Release Notes: Junos® OS Release 15.1X49-D30 for the SRX Series

Release 15.1X49-D30
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Revision 8

Contents

Introduction

Junos OS runs on the following Juniper Networks® hardware: ACX Series, EX Series, M Series, MX Series, PTX Series, QFabric, QFX Series, SRX Series, and T Series.

These release notes accompany Junos OS Release 15.1X49-D30 for the SRX Series. They describe new and changed features, known behavior, and known and resolved problems in the hardware and software.

You can also find these release notes on the Juniper Networks Junos OS Documentation webpage, located at https://www.juniper.net/techpubs/software/junos/.

NOTE: Junos OS Release 15.1X49-D30 supports vSRX, SRX550 High Memory (SRX550M), and SRX1500 devices. Junos OS Release 15.1X49-D30 also supports SRX5400, SRX5600, and SRX5800 devices with host subsystems composed of either an SRX5K-RE-1800X4 (RE2) with an SRX5K-SCBE (SCB2), or an SRX5K-RE-1800X4 (RE2) with an SRX5K-SCB3 (SCB3). Use the Junos OS Release 15.1X49-D30 Release Notes and the 15.1X49-D30 documentation for the supported platforms.

Junos OS Release 15.1X49-D30 does not support SRX5400, SRX5600, or SRX5800 devices with the following cards:

- SRX5K-40GE-SFP I/O Card (IOC1)
- SRX5K-4XGE-XFP I/O Card (IOC1)
- SRX5K-FPC-IOC Flex I/O card (Flex IOC1)
- SRX5K-RE-13-20 Routing Engine (RE1)
- SRX5K-SCB Switch Control Board (SCB1)
- SRX5K-SPC-2-10-40 Services Processing Card (SPC1)

Junos OS Release 15.1X49-D30 does not support SRX1400, SRX3400, or SRX3600 devices.

With the exception of SRX550M devices, Junos OS Release 15.1X49-D30 does not support SRX Series devices SRX100 through SRX650.

If you have any questions concerning this notification, please contact the Juniper Networks Technical Assistance Center (JTAC).

New and Changed Features

This section describes the new features and enhancements to existing features in Junos OS Release 15.1X49-D30 for the SRX Series devices.

Release 15.1X49-D30 Software Features

Flow-Based and Packet-Based Processing

- **Central point architecture enhancements for SRX5000 Line**—Starting in Junos OS Release 15.1X49-D30, the central point architecture is enhanced to handle higher concurrent sessions and connections per second (cps) for the SRX5000 line. The new central point architecture prevents data packets from going through the central point by offloading traffic management to SPUs. The system session capacity is extended, as the session limit on the central point is removed. The SPUs manage the IP action match and now there is no IP action match on the central point.

  As mobile subscribers grow, mobile data usage and demand to support higher concurrent sessions and cps increase. The central point architecture can now support 2.5 million cps and 258 million concurrent sessions on the SRX5000 line with 11 SPCs.

  [See Understanding Enhancements to Central Point Architecture for the SRX5000 Line.]

IP Monitoring

- **Increasing IP monitoring capacity for SRX5000 Line Devices for IOC2 and IOC3**—Starting with Junos OS Release 15.1X49-D30, IOC2 and IOC3 on SRX5000 line devices support IP monitoring on both the primary and secondary nodes.

  The following IOC2 MICs support IP monitoring:

  - MIC with 20x1GE SFP Interfaces (SRX-MIC-20GE-SFP)— 20 ports
  - MIC with 10x10GE SFP+ Interfaces (SRX-MIC-10XG-SFPP)—10 ports
  - MIC with 1x100GE CFP Interface (SRX-MIC-1X100G-CFP)—1 port
  - MIC with 2x40GE QSFP+ Interfaces (SRX-MIC-2X40G-QSFP)—2 ports

  The following IOC3 support IP monitoring:

  - SRX5K-MPC3-100G10G (2x100GE and 4x10GE ports)
  - SRX5K-MPC3-40G10G (6x40GE and 24x10GE ports)

  IP monitoring checks the end-to-end connectivity of configured IP addresses and allows a redundancy group to automatically fail over when the monitored IP address is not reachable through the reth interface. Both the primary and secondary nodes in the chassis cluster monitor specific IP addresses to determine whether an upstream device in the network is reachable.

[See IP Monitoring Overview]

Network Address Translation (NAT)

- **Central point architecture enhancements for NAT for SRX5000 Line**—Starting in Junos OS Release 15.1X49-D30, the central point architecture can handle higher system session capacity and session ramp-up rate for the SRX5000 line, which were previously limited by the central point memory capacity and CPU capacity. Hence, the workload on the central point is reduced to increase the session capacity and to support more sessions to achieve higher connections per second (cps).

