

# Release Notes

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## Juniper Cloud-Native Router 23.1 Release Notes

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### INTRODUCTION

Juniper Cloud-Native Router (cloud-native router) is a containerized implementation of Juniper control and forwarding planes. The cloud-native router runs on "white-box" Linux servers. It 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 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 JCNR 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

- RHEL 8.4, 8.5, or 8.6
- Rocky Linux 8.6

You can install the cloud-native router on VMs or BMS that run the operating systems shown above. Each server must have one or more Intel Columbiaville (E810) or Intel Fortville (XL710) NICs installed for proper operation.

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# New and Updated Features

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This section describes the new features in the Juniper Cloud-Native Router 23.1 release.

**NOTE:** Juniper Cloud-Native Router 23.1 release supports only L2 deployments. L3 deployments are not supported for this release.

## New Features in Juniper Cloud-Native Router Release 23.1

- **Support for native VLAN**—Juniper Cloud-Native Router now supports receiving and forwarding bridged Ethernet frames with 802.1Q VLAN tags. Typically, trunk ports accept only tagged packets, and the untagged packets are dropped. You can enable a JCNR fabric trunk port to accept untagged packets by configuring a native VLAN identifier (ID) on the interface on which you want the untagged packets to be received. When a JCNR fabric trunk port is enabled to accept untagged packets, such packets are forwarded with the native VLAN ID applied to them.
- **Support for preventing local switching**—Juniper Cloud-Native Router now provides support to prevent interfaces in a bridge domain that are a part of the same VLAN group, from transmitting ethernet frame copies in between those interfaces. The **noLocalSwitching** key provides the option to enable the functionality on the selected VLAN IDs.

**NOTE:** The **noLocalSwitching** functionality is a Technology Preview feature in the Juniper Cloud-Native Router Release 23.1.

# Resolved Issues

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This section provides information about issues that we resolved between release 22.4 and 23.1.

## Resolved Issues in Juniper Cloud-Native Router Release 23.1

- **JCNR-2788: contrail-k8s-deployer pod in crash loop even though vrouter pods are up**—Previously, on doing a vrouter upgrade between 22.4 containers, the contrail-k8s deployer would be in a crash loop for a longer duration before it could come up even while vRouter pods were up. This issue has been resolved.
- **JCNR-2980: Fabric workload trunk interface is coming up as access with no config in cRPD after deployment**—The fabric workload trunk interface configured in the `values.yaml` file before deployment would be deployed as an access interface with no configuration in cRPD after the deployment. This issue has been resolved.
- **JCNR-2802: Drop counters are updating with RX pkt count for pod interfaces when traffic is received even traffic drop is not existed**—The drop counters were incremented when traffic was received on the pod interface (ingress) in the vRouter even while the traffic was not dropped and transmitting correctly on the fabric interface. This issue has been resolved.
- **JCNR-3171: L2 ACL is not getting programmed in cRPD and vRouter intermittently in certain scenario**—The layer 2 firewall filters (ACL) was not getting programmed in cRPD and vRouter in certain scenarios like vRouter crash or Juniper Cloud-Native Router installation using helm with the ACL configuration in the template. This issue has been resolved.
- **JCNR-3173: After fresh deploy of JCNR, the pods Vif has invalid vrf**—After deploying a fresh version of JCNR, the `vif` pods would have invalid `vrf`. This issue has been resolved.

# Known Limitations

## IN THIS SECTION

- [Known Issues and Limitations in Juniper Cloud-Native Router Release 23.1 | 3](#)

This section describes issues and limitations present in Juniper Cloud-Native Router release 23.1.

## Known Issues and Limitations in Juniper Cloud-Native Router Release 23.1

- **JCNR-3541: core-facing on access interface is not removing the interface from no local switching—**When an access interface with the **no-local-switching** key enabled is configured to **core-facing**, then the no-local-switching functionality continues to be enabled on the access interface.
- **JCNR-3595: vf\_isolated remains true for access interface even after deleting no-local-switching from BD after vRouter restart—**Consider the following steps:
  1. Deploy Juniper Cloud-Native Router having a workload access interface with **no-local-switching** enabled for the bridge domain.
  2. Restart the vRouter and wait for it to be up.
  3. Go to cRPD and remove **no-local-switching** functionality from the bridge domain.

The access interface continues to have **no-local-switching** key enabled while this should not be the case.

### Workaround:

**no-local switching** works only for interfaces that have the interface-mode explicitly configured and are placed under the routing-instance and not the bridge domain. Therefore, the following configuration of the interface under the bridge domain which is done by the helm should be deleted,

```
set routing-instances vswitch bridge-domains bd1110 interface enp179s0f1v0
```

and the configuration shown below needs to be applied where the interface-mode is configured explicitly.

```
set routing-instances vswitch interface enp179s0f1v0
set interfaces enp179s0f1v0 unit 0 family bridge interface-mode access
set interfaces enp179s0f1v0 unit 0 family bridge vlan-id 1110
set interfaces enp179s0f1v0 unit 0 family bridge core-facing
```

- **JCNR-3600: Redundant syslog ng container on helm upgrade**—After a helm upgrade, the newly created **syslogng** pod continues to be in the pending state.

