Setting up Genesys Multicloud CX Private Edition

Configure VXLAN on OpenShift

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Contents

Learn how you can set up VXLAN tunnels, which is the first step in SBC integration with the Genesys Multicloud CX private edition deployment on OpenShift.

Related documentation:

-
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RSS:

- For private edition

Disclaimer

Genesys is committed to diversity, equality, and inclusivity. This includes using appropriate terms in our software and documentation. Therefore, Genesys is removing non-inclusive terms. For third-party products leveraged by Genesys that include such terms, Genesys uses the following as replacements.

- For the terms master/slave, Genesys uses “primary” and “secondary” or “primary” and “replica,” with exceptions for their use in third-party commands.
- For the terms blacklist/whitelist, Genesys uses blocklist/allowlist.
- For the term master, when used on its own, Genesys uses main wherever possible.

Set up VXLAN tunnels to the OpenShift cluster

```
bash-3.2$ ./oc get clusternetwork -o json | jq .items[0].network -r

10.28.0.0/14
```

Create a VXLAN tunnel and profile on the BIG-IPs

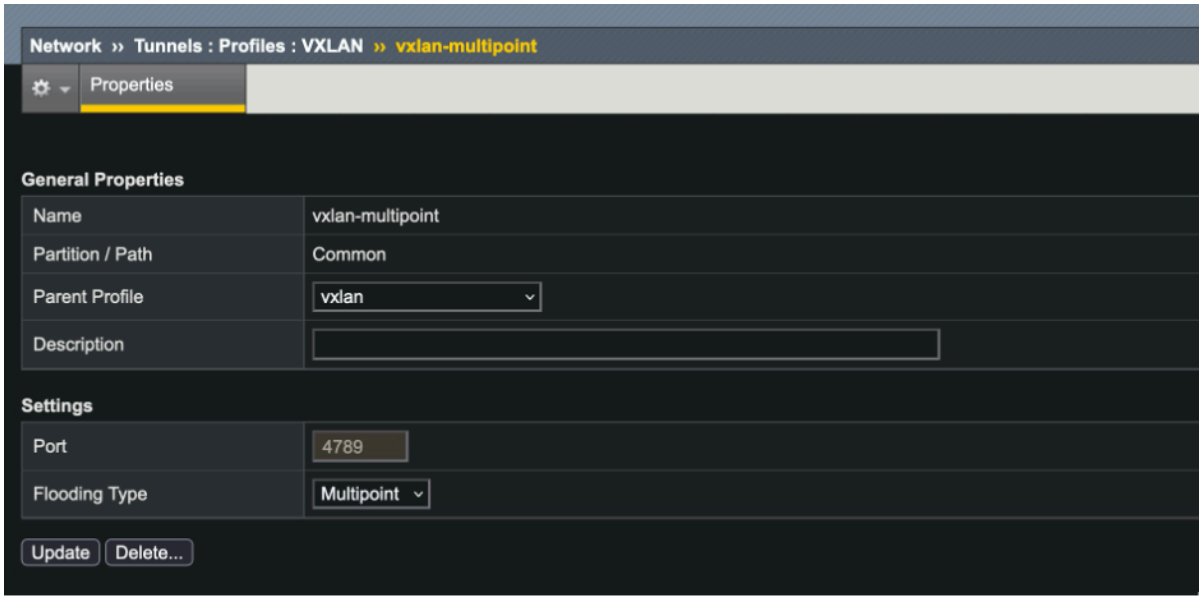
1. On bigip-01, create a VXLAN tunnel and profile.