  [See Understanding Central Point Architecture Enhancements for NAT and Understanding Reverse NAT Enhancements for Central Point Architecture.]

Screen

- **Central point architecture enhancement for screens for SRX5000 Line**—Starting in Junos OS Release 15.1X49-D30, the central point session and central point packet processing are handled by the SPU instead of the central point for the SRX5000 line. This change impacts the statistic and signature screen functionalities. The SPU now handles all screen-related actions, including statistic counter, logs, and SNMP trap.

  [See Understanding Central Point Architecture Enhancements for Screens.]

- **Improved logging and trapping for SRX Series devices**—Starting with Junos OS Release 15.1X49-D30, the system log information for IP-based session limits is enhanced to include more information. Each session-limit screen log now contains five tuples of information. The hard core screen SNMP trap interval can now be configured in the range from 1 second to 3600 seconds. The default interval is 2 seconds.

  [See Understanding Source-Based Session Limits]

Virtual Private Networks (VPNs)

- **Copying outer IP header DSCP and ECN to inner IP header for SRX5400, SRX5600, and SRX5800 devices and vSRX instances**—Starting with Junos OS Release 15.1X49-D30, copying the Differentiated Services Code Point (DSCP) from the outer IP header to the inner IP header type of service (ToS) field is supported.

  This feature is supported on IPv4 and IPv6 and in chassis cluster mode.

  The benefit in enabling this feature is that after IPsec decryption, clear text packets can follow inner CoS (DSCP+ECN) rules. When you enable this feature on a VPN object, the corresponding IPsec security association (SA) is cleared and reestablished.

  By default, this feature is disabled.

  - To enable the feature:

    set security ipsec vpn *vpn-name* copy-outer-dscp

  - To disable the feature:

    delete security ipsec vpn *vpn-name* copy-outer-dscp

  - To verify whether the feature is enabled or not:

show security ipsec security-associations detail

[See Copying Outer IP Header DSCP and ECN to Inner IP Header]

Related Documentation

Changes in Behavior and Syntax

This section lists the changes in behavior of Junos OS features and changes in the syntax of Junos OS statements and commands from Junos OS Release 15.1X49.

Application Identification and Tracking

- On SRX Series devices, the following CLI statements are deprecated—rather than immediately removed—to provide backward compatibility and a chance to bring your configuration into compliance with the new configuration:

  edit services ssl termination profile *profile-name* protocol-version ssl3

  edit services ssl initiation profile *profile-name* protocol-version ssl3

Chassis Cluster

- When an SRX Series device is operating in chassis cluster mode and encounters any IA-chip access issue in an SPC or an I/O Card (IOC), a minor FPC alarm will be activated to trigger redundancy group failover.
- Starting in Junos OS Release 15.1X49-D20, for all SRX Series devices, reth interface supports proxy ARP.

CLI

- Starting in Junos OS Release 15.1X49-D30, when you upgrade from an existing release to Junos OS Release 15.1X49-D30, the following CLI commands will run with a no-op and a warning message is displayed that the configuration is obsolete:

  set security forwarding-process application-services session-distribution-mode hash-based

  set security forwarding-process application-services session-distribution-mode normal

  set security forwarding-process application-services maximize-cp-sessions

Interfaces and Routing

- **GRE keepalive time feature for SRX Series devices**—Starting in Junos OS Release 15.1X49-D30, the GRE keepalive time feature is supported on the GRE tunnel interface. You can configure the keepalives on a GRE tunnel interface using the **keepalive-time** and **hold-time** commands at the [**edit protocols oam gre-tunnel interface interface-name**] hierarchy level.

Layer 2 Features

- **Enhanced Layer 2 CLI**—Starting with Junos OS Release 15.1X49-D10, enhanced Layer 2 CLI configurations are supported on SRX5400, SRX5600, and SRX5800 devices. Legacy Layer 2 transparent mode configuration statements and operational commands are not supported. If you enter legacy configurations in the CLI, the system displays an error and fails to commit the configurations.

  For example, the following configurations are no longer supported:

  - **set bridge-domain**
  - **set interfaces ge-1/0/0 unit 0 family bridge**
  - **set vlans vlan-1 routing-interface**

  Use the SRX L2 Conversion Tool to convert Layer 2 CLI configurations to enhanced Layer 2 CLI configurations.

  The SRX L2 Conversion Tool is available at http://www.juniper.net/support/downloads/?p=srx5400#sw .

  For more information, refer to the Knowledge Base article at http://kb.juniper.net .

[See Enhanced Layer 2 CLI Configuration Statement and Command Changes.]

Network Time Protocol

- Starting in Junos OS Release 15.1X49-D10, on all SRX Series devices, when the NTP client or server is enabled in the [**edit system ntp**] hierarchy, the REQ_MON_GETLIST and REQ_MON_GETLIST_1 control messages supported by the monlist feature within the NTP client or server might allow remote attackers, causing a denial of service. To identify the attack, apply a firewall filter and configure the router's loopback address to allow only trusted addresses and networks.

