1 for EX Series Switches on page 14
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Changes in Default Behavior and Syntax in JUNOS Release 10.1 for EX Series Switches

The following current system behavior, configuration statement usage, or operational mode command usage might not yet be documented in the JUNOS Software for EX Series switches documentation:

Layer 2 and Layer 3 Protocols

- EX Series switches now support the `show multicast rpf instance instance-name` command.

User Interface and Configuration

- On EX3200 switches and EX4200 switches, the `request system power-off other-routing-engine` command and the `request system power-off both-routing-engines` command are disabled.
- The output of the `show chassis hardware` command for EX3200 switches and EX4200 switches has been changed. The Description field in the output now displays SFP-100-LX40 for the 100Base-LH interface and SFP-100-LH for the 100Base-ZX interface.

- Related Topics**
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- Upgrade and Downgrade Issues for JUNOS Release 10.1 for EX Series Switches on page 16

Limitations in JUNOS Release 10.1 for EX Series Switches

This section lists the limitations in JUNOS Release 10.1B1 for EX Series switches.

Access Control and Security

- When you have configured more than 1024 supplicants on a single interface, 802.1X authentication might not work as expected and causes the 802.1X process (`dot1xd`) to fail.

Infrastructure

- On EX8200 switches, RIP version 1 does not work properly.
- If you configure interface parameters on an EX3200 or EX4200 switch running JUNOS Release 9.2 or Release 9.3 for EX Series switches and then attempt to upgrade to a later release or a later version of Release 9.3 than the one that is currently installed, the switch might display the following error message: `init: interface-control is thrashing , not restarted`. As a workaround, on the interfaces you had previously configured, configure `no-auto-negotiation` and set the link mode to `full-duplex`, then commit the revised configuration.
- The RADIUS request sent by an EX Series switch contains both Extensible Authentication Protocol (EAP) Identity Response and State attributes.
- On EX Series switches, an SNMP query fails when the SNMP index size of a table is greater than 128 bytes, because the Net SNMP tool does not support SNMP index sizes greater than 128 bytes.
- Spanning-tree, GVRP, or IGMP snooping configuration windows might load slowly in the J-Web interface. Wait till the windows load completely before entering information, or some information might get lost.
- On EX Series switches, the `show snmp mib walk etherMIB` does not display any output, even though the `etherMIB` is supported. This problem occurs because the values are not populated at the module level—they are populated at the table level only. You can issue `show snmp mib walk dot3StatsTable`, `show snmp mib walk dot3PauseTable`, and `show snmp mib walk dot3ControlTable` commands to display the output at the table level.
- When you issue the `request system power-off` command, the switch halts instead of turning off power.

- In the J-Web interface, the Ethernet Switching monitoring page might not display monitoring details if there are more than 13,000 MAC entries on the switch.
- In the J-Web interface, changing port roles from Desktop, Desktop and Phone, and Layer 2 Uplink might not remove the configurations for enabling dynamic ARP inspection and DHCP snooping.

Interfaces

- EX Series switches do not support queued packet counters. Therefore, the queued packet counter in the output of the `show interfaces interface-name extensive` command always displays a count of 0 and is never updated.
- The following message might appear in the system log:

```
Resolve request came for an address matching on Wrong nh nh:355,
type:Unicast...?
```

You can ignore this message.

- On EX3200 and EX4200 switches, when port mirroring is configured on any interface, the mirrored packets leaving a tagged interface might contain an incorrect VLAN ID.
- On EX8200 switches, port mirroring configuration on a Layer 3 interface with the output configured to a VLAN is not supported.
- On EX8200 switches, when an egress VLAN that belongs to a routed VLAN interface (RVI) is configured as the input for a port mirroring analyzer, the analyzer incorrectly appends a dot1q (802.1Q) header to the mirrored packets or does not mirror any packets at all. As a workaround, configure a port mirroring analyzer with each port of the VLAN as egress input.
- EX Series switches do not support IPv6 interface statistics. Therefore, all values in the output of the `show snmp mib walk ipv6IfStatsTable` command always display a count of 0.