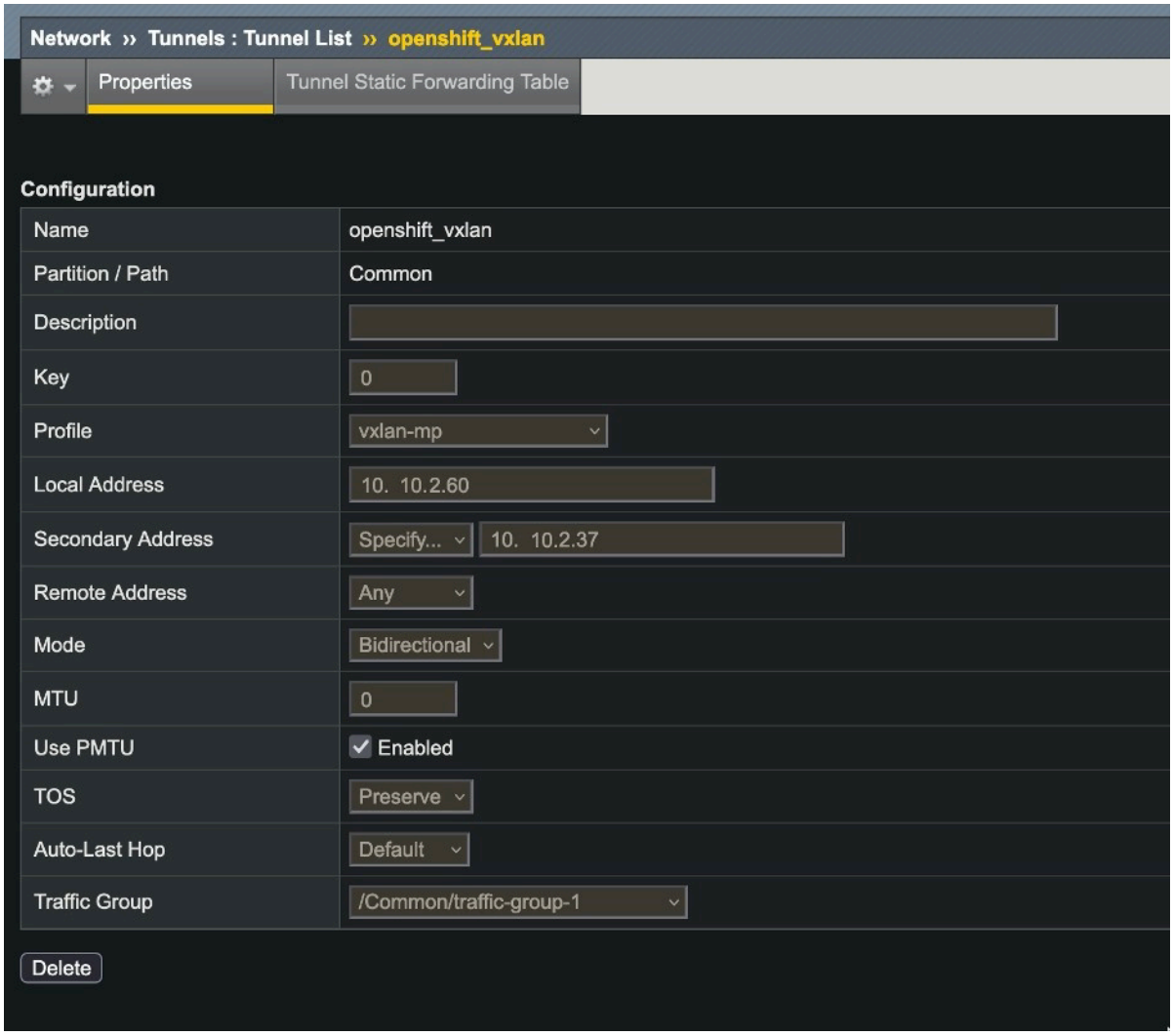
   ```
   (tmos)# create net tunnels vxlan vxlan-mp flooding-type multipoint

   (tmos)# create net tunnels tunnel openshift_vxlan key 0 profile vxlan-mp local-
   address 10.10.2.60 secondary-address 10.10.2.37
   ```

2. On bigip-02, create a VXLAN tunnel and profile.

```
(tmos)# create net tunnels vxlan vxlan-mp flooding-type multipoint

(tmos)# create net tunnels tunnel openshift_vxlan key 0 profile vxlan-mp local-
address 10.10.2.60 secondary-address 10.10.2.39
```

- Local-address: Internal floating IP
- Secondary-address: Internal self IP





Create new OpenShift host subnets for the BIG-IPs

This process includes creating three manifests, one for each of the BIG-IPs and a third for setting up the floating IP.