Screen

- In Junos OS releases earlier than Junos OS Release 15.1X49-D20, the firewall generates a log for every packet that exceeds the source-ip-based or destination-ip-based threshold and triggers the source or destination session limit. This can lead to a flood of logs if a large number of packets is received every second after the threshold has been reached. For example, if the source or destination session limit has been reached and 100 additional packets arrive in the next second, 100 log messages are sent to the system log server.

  Starting in Junos OS Release 15.1X49-D20, the firewall generates only one log message every second irrespective of the number of packets that trigger the source or destination session limit.

  This behavior also applies to flood protection screens with TCP-Synflood-src-based, TCP-Synflood-dst-based, and UDP flood protection.

System Management

- During a load override, to enhance the memory for the commit script, you must load the configuration by applying the following commands before the commit step:
  set system scripts commit max-datasize 800000000
  set system scripts op max-datasize 800000000
- On all SRX Series devices in transparent mode, packet flooding is enabled by default. If you have manually disabled packet flooding with the **set security flow bridge no-packet-flooding** command, then multicast packets such as OSPFv3 hello packets are dropped.

User Interface and Configuration

- You can configure only one rewrite rule for one logical interface. When you configure multiple rewrite rules for one logical interface, an error message is displayed and the commit fails.

Related Documentation

- New and Changed Features on page 4
- Known Behavior on page 10
- Known Issues on page 12

Known Behavior

This section contains the known behaviors, system maximums, and limitations in hardware and software in Junos OS Release 15.1X49-D30.

Application Identification and Tracking

- The application quality of service (AppQoS) feature is supported SRX5K-40GE-SFP I/O Card (IOC) and not supported on SRX5K-MPC (IOC2), SRX5K-MPC3-100G10G (IOC3), and SRX5K-MPC3-40G10G (IOC3).
- On SRX Series devices, when you change the timeout value for the application system cache entries using the command **set services application-identification application-system-cache-timeout**, the cache entries need to be cleared to avoid inconsistency in timeout values of existing entries.

Attack Detection and Prevention (ADP)

- On all high-end SRX Series devices, the first path signature screen is performed first, followed by the fast path bad-inner-header screen.
- On all SRX Series devices, when a packet allow or drop session is established, the bad-inner-header screen is performed on every packet, because this screen is a fast path screen.

CLI

- On SRX5000 line devices, the following CLI statement is deprecated—rather than immediately removed—to provide backward compatibility and a chance to bring your configuration into compliance with the new configuration:

  set chassis fpc <*fpc-slot*> services offload

  The following new CLI statement replaces the deprecated CLI statement:

  set chassis fpc <*fpc-slot*> np-cache

IP Monitoring

- On SRX5400, SRX5600, and SRX5800 devices, IP monitoring does not support MIC online/offline status.

Layer 2 Features

- **Layer 2 Bridging and Transparent Mode**— On all SRX Series devices, bridging and transparent mode are not supported on Mini-Physical Interface Modules (Mini-PIMs).

Network Address Translation (NAT)

- On high-end SRX Series devices, the number of IP addresses for NAT with port translation has been increased to 1M addresses since Junos OS Release 12.1X47-D10.

  The SRX5000 line, however, supports a maximum of 384M translation ports and cannot be increased. To use 1M IP addresses, you must confirm that the port number is less than 384. The following CLI commands enable you to configure the twin port range and limit the twin port number:

  - **set security nat source pool-default-twin-port-range <*low*> to <*high*>**
  - **set security nat source pool sp1 port range twin-port <*low*> to <*high*>**

Platform and Infrastructure

- On all high-end SRX Series devices, when you enable a global services offloading policy, the connections per second (cps) might be affected. You can use an IOC3 card to offload more sessions, or lower the session amount to ensure that the IOC2 is capable of handling it. As a workaround, identify the sessions that must be offloaded and only enable services offloading on those sessions.

Software Installation and Upgrade

- In-Service Software Upgrade (ISSU) is not supported for upgrading from earlier Junos OS releases to Junos OS Release 15.1X49. ISSU is supported for upgrading to successive Junos OS Release 15.1X49 releases and to major Junos OS releases.
- On all high-end SRX Series devices, unified ISSU is supported from Junos OS Release 12.1X45 to Junos OS Release 12.1X46 and from Junos OS Release 12.1X46 to Junos OS

Release 15.1X49-D10. Unified ISSU is not supported from Junos OS Release 12.1X45 to Junos OS Release 15.1X49-D10.

VPN

- On a high-end SRX Series device, VPN monitoring of an externally connected device (such as a PC) is not supported. The destination IP address for VPN monitoring must be a local interface on the high-end SRX Series device.
- On SRX Series devices, configuring RIP demand circuits over VPN interfaces is not supported.

