

Release Notes

Published
2025-07-02

Juniper Cloud-Native Router 25.2 Release Notes

INTRODUCTION

The Juniper Cloud-Native Router provides the service providers the flexibility to roll out the expansion requirements for 5G rollouts, reducing both the CapEx and OpEx. Cloud-Native Router is a containerized implementation of control and forwarding planes. Cloud-Native Router consists of modular components including a control plane (JCNR-Controller), forwarding plane (JCNR-vRouter), and JCNR-CNI. The control plane provides a Junos-based management framework, while the JCNR-vRouter, a DPDK-based, eBPF XDP-based or kernel-based forwarding plane, decouples forwarding from the Linux kernel, thus allowing faster forwarding and more scalability. JCNR-CNI provides the network interfaces in software that allow Cloud-Native Router to network with other containers, VMs, and physical devices. Together, these elements provide flexibility, programmability, and scalability for the coming generations of 5G installations.

SUPPORTED ON

- Baremetal servers—RHEL 8.4, 8.5, or 8.6; Rocky Linux 8.6, 8.7, 8.8, 8.9, 9.3; Ubuntu 22.04.4 LTS
- Red Hat OpenShift 4.13, 4.18
- Amazon Elastic Kubernetes Service (EKS) 1.26.3, 1.28.x, 1.29.x
- Google Cloud Platform (Rocky Linux 8.8)
- Wind River Cloud Platform 22.12, 24.09 (Technology Preview Only)
- Microsoft Azure Cloud Platform (Rocky Linux 8.7)
- VMWare Tanzu—TKG with VMware Photon OS 3.0

Table of Contents

New and Updated Features | 1

Resolved Issues | 2

Known Limitations | 3

Upgrade and Downgrade Options | 4

New and Updated Features

IN THIS SECTION

- [New Features in Juniper Cloud-Native Router Release 25.2 | 1](#)

This section describes the new features in the Juniper Cloud-Native Router (JCNR) 25.2 release.

New Features in Juniper Cloud-Native Router Release 25.2

- **Support for Layer 2 Circuits**—Juniper Cloud-Native Router supports Layer 2 circuits for a point-to-point Layer 2 connection over an IP/MPLS-based service provider's network. To establish the Layer 2 circuit, it uses Label Distribution Protocol (LDP) as the signaling protocol to advertise the ingress label to the remote PE routers. A targeted LDP session is established between the loopback addresses of the two PEs to exchange VPN labels. You can enable Layer 2 circuit features on Physical (PF/VF), VLAN sub-interface, bond interface (towards core), and pod interfaces.
- **Support for multiple IPSec tunnels with service chaining on a single pair of interfaces**—Juniper Cloud-Native Router supports multiple IPSec tunnels for security services through service chaining with Juniper cSRX on a single pair of interfaces.
- **Telemetry data for Layer 2 Circuits**—Juniper Cloud-Native Router provides telemetry data for Layer 2 circuits through Prometheus-based API and gRPC Network Management Interface (gNMI).
- **Support for Multihop BFD**—Juniper Cloud-Native Router supports both single-hop and multihop Bidirectional Forwarding Detection (BFD) protocol to detect failures in a network.
- **Overlay management access**—Juniper Cloud-Native Router can be managed across an overlay network. This allows you to situate your management host on the overlay network instead of only on the underlay network, giving you more options in your network implementation.
- **Wind River pre-bound L2 interfaces**—In a Wind River deployment, Juniper Cloud-Native Router supports pre-bound L2 interfaces in addition to pre-bound L3 interfaces.

- **Support for Dropper and Shaper modules in Layer-3 Class of Service**—Juniper Cloud-Native Router supports the DPDK dropper module that drops packets arriving at the scheduler block to avoid congestion. The drop is performed based on the weighted random early detection (WRED) drop profile maps. The Cloud-Native Router also supports configuring a transit rate to shape traffic per egress queue, preventing high priority queues from starving low priority queues.
- **Support for configuring IPSec tunnels post deployment using Configlets**—Juniper Cloud-Native Router supports deploying IPSec tunnels post cSRX deployment using configlets. You must set the `enableUserConfig` flag to true in the installation helm chart. You can then create IPSec tunnels or modify the tunnel configuration after deployment using a configlet.
- **Support for four QoS scheduler cores**—Juniper Cloud-Native Router supports up to four cores for the QoS scheduler (up from one).
- **Contrail Tools**—Juniper Cloud-Native Router makes available the optional Contrail Tools package, with initial support for the `collect_jcnr_support_info` and `dppkvifstats` commands (to collect troubleshooting information and DPDK performance statistics respectively).

Resolved Issues

IN THIS SECTION

- [Resolved Issues in Juniper Cloud-Native Router Release 25.2 | 2](#)

This section provides information about issues that were resolved in release 25.2.

Resolved Issues in Juniper Cloud-Native Router Release 25.2

- **JCNR-11320: Modifying Layer 2 Circuit Protect Interface results in a cRPD crash**—When configuring Layer 2 circuit configuration, modifying the protect interface to another primary interface, no longer causes in a cRPD crash.

- **JCNR-11257: Traffic drop upon cRPD restart if JCNR is handling over 2 million flows through MPLSoUDP tunnels**—When handling over two million traffic flows through MPLSoUDP tunnels, traffic drop is no longer observed in JCNR if cRPD is restarted.

Known Limitations

IN THIS SECTION

- [Known Issues and Limitations in Juniper Cloud-Native Router Release 25.2 | 3](#)

This section describes issues and limitations present in Juniper Cloud-Native Router (JCNR) release 25.2.

Known Issues and Limitations in Juniper Cloud-Native Router Release 25.2

- **JCNR-11738: IPv6 pod-to-pod ICMP traffic over IPSec tunnel is successfully transmitted along with ICMP Destination Unreachable Errors**—When IPv6 pod-to-pod ICMP traffic is sent through an IPSec tunnel from a service-chained Cloud-Native Router, the traffic is transmitted successfully, however ICMP Destination unreachable may also be transmitted.
- **JCNR-11754: Traffic destined to OAM sub-interface is dropped**—When the Cloud-Native Router's OAM interface is a sub-interface, traffic destined to the OAM interface is dropped.

Upgrade and Downgrade Options

IN THIS SECTION

- [Upgrade from a Previous Version | 4](#)
- [Downgrade to an Older Version | 4](#)

This section provides high-level information about the available upgrade and downgrade options.

Upgrade from a Previous Version

You can upgrade Juniper Cloud-Native Router from release 24.4 onwards to release 25.2. See the [Upgrade from Cloud-Native Router Release 24.4 and Later](#) topic in the deployment guide for details.

Downgrade to an Older Version

There is no procedure for downgrading to an older version. To change from a current version to an older version, you must uninstall the current version and install the older version.

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