1. Create one host subnet for each BIG-IP device.

   f5-openshift-hostsubnet-bigip-01.yaml

   ```
    # Setup for F5 bigip-01 hostsubnet
   #
   apiVersion: v1
   kind: HostSubnet
   metadata:
     name: bigip-01
     annotations:
   ```

```
    pod.network.openshift.io/fixed-vnid-host: "0"
    pod.network.openshift.io/assign-subnet: "true"
# provide a name for the node that will serve as BIG-IP's entry into the cluster
host: bigip-01
# The hostIP address will be the BIG-IP interface address routable to the
# OpenShift Origin nodes.
# This address is the BIG-IP VTEP in the SDN's VXLAN.
hostIP: 10.10.2.37
```

f5-openshift-hostsubnet-bigip-02.yaml

```
# Setup for F5 big-ip-02 hostsubnet
#
apiVersion: v1
kind: HostSubnet
metadata:
  name: bigip-02
  annotations:
    pod.network.openshift.io/fixed-vnid-host: "0"
    pod.network.openshift.io/assign-subnet: "true"
# provide a name for the node that will serve as BIG-IP's entry into the cluster
host: bigip-02
# The hostIP address will be the BIG-IP interface address routable to the
# OpenShift Origin nodes.
# This address is the BIG-IP VTEP in the SDN's VXLAN.
hostIP: 10.10.2.39
```

f5-openshift-hostsubnet-bigip-float.yaml

```
# Setup for F5 big-ip-floating interface hostsubnet
#
apiVersion: v1
kind: HostSubnet
metadata:
  name: big-ip-float
  annotations:
    pod.network.openshift.io/fixed-vnid-host: "0"
    pod.network.openshift.io/assign-subnet: "true"
# provide a name for the node that will serve as BIG-IP's entry into the cluster
host: big-ip -float
# The hostIP address will be the BIG-IP interface address routable to the
# OpenShift Origin nodes.
# This address is the BIG-IP VTEP in the SDN's VXLAN.
hostIP: 10.10.2.60
```

2. Create the host subnet for the BIG-IPs by applying the preceding manifest files in OpenShift.

```
oc create -f f5-openshift-hostsubnet-bigip-01.yaml

oc create -f f5-openshift-hostsubnet-bigip-02.yaml

oc create -f f5-openshift-hostsubnet-bigip-float.yaml
```

3. Verify creation of the host subnets.

```
bash-3.2$ ./oc get hostsubnets
NAME
HOST                                          HOST IP       SUBNET           EGRESS
CIDRS   EGRESS IPS
aro1-eastus2-cpe-master-0               aro1-eastus2-cpe-master-0
10.10.0.9    10.29.0.0/23
aro1-eastus2-cpe-master-1               aro1-eastus2-cpe-master-1
10.10.0.8    10.30.0.0/23
```

```
aro1-eastus2-cpe-master-2                aro1-eastus2-cpe-master-2
10.10.0.7    10.28.0.0/23
aro1-eastus2-cpe-worker-eastus21-2bwqk   aro1-eastus2-cpe-worker-eastus21-2bwqk
10.10.1.5    10.29.12.0/23
aro1-eastus2-cpe-worker-eastus21-5v8hx   aro1-eastus2-cpe-worker-eastus21-5v8hx
10.10.1.7    10.30.10.0/23
aro1-eastus2-cpe-worker-eastus22-5mpvv   aro1-eastus2-cpe-worker-eastus22-5mpvv
10.10.1.11   10.28.12.0/23
bigip-float                              bigip-
float                                    10.10.2.60   10.30.2.0/23
bigip-01
bigip-01                                 10.10.2.37   10.31.0.0/23
bigip-02
bigip-02                                 10.10.2.39   10.29.2.0/23
```