Related Topics

- [New Features in JUNOS Release 10.1 for EX Series Switches on page 3](#)
- [Changes in Default Behavior and Syntax in JUNOS Release 10.1 for EX Series Switches on page 6](#)
- [Outstanding Issues in JUNOS Release 10.1 for EX Series Switches on page 9](#)
- [Resolved Issues in JUNOS Release 10.1 for EX Series Switches on page 14](#)
- [Errata in Documentation for JUNOS Release 10.1 for EX Series Switches on page 15](#)
- [Upgrade and Downgrade Issues for JUNOS Release 10.1 for EX Series Switches on page 16](#)

Outstanding Issues in JUNOS Release 10.1 for EX Series Switches

The following are outstanding issues in JUNOS Release 10.1B1 for EX Series switches. The identifier following the description is the tracking number in our bug database.



NOTE: PR 440611, which was previously included in the JUNOS Release 10.0 release notes as an outstanding issue, has been removed, because this issue is not applicable to JUNOS Release 10.1B1 for EX Series switches.

- Access Control and Port Security
- Bridging, VLANs, and Spanning Trees
- Class of Service
- Firewall Filters
- Hardware
- Infrastructure
- Interfaces
- Layer 2 and Layer 3 Protocols

Access Control and Port Security

- If you configure the RADIUS server `revert-interval interval` option, the switch does not attempt to reconnect to the unreachable server after the revert interval has elapsed. [PR/304637]
- When both DHCP relay and snooping are configured on a EX2200 switch, the DHCP snooping database might not be built on that device. [PR/480682]

Bridging, VLANs, and Spanning Trees

- On EX8200 switches, when the links on STP-enabled routed VLAN interfaces (RVIs) come up, control packets might egress before the STP BPDUs. [PR/300576]
- When MVRP and VSTP are enabled together on EX Series switches, convergence does not occur between MVRP and VSTP. [PR/477019]
- On an EX2200 switch when there is no STP/RTG configured in the network and there is traffic looping, after the network loop is broken, sometimes MAC learning might not occur. As a workaround, restart the forwarding (pfem) process. [PR/473454]

Class of Service

- On EX8200 switches, classification of packets using ingress firewall filter rules with forwarding-class and loss-priority configurations does not rewrite the DSCP or 802.1p bits. Rewriting of packets is determined by the forwarding-class and loss-priority values set in the DSCP classifier applied on the interface. [PR/399331]

- On an EX2200 switch when a queue is oversubscribed and you modify a scheduler with `buffer-size exact` option on it such that it reduces the allocated buffers on the queue, the queue can stop dequeuing packets. Workaround : Stop traffic going out on the port. Deactivate and reactivate class of service (CoS). You can also reboot the switch. [PR/481401]

Firewall Filters

- On EX Series switches, when interface ranges or VLAN ranges are used in configuring firewall filters, egress firewall filter rules take more than 5 minutes to install. [PR/468806]
- IGMP packets are not matched by user-configured firewall filters. [PR/482194]

Hardware

- When an EX8216 switch power cycle completes, the `Last reboot reason` for the master and backup Routing Engines in the `show chassis routing-engine` command output might display incorrect values. [PR/415569]

Infrastructure

- In the J-Web interface, you cannot commit some configuration changes in the Port Configuration page and VLAN Configuration page because of the following limitations for port mirroring ports and port mirroring VLANs:
 - A port configured as the output port for an analyzer cannot be a member of any VLAN other than the default VLAN.
 - A VLAN configured to receive analyzer output can be associated with only one port.

[PR/400814]

- In the J-Web interface, uploading a software package to the switch might not work properly if you are using Internet Explorer version 7. [PR/424859]
- If an SRE module, RE module, SF module, line card, or Virtual Chassis member is in offline mode, the J-Web interface might not update the dashboard image accordingly. [PR/431441].
- On an EX2200 switch if the following message is displayed when switch is booting, it indicates that the installed packages might be corrupted: `mount_check: SHA1 (/packages/jkernel-ex-10.1-20090925.0) = f45dd191b053b608dafecc0ef3ea329c9f85693b ! =5fe72546eed0c0cb83e6addc6709720f56e8b6da`
As a workaround you can reinstall the image from the loader prompt with `-format` option set. [PR/433663]
- In the J-Web interface, in the Port Security Configuration page, you are required to configure `action` when you configure `MAC limit` even though configuring an `action` value is not mandatory in the CLI. [PR/434836]

