

Contrail Networking Release 1909

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RELEASE

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Introduction

Juniper Networks Contrail Networking is an open, standards-based software solution that delivers network virtualization and service automation for federated cloud networks. It provides self-service provisioning, improves network troubleshooting and diagnostics, and enables service chaining for dynamic application environments across enterprise virtual private cloud (VPC), managed Infrastructure as a Service (IaaS), and Networks Functions Virtualization (NFV) use cases.

These release notes accompany Release 1909 of Contrail Networking. They describe new features, limitations, and known problems.

These release notes are displayed on the Contrail Networking Documentation Web page at https://www.juniper.net/documentation/en_US/contrail19/information-products/topic-collections/release-notes/index.html.

New and Changed Features

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The features listed in this section are new or changed as of Contrail Networking Release 1909. A brief description of each new feature is included.

Enhanced VLAN ID Assignment for Virtual Networks

Starting with Contrail Networking Release 1909, you can assign one VLAN ID only to one virtual network in an enterprise style configuration. This is because of the **VLAN-ID Fabric-Wide Significance** field, which is enabled for enterprise style configuration and disabled for service provider style configuration.

For more information, see [Virtual Port Groups](#).

Performing Maintenance Activity on Data Center Devices

Starting with Contrail Networking Release 1909, you can activate maintenance mode on spine and leaf devices in a data center fabric. In maintenance mode, traffic flowing through the device is drained out or rerouted to other devices so that you can perform maintenance activity on the device like replace line cards or fix any issue on the device. You can activate maintenance mode on a device from the **Infrastructure > Fabrics > *Fabric_Name*** page.

For more information, see [Activating Maintenance Mode on Data Center Devices](#).

Support for Contrail with Kubernetes in Nested Mode by Using Juju Charms

Contrail Networking Release 1909 supports provisioning of a Kubernetes cluster inside an OpenStack cluster. Contrail Networking offers a nested control and data plane where a single control plane and a single network stack can manage and service both the OpenStack and Kubernetes clusters. In nested mode, a Kubernetes cluster is provisioned in virtual machines of an OpenStack cluster. The CNI plugin and the Contrail-Kubernetes manager of the Kubernetes cluster interface directly with Contrail components that manage the OpenStack cluster. All Kubernetes features, functions and specifications are supported in nested mode.

For more information, see [Installing Contrail with Kubernetes in Nested Mode by Using Juju Charms](#).

Support for QFX10002-60C Device

Starting with Contrail Networking Release 1909, you can configure CRB-Access Role on a QFX10002-60C device running Junos OS Release 19.1R2 and later. QFX10002-60C device configured with CRB-Access role works only if enterprise style of configuration is enabled. To enable enterprise

style of configuration, select the **VLAN-ID Fabric Wide Significance** check box when onboarding the QFX10002-60C device.

For more information on enterprise style of configuration, see [Configuring EVPN VXLAN Fabric with Multitenant Networking Services](#). For more information on supported hardware platforms and associated roles, see [Supported Hardware Platforms and Associated Node Profiles and Roles](#).

Support for QFX5120-32C Device

Contrail Networking Release 1909 supports QFX5120-32C device running Junos OS Release 19.1R2 and later.

For more information on supported hardware platforms and associated roles, see [Supported Hardware Platforms and Associated Node Profiles and Roles](#).

Viewing the Hardware Inventory of Data Center Devices

Starting with Contrail Networking Release 1909, you can view the hardware inventory of a data center device using Contrail Command user interface (UI). The hardware inventory of a data center device contains information about chassis, routing engine, power-supply, FPC, and so on. To view the hardware inventory, navigate to the **Hardware Inventory** tab in the **Infrastructure>Fabrics>Fabric_Name>Device_Name** page. The details displayed in the **Hardware Inventory** tab correspond to the output of using the `show chassis hardware` command on the data center device.

For more information, see [Viewing Hardware Inventory of Data Center Devices](#).

Supported Platforms Contrail Networking Release 1910

[Table 1 on page 4](#) lists the orchestrator releases and the corresponding operating systems and kernel versions supported by Contrail Networking Release 1910.

Table 1: Supported Platforms

Contrail Networking Release	Orchestrator Release	Deployment Tool	Operating System, Kernel, and Key Components Version
Contrail Networking Release 1910	Kubernetes 1.12.9	Ansible	<ul style="list-style-type: none"> CentOS 7.7—Linux Kernel Version 3.10.0-1062.1.1 Docker version: 18.03.1-ce
	OpenShift 3.11	Ansible	<ul style="list-style-type: none"> RHEL 7.7—Linux Kernel Version 3.10.0-1062.121
	OpenStack Rocky	Ansible	<ul style="list-style-type: none"> CentOS 7.7—Linux Kernel Version 3.10.0-1062.1.1 Ansible version: 2.5.2 Docker version: 18.03.1-ce
	OpenStack Queens	Ansible	<ul style="list-style-type: none"> CentOS 7.7—Linux Kernel Version 3.10.0-1062.1.1 Ansible version: 2.5.2 Docker version: 18.03.1-ce
		Juju Charms	<ul style="list-style-type: none"> Ubuntu 18.04.2—Linux Kernel Version 4.15.0-48-generic MaaS Version: 2.4.2
		Helm	<ul style="list-style-type: none"> Ubuntu 16.04.3—Linux Kernel Version 4.4.0-165-generic Docker version: 17.03.2-ce Helm version: 2.7.2 Kubernetes version: 1.9.3