**Workaround:**

After the upgrade, delete the older **syslogng** pod manually by issuing the `kubectl -n jcnr delete <syslog-pod-name>` command.

- **JCNR-3652: Agent pod missing "ss" causing the below Error in agent logs**—The following error is visible in the **contrail-vrouter-agent.log** file. You can ignore this error as it does not affect the normal functioning of Juniper Cloud-Native Router.

```
[ERROR] [Category=Common, Task=http::RequestHandlerTask] No command output for  ss -px | grep
pid=166 | grep ESTAB | grep dpdk_netlink
```

## Upgrade or Downgrade Options

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

# Upgrade from a Previous Version

Upgrade from a previous version to Juniper Cloud-Native Router Release 23.1 is supported.

**NOTE:** Juniper Cloud-Native Router 23.1 release supports only L2 deployments. L3 deployments are not supported for this release.

To upgrade from an older version to Juniper Cloud-Native Router Release 23.1, perform the following steps:

1. Download the tarball, **Juniper\_Cloud\_Native\_Router\_23.1.tgz**, to the directory of your choice.
2. Expand the file **Juniper\_Cloud\_Native\_Router\_23.1.tgz**.

```
tar xzvf Juniper_Cloud_Native_Router_23.1.tgz
```

3. Change directory to **Juniper\_Cloud\_Native\_Router\_23.1**.

```
cd Juniper_Cloud_Native_Router_23.1
```

4. Load the JCNr docker images to local docker. The images are available in the **Juniper\_Cloud\_Native\_Router\_<release-number>/images** directory.

```
docker load -i images/jcnr-images.tar.gz
```

5. Edit the **helmchart/values.yaml** file. You must edit the values.yaml file to match the current interface configurations on your currently deployed JCNr instance. For example,

```
#####
#                                     L2 PARAMS                                     #
#####

# fabricInterface: NGDU or tor side interface, expected all types
# of traffic; interface_mode is always trunk for this mode
fabricInterface:
- bond0:
    interface_mode: trunk
```

```

vlan-id-list: [100, 200, 300, 700-705]
storm-control-profile: rate_limit_pf1

# fabricWorkloadInterface: RU side interfaces, expected traffic is only
# management/control traffic; interface mode is always access for this mode
fabricWorkloadInterface:
- enp59s0f1v0:
    interface_mode: access
    vlan-id-list: [700]

```

6. Upgrade the current version of JCNR to release 23.1 by issuing the following command:

```
helm upgrade jcnr helmchart/.
```

**NOTE:** Upgrading from an older release such as Juniper Cloud-Native Router Release 22.4 results in having a redundant pod—syslog-ng. Delete the older pod manually after the upgrade by using the `kubectl -n jcnr delete pod <syslog-ng_pod_name>` command.

## Verify if Upgrade is Successful

Issue the command `kubectl get pods -A`. The output of the command shows all of the pods in the Kubernetes cluster in all namespaces. A successful upgrade shows that all pods display that they are in the running state. For example,

```

kubectl get pods -A

```

NAMESPACE	NAME	READY	STATUS	
contrail-deploy	contrail-k8s-deployer-7749c5657d-7qpxw	1/1	Running	
0	47m			
contrail	contrail-vrouter-masters-2nqp6	3/3	Running	
0	80m			
jcnr	kube-crpd-worker-ds-vd7jn	1/1	Running	
0	48m			
jcnr	syslog-ng-c4f7b7455-hxvgl	1/1	Running	
0	83m			
kube-system	calico-kube-controllers-5f4fd8666-x2q99	1/1	Running	869 (2m1s
ago)	46h			
kube-system	calico-node-28w98	1/1	Running	1 (20h



ago)	46h			
kube-system	coredns-54bf8d85c7-868ts	1/1	Running	
0	46h			
kube-system	dns-autoscaler-7944dc7978-ws9fn	1/1	Running	1 (20h
ago)	46h			
kube-system	kube-apiserver-ix-esx-06	1/1	Running	2 (20h
ago)	46h			
kube-system	kube-controller-manager-ix-esx-06	1/1	Running	6 (49m
ago)	46h			
kube-system	kube-multus-ds-amd64-jl69w	1/1	Running	1 (20h
ago)	46h			
kube-system	kube-proxy-qm5bl	1/1	Running	1 (20h
ago)	46h			
kube-system	kube-scheduler-ix-esx-06	1/1	Running	7 (49m
ago)	46h			
kube-system	nodelocaldns-bntfp	1/1	Running	1 (20h
ago)	46h			

## Downgrade to an Older Version

As of the 23.1 Release of Juniper Cloud-Native Router, 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 an older version.

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