- On EX8200 switches, if IS-IS is enabled on routed VLAN interfaces (RVIs), IS-IS adjacency states go down and come up after a graceful Routing Engine switchover (GRES). [PR/442373]
- The `interface-range` configuration statement is not supported under `[edit groups]` hierarchy. An error message might not be displayed when you use the `interface-range` statement. [PR/453538]
- On EX8200 switches, when IGMP snooping is enabled, the IPv6 multicast Layer 2 control frame is not forwarded to other interfaces in the same VLAN. [PR/456700]
- In the J-Web interface, the menu on the left side of the J-Web pages and contents of the J-Web pages might disappear when you click twice on the Troubleshoot tab. As a workaround, click on the Dashboard tab or Configure tab, and click again on the Troubleshoot tab to display the menu and contents of the page. [PR/459936]
- The DHCP snooping database is not built after graceful Routing Engine switchover (GRES) is performed twice. Even though packets are coming from the DHCP server, they are not inserted in the DHCP relay. [PR/461318]
- In the J-Web interface, in the BGP Configuration page (**Configuration > Routing > BGP**), if the values entered in the text boxes (for protocols, file name, and description) contain double quotation marks, the J-Web interface does not allow you to delete those values. If the value in the Group Name contains double quotation marks, the J-Web interface allows you to delete the BGP group name, but the deleted value reappears when you refresh the BGP Configuration page. As a workaround, delete the values that contain double quotation marks using the CLI. [PR/464030]
- The `jnxFirewall` MIB might not be populated in a firewall filter configuration. As a workaround, set up the following configuration to skip the firewall MIB:

```

user@switch# show snmp
view firewall_exclude {
  oid .1.3.6.1.4.1.2636.3.5 exclude;
  oid .1;
}
community public {
  view firewall_exclude;
  authorization read-only;
}

```

[PR/464061]

- In the J-Web interface, in the OSPF Global Settings table in the OSPF Configuration page, the Global Information table in the BGP Configuration page, or the Add Interface window in the LACP Configuration page, if you try to change the position of columns using the drag-and-drop method, only the column header moves to the new position instead of the entire column. [PR/465030]
- When you access the J-Web interface using the Mozilla Firefox Web browser and move a J-Web window (for example, the Add Interface window) over the browser toolbars, the window appears behind the browser toolbars. After this problem occurs, the window cannot be moved, because the title bar of the window is not visible. If you cancel and reopen the window, the window continues to appear behind the browser toolbars. [PR/473238]

- On EX8200 switches, after a graceful Routing Engine switchover (GRES), you can still navigate through the Maintenance menu in the LCD even after the Maintenance menu in the LCD has been disabled through the `set chassis lcd maintenance-menu disable` command. As a workaround, delete the LCD Maintenance menu configuration using the CLI on the new master switch, and then disable the LCD Maintenance menu using the `set chassis lcd maintenance-menu disable` command. [PR/473597]
- In the J-Web interface, in the OSPF Configuration page, the Traceoptions tab in the Edit Global Settings window (**Configuration > Routing > OSPF**) does not display the available flags (tracing parameters). As a workaround, use the CLI to view the available flags. [PR/475313]
- When you have a large number of static routes configured, and if you have navigated to pages other than page 1 in the Route Information table in the J-Web interface (**Monitor > Routing > Route Information**), changing the Route Table to query other routes refreshes the page but does not return to page 1. For example, if you run the query from page 3 and the new query returns very few results, the results table continues to display page 3 with no results. To view the results, navigate to page 1 manually. [PR/476338]
- In the J-Web interface Static Routing configuration page, you might not be able to delete a configured next-hop address because the **Delete** button is disabled. [PR/476572]
- In the J-Web interface, the dashboard does not display the uplink ports when transceivers are not plugged into the ports. [PR/477549]
- In some rare cases, switch bootup fails when loading the JUNOS Software. The message **Device not ready** displays because the NAND flash is not responding. Workaround: Power cycle the switch. [PR/482026]
- The name of the `set ethernet-switching-options authentication-whitelist` statement will be changed. The new name is correct in the documentation, but present in the CLI as `set ethernet-switching-options white-list`. [PR/487167]