Related Documentation

- New and Changed Features on page 4
- Changes in Behavior and Syntax on page 7
- Known Issues on page 12
- Resolved Issues on page 14
- Documentation Updates on page 18
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Known Issues

This section lists the known issues in hardware and software in Junos OS Release 15.1X49-D30.

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

Chassis Cluster

- On SRX5400, SRX5600, and SRX5800 devices in a chassis cluster, when you simultaneously reboot both the nodes of the device, the secondary node cannot respond after reboot until the IOCs on the other node are online.
  As a workaround, reboot the secondary node 3 minutes after rebooting the primary node or after all FPCs on the primary node become online, whichever is shorter. PR1104249
- On all high-end SRX Series devices in a chassis cluster, the G-ARP is not sent with a static MAC address when chassis cluster failure occurs.
  As a workaround do the following:
  1. Create a new sample redundancy group, move the reth interface (which has mac-address changed or configured) into the new sample redundancy group, and commit.
  2. Move the reth interface back to its original redundancy group as per your configuration, deactivate the sample redundancy group, and commit. (When you move reth to a new redundancy group, its MAC address is refreshed with the configured address.) PR1115596

CLI

- On SRX5400, SRX5600, and SRX5800 devices, ICMP Out Errors with a rate of 10,000 per second are generated when you issue the **show snmp mib get decimal 1.3.6.1.2.1.5.15.0** command. PR1063472

Dynamic Host Configuration Protocol (DHCP)

- On all SRX Series devices configured as a DHCP server (using the jdhcpd process), when the DHCP server gets a new request from a client and applies an IP address from the authentication process (authd), the jdhcpd process communicates with authd process twice as expected (once for the DHCP discovery message and once for the DHCP request message). If the authentication fails in the first message, the authd process will indefinitely wait for the second authentication request. However, the jdhcpd process never sends the second request, because the process detects that the first authentication did not occur. This causes memory leak on the authd process, and the memory might get exhausted, generating a core file and preventing DHCP server service. High CPU usage on the Routing Engine might also be observed. PR1042818

Flow-Based and Packet-Based Processing

- On all high-end SRX Series devices, in some scenarios, the flowd process might generate core files due to stack overflow while running a log collection script on the device. PR1020739
- On SRX5400, SRX5600, and SRX5800 devices with an SRX5K IOC II, configuring a sampling feature (flow monitoring) might cause high kernel heap memory usage. PR1033359
- On all high-end SRX Series devices, when verifying the connections per second (cps) value using SNMP MIB walk **nxJsNodeSessionCreationPerSecond**, the device-polling mechanism gives a cps value that is an average of the values within the past 96 seconds. If the cps value is not constant, the reported cps number might not exactly equal the actual cps value. PR1109767
- On all high-end SRX Series devices, for a device running NAT traffic in high stress conditions, continuous chassis cluster failover might result in a minor central point session leak. However, other than the wasted sessions caused by the leak, this issue has no other effects on the device. PR1124695 and PR1141695

Network Address Translation (NAT)

- On all high-end SRX Series devices in a chassis cluster, when NAT with port-block allocation is configured, duplicate system log messages might be generated for each port-block allocation and release. PR1118563

Routing Policy and Firewall Filters

- On all high-end SRX Series devices, if there are two routing instances of instance type default and virtual router, when you change the instance type of one routing instance

from default to virtual router after the routing policy is configured, the route is missing from the second routing instance.
As a workaround, deactivate the first routing instance and the routing policy, and then activate the first routing instance to correct the issue. PR969944

- On all high-end SRX Series devices, during route deletion on Packet Forwarding Engine, next-hop entries might not be deleted, these stale next-hops may continue to be used by sessions resulting in flowd process crash. PR1017037

Unified Threat Management (UTM)

- On all high-end SRX Series devices, under high connections per second (cps) and UTM Sophos antivirus traffic, the device might ramp up to 99 percent CPU usage because of a central lock of object cache memory allocation. There is no clear boundary, because the allocation race condition varies.
As a workaroud, reducing traffic cps might lower the high CPU usage. PR967739

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Resolved Issues

This section lists the issues fixed in the Junos OS main release and the maintenance releases.