Table 1: Supported Platforms *(Continued)*

Contrail Networking Release	Orchestrator Release	Deployment Tool	Operating System, Kernel, and Key Components Version
	Red Hat OpenStack Platform 13.0.8	RHOSP 13 director	<ul style="list-style-type: none"> RHEL7.7—Linux Kernel Version 3.10.0-1062.1.2
	VMware vCenter 6.7	Ansible	<ul style="list-style-type: none"> ESX version 6.5 <p>CentOS VM version running vRouter: CentOS 7.7—Linux Kernel Version 3.10.0-1062.1.1</p>

Table 2: Supported AppFormix Release

Contrail Networking Release	AppFormix Release	Operating System
Contrail Networking Release 1910	AppFormix 3.1.6	CentOS 7.7

Known Behavior

This section lists known limitations with this release.

- CEM-9043 While provisioning through Contrail Command, 1909.3 images are getting pulled instead of 1909.30 inspite of using “image_tag” in instances.yml when using hub.juniper.net repository.

As a workaround, use 1909.30-queens as CONTRAIL_CONTAINER_TAG.

- CEM-8926 RHOSP13 ISSU upgrade fails in step 8.2 openstack overcloud upgrade run --nodes \$nodes --playbook deploy_steps_playbook.yaml

The issue is because docker start fails as docker.sock gets created as a directory instead of file. This is due to the race condition in docker start.

```
[root@overcloud-contrailcontroller-0 ~]# ls -ltr /run/ | grep dock
drwxr-xr-x. 7 root root 140 Sep 11 13:07 docker *
drwxr-xr-x. 2 root root 40 Sep 11 22:34 docker.sock
```

As a workaround, perform the following steps:

1. Delete the **docker.sock** directory.
 2. Restart Docker.
 3. Rerun OpenStack overcloud upgrade run --nodes \$nodes --playbook deploy_steps_playbook.yaml
- CEM-8721 Care must be taken when editing the Global ASN value. The Global ASN value should not be changed to any of the existing user created ASN.
 - CEM-8708 The routing instance name is generated by using the logical router name that you enter while creating a logical router. However, Junos has a character length limit, and the logical router name that you enter must not exceed 200 characters. You can create logical routers from the **Overlay>Logical Routers** page of the Contrail Command UI.
 - CEM-8701 While bringing up a BMS using the Life Cycle Management workflow, sometimes on faster servers the re-image does not go through and instance not moved from ironic vn to tenant vn. This is because if the PXE boot request from the BMS is sent before the routes are converged between the BMS port and the TFTP service running in Contrail nodes. As a workaround, the servers can be rebooted or the BIOS in the servers can be configured to have a delayed boot.
 - CEM-8149 BMS LCM with fabric set with enterprise_style=True is not supported. By default, enterprise_style is set to False. User should avoid using enterprise_style=True if the fabric object will onboard BMS LCM instance.
 - CEM-7874 User defined alarms may not be generated, when third stunnel/Redis service instance is down after the first two instances were restarted.
 - CEM-5441 On a freshly provisioned Contrail + Appformix cluster, to enable the live data streaming the web sockets between Contrail UI and Appformix server need to be established. This needs to be triggered once by login to the Appformix UI.
 - CEM-5334 The multi cloud gateway on the cloud will allow traffic from only a vRouter or Controller nodes to reach to the On-Prem cluster. So in case of deployment where the On-Prem open stack cluster need to be extended to the K8s cluster on the cloud, the k8s master must be defined in one of the vRouters on the cloud.

- CEM-5284 Cloud Compute/vrouter nodes will not be listed in the cluster-nodes/compute node page, all nodes/computes will be listed in the servers page
- CEM-5282 When Azure cloud is extended to On-Prem cluster running on RHEL hosts, contrail-status shows vRouters running on Azure as initializing, though the services are up. This is due to the Red Hat issue <https://access.redhat.com/solutions/2766251>.
- CEM-5141 For deleting compute nodes, the UI workflow will not work. Instead, update the instances.yaml with "ENABLE_DESTROY: True" and "roles:" (leave it empty) and run the following playbooks.

```
ansible-playbook -i inventory/ -e orchestrator=openstack --tags nova playbooks/
install_openstack.yml
ansible-playbook -i inventory/ -e orchestrator=openstack playbooks/install_contrail.yml
```

For example:

```
global_configuration:
  ENABLE_DESTROY: True
  ...
  ...
instances:
  ...
  ...
  srvr5:
    provider: bms
    ip: 19x.xxx.x.55
    roles:
  ...
  ...
```

- CEM-5043 VNI update on a LR doesnt update the RouteTable. As a workaround, delete the LogicalRouter and create a new LogicalRouter with the new VNI.
- CEM-5042 Adding new subnet on an already provisioned VPC is not supported. If all the subnets are added during initial bringup of VPC, nodes can be added incrementally to the subnets anytime.
- CEM-5041 Provisioning of Region or VPC objects only on the cloud without any nodes is not supported. Add atleast one node while provisioning Region/VPC.
- CEM-5024 Current multi cloud provisioning does not enable the On-prem TOR to exchange public cloud subnets with the On-Prem controllers. The user need to add static routes on the controllers to all the public cloud subnets.