Interfaces

- The system log might display the following messages when the `monitor interfaces interface-name` command is issued simultaneously from multiple Telnet sessions:

```
Nov 21 11:55:29 st-grande02-re0 /kernel: ifd_pfestat_req_wait_internal:
  ifd ge-6/0/40, stats_req 0xa8f33d80, sreq_id 41028, new sreq_id 42053
Nov 21 11:55:44 st-grande02-re0 login: LOGIN_INFORMATION: User regress
logged in from host 172.24.104.140 on device tty5
Nov 21 11:55:45 st-grande02-re0 su: regress to root on /dev/tty5
Nov 21 11:55:53 st-grande02-re0 /kernel: ifd_pfestat_req_wait_internal:
  ifd ge-0/0/35, stats_req 0xa8a9dd20, sreq_id 4380, new sreq_id 5405
Nov 21 11:56:27 st-grande02-re0 /kernel: ifd_pfestat_req_wait_internal:
  ifd ge-0/0/30, stats_req 0xa8b60de0, sreq_id 54857, new sreq_id 55882
Nov 21 11:56:46 st-grande02-re0 /kernel: ifd_pfestat_req_wait_internal:
  ifd ge-0/0/31, stats_req 0xa89a56c0, sreq_id 36596, new sreq_id 37621
Nov 21 11:56:58 st-grande02-re0 /kernel: ifd_pfestat_req_wait_internal:
  ifd ge-0/0/33, stats_req 0xa8bd3d20, sreq_id 32622, new sreq_id 33647
Nov 21 11:57:08 st-grande02-re0 /kernel: ifd_pfestat_req_wait_internal:
  ifd ge-0/0/31, stats_req 0xa8bd3d20, sreq_id 52160, new sreq_id 53185
```

[PR/403842]

- On EX8200 switches, if primary and backup interfaces for link protection are configured on a LAG interface (under the `ether-options 802.3ad` statement), packets might egress on the backup interface instead of the primary interface when the line card is restarted or during Routing Engine switchover. As a workaround, remove and reapply the LAG configuration. [PR/409934]
- On EX8200 switches, aggregated Ethernet interfaces might go down and come back up for a few minutes while the switch is updating many routes. [PR/416976]

Layer 2 and Layer 3 Protocols

- IGMP snooping does not function for IGMPv3 reports with the exclude filter mode. [PR/286600]
- On EX8200 switches, if Protocol Independent Multicast (PIM) is enabled, the switch might record the following in the system log:

```
Jan 13 15:13:19 st-grande02-re0 fpc0
RT-HAL,rt_entry_change_msg_check,1207: Unknown prefix 8.0.1.6
Jan 13 15:13:19 st-grande02-re0 /kernel: RT_PFE: RT msg op 3 (PREFIX
CHANGE) failed, err 5 (Invalid)
Jan 13 15:13:19 st-grande02-re0 fpc0 RT-HAL,rt_msg_handler,407: route
check failed.
```

[PR/415748]

- IS-IS adjacency might flap when a Routing Engine switchover occurs on EX3200 and EX4200 switches. On EX8200 switches, IS-IS adjacency flaps when GRES is enabled. The adjacency stabilizes after one flap. [PR/429589]

Related Topics

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Resolved Issues in JUNOS Release 10.1 for EX Series Switches

The following are the issues that have been resolved since JUNOS Release 10.0R1 for EX Series switches. The identifier following the descriptions is the tracking number in our bug database.

- Bridging, VLANs, and Spanning Trees
- Firewall Filters
- Hardware
- Infrastructure