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

Resolved Issues

Application Layer Gateways (ALGs)

- On all SRX Series devices with the H.323 ALG enabled, if dual NAT (the packets in the same call receive different NAT rules bidirectionally) is enabled, then the destination NAT for the payload is skipped during ALG processing. For example, the address payload in the H.225 gatekeeper confirm packet is not translated by the H.323 ALG. PR1100638

Chassis Cluster

- On all SRX Series devices in a chassis cluster, when you disable the member interface of a redundant Ethernet (reth) interface, and if the interface disabling action causes the related redundancy group failover, such as, the only member interface under reth interface on the primary node is disabled, or the number of operating member interfaces under a link aggregation group (LAG) redundant Ethernet (reth) interface on the primary

node falls below the configured value of minimum-links, then the reth interface will flap. PR1111360

- On SRX5400, SRX5600, and SRX5800 devices in a chassis cluster with SRX5K-MPC (IOC2), SRX5K-MPC3-100G10G (IOC3), or SRX5K-MPC3-40G10G (IOC3) installed, when VLAN tagging is configured on the reth interface and LACP is enabled, and if the logical reth interfaces with VLAN tagged are configured within separate security zones, then the LACP protocol fails. PR1128355

Flow-Based and Packet-Based Processing

- On all high-end SRX Series devices configured with chassis cluster and logical systems (LSYS), when the session number is close to the configured LSYS session limit, sessions might not be successfully created on the secondary node. The sessions will be created on the backup flow SPUs, but not on the central point. As a result, the backup flow SPUs will keep retrying until the SPUs are successful. When this situation continues, the session limit on the secondary node's SPU will reach the maximum limit value and this will affect the new session creation. (Note: The number of sessions on the secondary node SPU is usually higher than on the primary node SPU). PR1061067
- On all SRX Series devices, if 1:1 sampling is configured for J-Flow and the device processes a high volume of traffic, a race condition of an infinite loop of J-Flow entry deletion might be encountered, As a result, the flowd process crashes. PR1088476
- On all high-end SRX Series devices, if Services Offloading is enabled, in certain cases, such as packets flowing on an LAG interface or fragmented packets processing, duplicated packets might be randomly generated and forwarded out of the device. PR1104222
- On all SRX Series devices, if equal-cost multipath (ECMP) routing is configured, in a race condition of ECMP route updating, the flowd process might crash. PR1105809
- On all high-end SRX Series devices with IPsec VPN configured, if traffic is transmitted from one VPN tunnel to another VPN tunnel, and these two VPN tunnels are anchored on different SPUs, then this VPN traffic might be forwarded in a loop between these two SPUs. PR1110437
- On all SRX Series devices (except the SRX110) in a chassis cluster, when ECMP is configured across the interfaces on both nodes, packets are dropped intermittently. PR1123543
- On all SRX Series devices with multi-threaded forwarding engines that have the **tcp-session strict-syn-check** feature enabled, the initial packets of a TCP session might be dropped due to a race condition. PR1130268

Interfaces and Routing

- On all high-end SRX Series devices, when you modify a security zone that has many interfaces (for example, when adding or deleting an interface in such a zone), an abnormally high CPU load might occur upon commit. PR1131679

Intrusion Detection and Prevention (IDP)

- On all high-end SRX Series devices with IDP SSL inspection enabled, traffic with an RSA key size more of than 2000 might cause high CPU usage and performance degradation on the data plane. PR1125387

J-Web

- On all SRX Series devices in J-Web, the **default** option under **Security > Logging > Application Tracking** is enabled. This setting enables application tracking if any system log configuration is saved. PR1106629
- On all high-end SRX Series devices, when a logical system (LSYS) user logs in to J-Web, changes the configuration, and clicks the Compare button, the result window does not pop up. PR1115191

Layer 2 Ethernet Services

- On all SRX Series devices, if the device acts as a DHCP server using the jdhcpd process and if the DHCP client sends a discover message with a requested IP address, then the authd process uses the requested IP address to find the pool with priority. This causes the device to assign an IP address from an incorrect DHCP pool to the DHCP client when there is a DHCP pool that shares the same subnet with the requested IP address. However, it is not the expected pool of the DHCP client. PR1097909

Network Address Translation (NAT)

- On all high-end SRX Series devices, when NAT with PBA (port-block allocation) is configured on the device cluster, duplicate system log messages are generated for each port-block allocation and release. PR1118563

Platform and Infrastructure

- On all SRX Series devices, when SNMPv3 privacy and authentication passwords are set and updated, NSM fails to push the update to the device that is managed by NSM. PR1075802
- On all high-end SRX Series devices, the chassis cluster LED changes to amber after RG0 failover, but the CLI indicates it is green. PR1085597
- On all high-end SRX Series devices, an SPU might become inaccessible from the Routing Engine because of a memory-buffer counter corruption. Because of this issue, a service outage occurs in certain scenarios, for example, when IPsec is configured with certificate-based authentication. PR1102376