- CEM-4943 After deleting and reprovisioning public cloud infra, though the nodes get deleted from the cloud, the API server and Kubernetes will have stale entries for the deleted objects. To clean up the stale entries, run the following housekeeping scripts:

1. Log in to the command container.
2. Navigate to the **contrail-multi-cloud** folder.

```
cd /usr/share/contrail/contrail-multi-cloud/
```

3. Run the following script.

```
TF_STATE=/root/contrail-multi-cloud/terraform.tfstate INVENTORY=inventories/inventory.yml  
TOPOLOGY=/root/contrail-multi-cloud/topology.yml ./housekeeper.sh
```



NOTE: If you run the script after provisioning, ensure that TF_STATE is the backup file. For example:

```
TF_STATE=/root/contrail-multi-cloud/terraform.tfstate.backup  
INVENTORY=inventories/inventory.yml TOPOLOGY=/root/contrail-multi-cloud/  
topology.yml ./housekeeper.sh
```

- CEM-4941 The multicloud gateway on the public cloud cannot be shared across different subnets. Each subnet must have its own gateway.
- CEM-4865 Provisioning of Contrail Controllers on public cloud is not supported. Controllers need to be provisioned On-prem.
- CEM-4467 On DPDK computes, sometimes VM creation fails with "Connection is closed" error. The issue is not related to any of the contrail components. It is related to systemd-machined service in registering VMs. As a workaround, restart the systemd-machined service to fix the issue.
- CEM-4381 Contrail Fabric device manager tasks can fail if one or more Contrail API servers is down. Contrail-status on the Contrail config nodes can be used to determine if this situation occur.
- CEM-4370 After creating a PNF Service Instance, the fields like PNF eBGP ASN*, RP IP Address, PNF Left BGP Peer ASN*, Left Service VLAN*, PNF Right BGP Peer ASN*, Right Service VLAN* cannot be modified. If there is a need to modify these values, delete and re-create the Service Instance with intended values.

- CEM-4190 IPtables rules are not updated on MC-GW nodes. As a workaround, you must configure IPtables on the on-premise MC-GW nodes with INPUT and FORWARD and default ACCEPT policy.
- CEM-3959 BMS movement across TORs is not supported. To move BMS across TORs the whole VPG need to be moved. That means if there are more than one BMS associated to one VPG, and one of the BMS need to be moved, the whole VPG need to be deleted and re-configured as per the new association.
- CEM-3324 Users cannot provision Contrail Cluster entirely in Public cloud. Contrail Cluster need to be On-Prem and vRouters can be extended to public cloud.
- JCB-204796 In a Helm-based provisioned cluster, VM launch fails if MariaDB replication is set to >1.
- JCB-202874 After deleting a vRouter chart with DPDK, the NICS do not rebind to the host in Helm.
- JCB-190956 While creating ironic-provision, service address in the subnet must be pointing to openstack ironic node ip/kolla internal vip.
- JCB-187320 On a DPDK compute vif `list -rate core-dumps` with traffic.
- JCB-187287 High Availability provisioning of Kubernetes master is not supported.
- JCB-186493 When a snapshot of an active VM fails, shutdown the VM before generating the snapshot.
- JCB-184837 After provisioning Contrail by using a Helm-based provisioned cluster, restart nova-compute container.
- JCB-184776 When the vRouter receives the head fragment of an ICMPv6 packet, the head fragment is immediately enqueued to the assembler. The flow is created as hold flow and then trapped to the agent. If fragments corresponding to this head fragment are already in the assembler or if new fragments arrive immediately after the head fragment, the assembler releases them to flow module. Fragments get enqueued in the hold queue if agent does not write flow action by the time the assembler releases fragments to the flow module. A maximum of three fragments are enqueued in the hold queue at a time. The remaining fragments are dropped from the assembler to the flow module.

As a workaround, the head fragment is enqueued to assembler only after flow action is written by agent. If the flow is already present in non-hold state, it is immediately enqueued to assembler.
- JCB-177787 In DPDK vRouter use cases such as SNAT and LBaaS that require netns, jumbo MTU cannot be set. Maximum MTU allowed: <=1500.
- JCB-177541 When you receive an error message during Kolla provisioning, rerunning the code will not work. In order for the provisioning to work, restart provisioning from scratch.
- JCB-171466 Metadata SSL works only in HA deployment mode.

- JCB-163773 A false alarm for config service is generated when config and configdb services are installed on different nodes. Ignore the false alarm.
- JCB-162927 SR-IOV with DPDK co-existence deployment is not supported using contrail-helm-deployer.