Bridging, VLANs, and Spanning Trees

- When Multiple VLAN Registration Protocol (MVRP) and MSTP are enabled together on EX Series switches, convergence does not occur between MVRP and MSTP. [PR/449248: This issue has been resolved.]
- On EX4200 switches with the access interface through which traffic enters the switch configured as trusted (`secure-access-port interface interface-name dhcp-trusted`), VLAN Spanning Tree Protocol (VSTP) bridge protocol data units (BPDUs) are sent to the Routing Engine with the learning CPU code 37 instead of the reserved learning CPU code 306. [PR/468095: This issue has been resolved.]
- On EX3200 and EX4200 switches with large VLAN configurations (more than 1024 VLANs), stale dynamic VLAN entries might be found in the Ethernet switching process (`eswd`) after you delete VLANs or deactivate the Multiple VLAN Registration Protocol (MVRP). [PR/471647: This issue has been resolved.]
- On EX3200 and EX4200 switches, when MVRP dynamic VLAN creation is disabled, deregistration of VLANs on trunk interfaces does not occur even after the tag associated with the VLAN has been modified. [PR/479636: This issue has been resolved.]
- On EX3200 and EX4200 switches, stale MVRP VLAN membership entries might be found on blocked interfaces even after MVRP has been deactivated on the peer switch. [PR/482126: This issue has been resolved.]

Firewall Filters

- The `accept` action and the `log` and `syslog` action modifiers in the firewall filter configuration might not work as expected for packets destined for the switch. [PR/406714: This issue has been resolved.]
- On EX3200 and EX4200 switches, if you configure an egress firewall filter with the match condition `source-address` or `destination-address` on a VLAN and its routed VLAN interface (RVI), the firewall filter might not work properly. [PR/476626: This issue has been resolved.]

Hardware

- On 48-port SFP line cards used in EX8200 switches, do not install a transceiver in the first or last port on the bottom row (ports 1 and 47). Transceivers installed in these ports are difficult to remove. As a workaround, you can remove the transceiver by using a small flathead screwdriver or other tool to lift the lock on the transceiver. [PR/423694: This issue has been resolved.]

Infrastructure

- In the J-Web interface, the Edit MSTI window in the Spanning Tree Configuration page might not display details of an uncommitted interface configuration. [PR/433506: This issue has been resolved.]
- In the J-Web interface, in the OSPF Configuration page, no flags are displayed for the Traceoptions tab in OSPF Global Settings. [PR/461558: This issue has been resolved.]

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Errata in Documentation for JUNOS Release 10.1 for EX Series Switches

There are no outstanding documentation issues in this release.

Related Topics

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Upgrade and Downgrade Issues for JUNOS Release 10.1 for EX Series Switches

The following pages list the issues in JUNOS Release 10.1B1 for EX Series switches regarding software upgrade or downgrade:

- Upgrading or Downgrading from JUNOS Release 9.4R1 for EX Series Switches on page 16
- Upgrading from JUNOS Release 9.3R1 to Release 10.1 for EX Series Switches on page 16
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Upgrading or Downgrading from JUNOS Release 9.4R1 for EX Series Switches

The ARP aging time configuration in the `system` configuration stanza in JUNOS Release 9.4R1 is incompatible with the ARP aging time configuration in JUNOS Release 9.3R1 or earlier and JUNOS Release 9.4R2 or later. If you have configured `system arp aging-timer aging-time` on EX Series switches running JUNOS Release 9.4R1 and upgrade to JUNOS Release 9.4R2 or later or downgrade to JUNOS Release 9.3R1 or earlier, the switch will display configuration errors on booting up after the upgrade or downgrade. As a workaround, delete the `arp aging-timer aging-time` configuration in the `system` configuration stanza and reapply the configuration after you complete the upgrade or downgrade.

The format of the file in which the Virtual Chassis topology information is stored was changed in JUNOS Release 9.4. When you downgrade JUNOS Release 9.4 or later running on EX4200 switches in a Virtual Chassis to JUNOS Release 9.3 or earlier, make topology changes, and then upgrade to JUNOS Release 9.4 or later, the topology changes you have made using JUNOS Release 9.3 or earlier are not retained. The switch restores the last topology change you have made using JUNOS Release 9.4.

Upgrading from JUNOS Release 9.3R1 to Release 10.1 for EX Series Switches

If you are upgrading from JUNOS Release 9.3R1 and have voice over IP (VoIP) enabled on a private VLAN (PVLAN), you must remove this configuration before upgrading, to prevent upgrade problems. VoIP on PVLAN interfaces is not supported in releases later than JUNOS Release 9.3R1.

Upgrading from JUNOS Release 9.2 to Release 10.1 for EX Series Switches

For JUNOS Release 9.3 and later for EX Series switches, during the upgrade process, the switch performs reference checks on VLANs and interfaces in the `802.1X` configuration stanza. If there are references in the `802.1X` stanza to names or tags of VLANs that are not currently configured on the switch or to interfaces that are not configured or do not belong to the `ethernet-switching` family, the upgrade will fail. In addition, static MAC addresses on single-suplicant mode interfaces are not supported.