- On all high-end SRX Series devices, starting in Junos OS Release 12.3X48-D20, the **set chassis fpc num sampling-instance name** command is required for J-Flow version 9 configuration. However, the commit fails when the **set chassis fpc num sampling-instance name** command is configured. PR1108371
- On all high-end SRX Series devices, you cannot configure more than one lt-0/0/0.x interface per logical systems (LSYS) on the following Junos OS maintenance releases:
  12.1X44-D35 through 12.1X44-D55
  12.1X46-D25 through 12.1X46-D40
  12.1X47-D10 through 12.1X47-D25
  12.3X48-D10 through 12.3X48-D15
  15.1X49-D10 through 15.1X49-D20
  You can configure more than one lt-0/0/0.x interface per LSYS if you have no interconnect LSYS configured. If the interconnect LSYS is configured, then you can have only one lt-0/0/0.x interface per LSYS. The issue is fixed in the following Junos OS maintenance releases: 12.1X44-D60, 12.1X46-D45, 12.1X47-D30, 12.3X48-D20, and 15.1X49-D30. PR1121888

Routing Protocols

- On all SRX Series devices, If the device acts as a rendezvous point (RP) in a multicast environment and if the interface of the RP is configured in a custom logical system (LSYS) or routing instance, then the register-stop messages might be incorrectly sent out from the root LSYS or routing instance instead of from the custom LSYS or routing instance. PR1062305

Routing Policy and Firewall Filters

- When polling the following OIDs through SNMP, file Descriptor leak might be seen during the nsd process.
  - jnxLsysSpCPSummary
  - jnxLsysSpSPUSummary
  - jnxLsysSpCPUEntry
  - jnxLsysSpCPUTable

PR1079629

Switching

- On all SRX Series devices, when you connect to the device through wireless AP the secure access port incorrectly allows access to the MAC addresses that are not in the list of allowed MAC addresses. PR587163

User Interface and Configuration

- On all SRX Series devices, when you commit the traffic selector (TS) configuration, it might fail and an ffp core file might be generated. PR1089676

VPNs

- On all high-end SRX Series devices, when the **alarm-without-drop** option is configured for the UDP Flood Protection screen, packets classified as attack packets might be sent out of order. This can result in performance degradation. PR1090963
- On all SRX Series device, if there are lots of IPsec VPNs configured, any configuration committing related to IPsec VPN might cause a pause in the kmd process, which might cause Dead-Peer-Detection (DPD) timeout and VPN tunnel renegotiation. PR1129848
- On all high-end SRX Series devices, downloading a large CRL over LDAP fails in some conditions, causing high CPU usage on the Routing Engine. PR1130164

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Documentation Updates

This section lists the errata and changes in the software documentation.

Layer 2 Bridging and Transparent Mode for Security Devices

- Starting in Junos OS Release 15.1X49-D10, the *Layer 2 Bridging and Switching Feature Guide for Security Devices* guide is retitled to *Layer 2 Bridging and Transparent Mode for Security Devices*.
- Although Ethernet switching is not supported in Junos OS Release 15.1X49-D10, the *Layer 2 Bridging and Transparent Mode for Security Devices* guide retains content about Ethernet switching.
- Starting in Junos OS Release 15.1X49-D10, the term *bridge-domain* is changed to *VLAN*. However, the documents still use the term *bridge-domain* in topics.

Related Documentation

Migration, Upgrade, and Downgrade Instructions

This section contains the procedure to upgrade Junos OS, and the upgrade and downgrade policies for Junos OS. Upgrading or downgrading Junos OS can take several hours, depending on the size and configuration of the network.

Upgrade for Layer 2 Configuration

Starting with Junos OS Release 15.1X49-D10 and later, enhanced Layer 2 CLI configurations are supported. If your device was configured earlier for Layer 2 transparent mode, then you must convert the legacy configurations to enhanced Layer 2 CLI configurations.

For details on how to migrate from Junos OS Release 12.3X48-D10 and earlier releases to Junos OS Release 15.1X49-D10 and later releases, refer to the Knowledge Base article at http://kb.juniper.net .

Upgrading an AppSecure Device

For devices implementing AppSecure services, use the **no-validate** option when upgrading from Junos OS Release 11.2 or earlier to Junos OS 11.4R1 or later. The application signature package used with AppSecure services in previous releases has been moved from the configuration file to a signature database. This change in location can trigger an error during the validation step and interrupt the Junos OS upgrade. The **no-validate** option bypasses this step.

Network and Security Manager Support

Network and Security Manager (NSM) support for SRX Series Services Gateways with Junos OS 15.1X49-D10 is available only with NSM versions 2012.2R6 / 2012.1R10 and later. For additional information, see the Network and Security Manager documentation.

Upgrade and Downgrade Scripts for Address Book Configuration

Beginning with Junos OS Release 12.1, you can configure address books under the **[security]** hierarchy and attach security zones to them (zone-attached configuration). In Junos OS

Release 11.1 and earlier, address books were defined under the **[security zones]** hierarchy (zone-defined configuration).

You can either define all address books under the **[security]** hierarchy in a zone-attached configuration format or under the **[security zones]** hierarchy in a zone-defined configuration format; the CLI displays an error and fails to commit the configuration if you configure both configuration formats on one system.