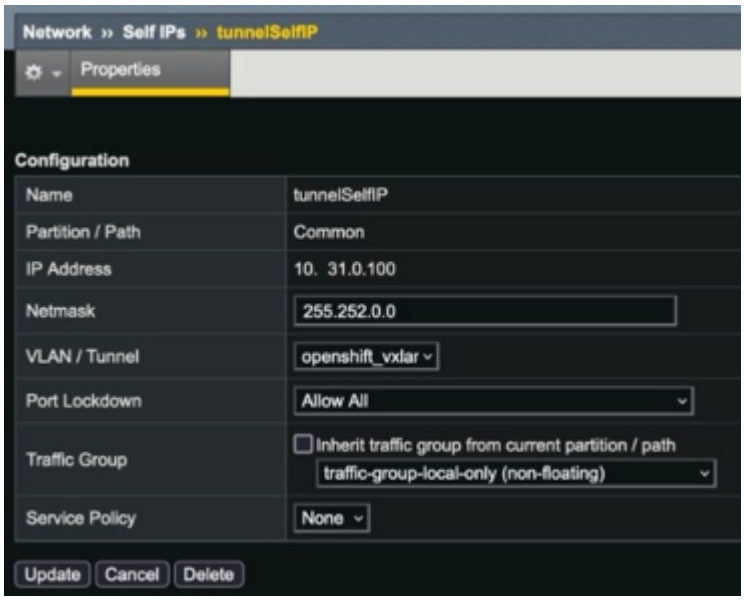
Create a self IP address in the VXLAN

When you create a self IP address in the VXLAN for each BIG-IP, you must ensure the following:

- The subnet mask you assign to the self IP must match the one that the OpenShift SDN assigns to nodes. By default, it is a /14.
- Specify a floating traffic group (for example, traffic-group-1). Otherwise, the self IP uses the BIG-IP system's default.

1. On bigip-01, create the self IP from host subnets bigip-01

```
(tmos)# create net self tunnelSelfIP address 10.31.0.100/14 allow-service all vlan
openshift_vxlan
```

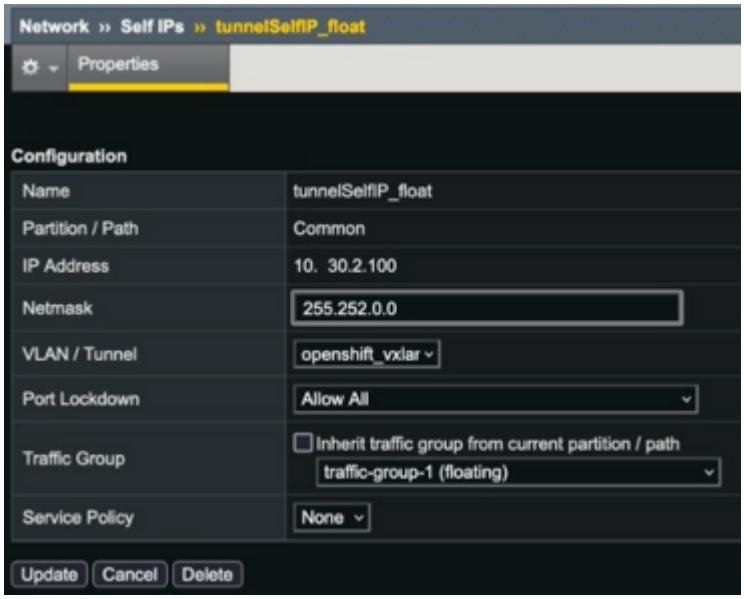


2. On bigip-02, create the self IP from host subnets bigip-02

```
(tmos)# create net self tunnelSelfIP address 10.29.2.100/14 allow-service all vlan
openshift_vxlan
```

3. On the active BIG-IP, create a floating IP address in the subnet assigned by the OpenShift SDN from the host subnets big-ip-float

```
(tmos)# create net self tunnelSelfIP address 10.30.2.100/14 allow-service all traffic-
group traffic-group-1 vlan openshift_vxlan
```



Create a partition on the BIG-IP system

Create a partition on the BIG-IP system using the following command:

```
(tmos)# create auth partition cisPartition
```