CAUTION: If your Release 9.2 configuration includes any of the following conditions, revise the configuration before upgrading to Release 10.1. If you do not take these actions, the upgrade will fail:

- Ensure that all VLAN names and tags in the 802.1X configuration stanza are configured on the switch and that all interfaces are configured on the switch and assigned to the **ethernet-switching** family. If the VLAN or the interface is not configured and you try to commit the configuration, the commit will fail.
- Remove static MAC addresses on single-suplicant mode interfaces. If they exist and you try to commit the configuration, the commit will fail.
- In an 802.1X configuration stanza, if **authentication-profile-name** does not exist and you try to commit the configuration, the commit will fail.
- In an 802.1X configuration stanza, broadcast and multicast MAC addresses are not supported in a static MAC configuration. If they exist and you try to commit the configuration, the commit will fail.
- Support for static MAC bypass in single or single-secure mode has been removed. If static MAC bypass exists and you try to commit the configuration, the commit will fail.
- In an 802.1X configuration stanza, the switch will not accept the option **vrange** as an assigned VLAN name. If it exists and you try to commit the configuration, the commit will fail.
- Enabling 802.1X and the port mirroring feature on the same interface is not supported. If you enable 802.1X and port mirroring on the same interface and then attempt to commit the configuration, the commit will fail.
- In an 802.1X configuration stanza, if the VLAN name or tag specified under **dot1x authenticator static** does not exist and you try to commit the configuration, the commit will fail.
- If the MSTP configuration contains a VLAN (under **protocols mstp msti msti-id**) that does not exist on the switch and you try to commit the configuration, the commit will fail. Remove the VLAN from the MSTP configuration before you perform an upgrade.
- In the **interfaces** configuration stanza, if **no-auto-negotiation** is configured but speed and link duplex settings are not configured under **ether-options** and you try to commit the configuration, the commit will fail. If **no-auto-negotiation** is configured under **ether-options**, you must configure speed and link duplex settings.
- In the **ethernet-switching-options** configuration, if **action** is not configured for the number of MAC addresses allowed on the interface (under **secure-access-port interface interface-name mac-limit** in the CLI or in the Port Security Configuration page in the J-Web interface), and you try to commit the configuration, the commit will fail. You must configure an action for the MAC address limit before upgrading from Release 9.2 to Release 10.1.
- If you have configured a tagged interface on logical interface 0 (unit 0), configure a tagged interface on a logical interface other than unit 0 before upgrading from Release 9.2 to Release 10.1. If you have not done this and you try to commit the configuration, the commit will fail. Beginning with JUNOS Release 9.3 for EX Series switches, untagged packets, BPDUs (such as in LACP and STP), and

priority-tagged packets are processed on logical interface 0 and not on logical interface 32767. In addition, if you have not configured any untagged interfaces, the switch creates a default logical interface 0.

- On EX4200 switches, if you have installed advanced licenses for features such as BGP, rename the `/config/license` directory to `/config/.license_priv` before upgrading from Release 9.2 to Release 9.3 or later. If the switch does not have a `/config/license` directory, create the `/config/.license_priv` directory manually before you upgrade. If you do not rename the `/config/license` directory or create the `/config/.license_priv` directory manually, the licenses installed will be deleted after you upgrade from Release 9.2 to Release 9.3 or later.

Downgrading from JUNOS Release 10.1 to Release 9.2 for EX4200 Switches

When you downgrade a Virtual Chassis configuration from JUNOS Release 10.1 to Release 9.2 for EX Series switches, member switches might not retain the mastership priorities that had been configured previously. To restore the previously configured mastership priorities, commit the configuration by issuing the `commit` command.

- Related Topics**
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 - Changes in Default Behavior and Syntax in JUNOS Release 10.1 for EX Series Switches on page 6
 - Limitations in JUNOS Release 10.1 for EX Series Switches on page 7
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Revision History

16 November 2009—Revision 1, JUNOS Software for EX Series Switches, Release 10.1B1

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