Juniper Networks provides Junos operation scripts that allow you to work in either of the address book configuration formats (see Figure 1 on page 21).

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- Running Upgrade and Downgrade Scripts on page 21
- Upgrade and Downgrade Support Policy for Junos OS Releases and Extended End-Of-Life Releases on page 22

About Upgrade and Downgrade Scripts

After downloading Junos OS Release 12.1, you have the following options for configuring the address book feature:

- **Use the default address book configuration**—You can configure address books using the zone-defined configuration format, which is available by default. For information on how to configure zone-defined address books, see the Junos OS Release 11.1 documentation.
- **Use the upgrade script**—You can run the upgrade script available on the Juniper Networks support site to configure address books using the new zone-attached configuration format. When upgrading, the system uses the zone names to create address books. For example, addresses in the trust zone are created in an address book named **trust-address-book** and are attached to the trust zone. IP prefixes used in NAT rules remain unaffected.

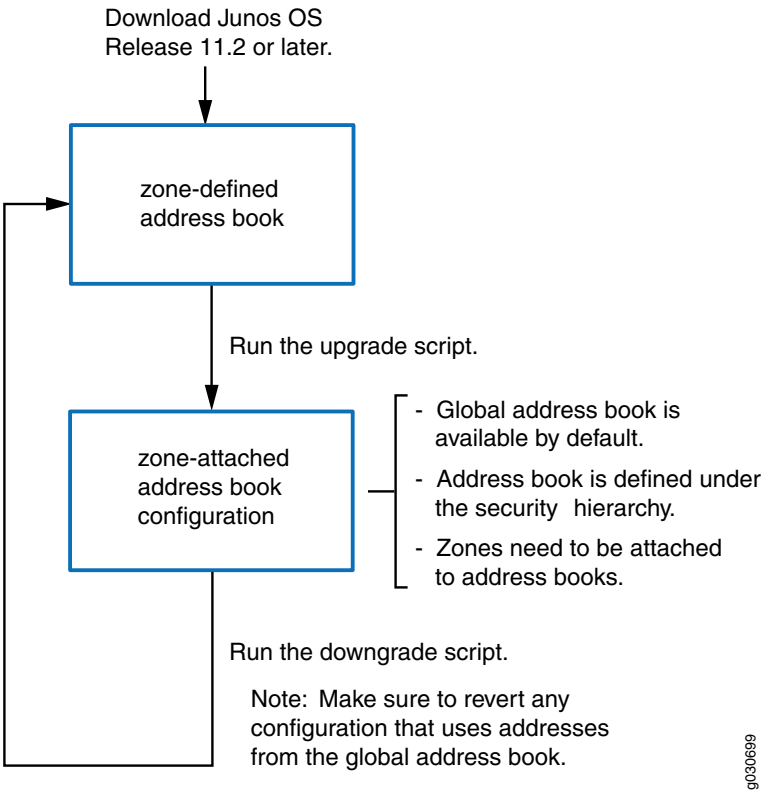
  After upgrading to the zone-attached address book configuration:

  - You cannot configure address books using the zone-defined address book configuration format; the CLI displays an error and fails to commit.
  - You cannot configure address books using the J-Web interface.

  For information on how to configure zone-attached address books, see the Junos OS Release 12.1 documentation.
- **Use the downgrade script**—After upgrading to the zone-attached configuration, if you want to revert to the zone-defined configuration, use the downgrade script available on the Juniper Networks support site. For information on how to configure zone-defined address books, see the Junos OS Release 11.1 documentation.

NOTE: Before running the downgrade script, make sure to revert any configuration that uses addresses from the global address book.

Figure 1: Upgrade and Downgrade Scripts for Address Books



Running Upgrade and Downgrade Scripts

The following restrictions apply to the address book upgrade and downgrade scripts:

- The scripts cannot run unless the configuration on your system has been committed. Thus, if the zone-defined address book and zone-attached address book configurations are present on your system at the same time, the scripts will not run.
- The scripts cannot run when the global address book exists on your system.
- If you upgrade your device to Junos OS Release 12.1 and configure logical systems, the master logical system retains any previously configured zone-defined address book configuration. The master administrator can run the address book upgrade script to convert the existing zone-defined configuration to the zone-attached configuration. The upgrade script converts all zone-defined configurations in the master logical system and user logical systems.

NOTE: You cannot run the downgrade script on logical systems.

For information about implementing and executing Junos operation scripts, see the *Junos OS Configuration and Operations Automation Guide*.

Upgrade and Downgrade Support Policy for Junos OS Releases and Extended End-Of-Life Releases

Support for upgrades and downgrades that span more than three Junos OS releases at a time is not provided, except for releases that are designated as Extended End-of-Life (EEOL) releases. EEOL releases provide direct upgrade and downgrade paths—you can upgrade directly from one EEOL release to the next EEOL release even though EEOL releases generally occur in increments beyond three releases.

You can upgrade or downgrade to the EEOL release that occurs directly before or after the currently installed EEOL release, or to two EEOL releases before or after. For example, Junos OS Releases 10.0, 10.4, and 11.4 are EEOL releases. You can upgrade from Junos OS Release 10.0 to Release 10.4 or even from Junos OS Release 10.0 to Release 11.4. However, you cannot upgrade directly from a non-EEOL release that is more than three releases ahead or behind. For example, you cannot directly upgrade from Junos OS Release 10.3 (a non-EEOL release) to Junos OS Release 11.4 or directly downgrade from Junos OS Release 11.4 to Junos OS Release 10.3.

To upgrade or downgrade from a non-EEOL release to a release more than three releases before or after, first upgrade to the next EEOL release and then upgrade or downgrade from that EEOL release to your target release.

For more information about EEOL releases and to review a list of EEOL releases, see http://www.juniper.net/support/eol/junos.html.

For additional information about how to upgrade and downgrade, see the Installation and Upgrade Guide for Security Devices.

Related Documentation

- New and Changed Features on page 4
- Changes in Behavior and Syntax on page 7
- Known Behavior on page 10
- Known Issues on page 12
- Resolved Issues on page 14

Product Compatibility

This section lists the product compatibility for any Junos SRX mainline or maintenance release.

Hardware Compatibility

To obtain information about the components that are supported on the device, and special compatibility guidelines with the release, see the SRX Series Hardware Guide.

To determine the features supported on SRX Series devices in this release, use the Juniper Networks Feature Explorer, a Web-based application that helps you to explore and compare Junos OS feature information to find the right software release and hardware platform for your network. Find Feature Explorer at http://pathfinder.juniper.net/feature-explorer/.

Transceiver Compatibility for SRX Series Devices

We strongly recommend that only transceivers provided by Juniper Networks be used on SRX Series interface modules. Different transceiver types (long-range, short-range, copper, and others) can be used together on multiport SFP interface modules as long as they are provided by Juniper Networks. We cannot guarantee that the interface module will operate correctly if third-party transceivers are used.

Please contact Juniper Networks for the correct transceiver part number for your device.

Finding More Information

For the latest, most complete information about known and resolved issues with the Junos OS, see the Juniper Networks Problem Report Search application at http://prsearch.juniper.net.

For regulatory compliance information about Common Criteria, FIPS, Homologation, RoHS2, and USGv6 for Juniper Networks products, see the Juniper Networks Compliance Advisor.

Juniper Networks Feature Explorer is a Web-based application that helps you to explore and compare Junos OS feature information to find the correct software release and hardware platform for your network. Find Feature Explorer at http://pathfinder.juniper.net/feature-explorer/.

Juniper Networks Content Explorer is a Web-based application that helps you explore Juniper Networks technical documentation by product, task, and software release, and download documentation in PDF format. Find Content Explorer at http://www.juniper.net/techpubs/content-applications/content-explorer/.

Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can send your comments to techpubs-comments@juniper.net, or fill out the documentation feedback form at https://www.juniper.net/cgi-bin/docbugreport/. If you are using e-mail, be sure to include the following information with your comments:

- Document or topic name
- URL or page number
- Software release version (if applicable)

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or JNASC 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.

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service 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 http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit http://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: http://www.juniper.net/customers/support/
- Search for known bugs: http://www2.juniper.net/kb/
- Find product documentation: http://www.juniper.net/techpubs/
- Find solutions and answer questions using our Knowledge Base: http://kb.juniper.net/
- Download the latest versions of software and review release notes: http://www.juniper.net/customers/csc/software/

- Search technical bulletins for relevant hardware and software notifications: http://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: http://www.juniper.net/company/communities/
- Open a case online in the CSC Case Management tool: http://www.juniper.net/cm/

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

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at http://www.juniper.net/cm/.
- 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 http://www.juniper.net/support/requesting-support.html.

Revision History

21, March 2017—Revision 8— Junos OS 15.1X49-D30 – SRX Series.

12, January 2017—Revision 7— Junos OS 15.1X49-D30 – SRX Series.

15, November 2016—Revision 6— Junos OS 15.1X49-D30 – SRX Series.

27, July 2016—Revision 5— Junos OS 15.1X49-D30 – SRX Series.

12, April 2016—Revision 4— Junos OS 15.1X49-D30 – SRX Series.

22, March 2016—Revision 3— Junos OS 15.1X49-D30 – SRX Series.

28, December 2015—Revision 2— Junos OS 15.1X49-D30 – SRX Series.

10, December 2015—Revision 1— Junos OS 15.1X49-D30 – SRX Series.