



## Network Segmentation Manager

This chapter describes how to identify and resolve problems with Network Segmentation Manager (NSM).

### Information About Network Segmentation Manager

See the *Cisco Nexus 1000V for KVM Virtual Network Configuration Guide, Release 5.x* for more information.

### Problems with Network Segmentation Manager

The following are symptoms and possible causes for problems with virtual networking.

Symptom	Solution
OpenStack Neutron operations fails if the VSM is not reachable.	Verify that the VSM and the controller node are connected and resolve connectivity issues, if any.
Creation of networks/subnets/ports fails if it exceeds the quota set in configuration file, neutron.conf	Verify that the quota set in /etc/neutron/neutron.conf is not exceeded. If quota is exceeded, adjust the quota and restart neutron-server on all nodes.
If the VEM port count exceeds 990, vEth ports cannot be created, and this condition impacts data traffic.	Verify whether the number of VEM ports do not exceed 900 virtual ports. Remove some ports, if required.
Neutron agent-list and Nova service-list fails when executing commands.	Verify whether the Neutron and Nova services are correctly configured. Resolve configuration issues, see <a href="#">Red Hat Enterprise Linux OpenStack Platform 7 Director Installation and Usage</a> .

For more information about problems occurring with NSM, see [Problems with Port Profiles, page 6-2](#).

### Network Segmentation Manager Troubleshooting Commands

You can use the commands in this section to troubleshoot problems related to the NSM.

Command	Purpose
<code>show nsm ip pool template name <i>name</i></code>	Displays the IP pool template information.
<code>show nsm ip pool template usage network segment</code>	Displays the network segment using an IP pool template.
<code>show nsm logical network <i>name</i></code>	Displays the NSM logical network name.
<code>show nsm network segment brief</code>	Displays brief information about the network segment information.
<code>show nsm network segment filter network segment pool <i>name</i></code>	Displays the filtered information for a network segment pool.
<code>show nsm network segment filter vlan <i>vlan_ID</i></code>	Displays the network segment VLAN information.
<code>show nsm network segment name <i>name</i></code>	Displays network segment information.
<code>show nsm network segment pool <i>name</i></code>	Displays network segment pool information.
<code>show nsm network uplink brief</code>	Displays brief information about the network segment uplink.
<code>show nsm network uplink filter import <i>Ethernet Port-Profile name</i></code>	Displays network segment uplink information filtered by Ethernet policy port profile.
<code>show dynamic-port-profile</code>	Displays dynamic port profile information.
<code>show dynamic-port-profile <i>name</i></code>	Displays dynamic port profile information for the specified port profile.
<code>show dynamic-port-profile inherit <i>name</i></code>	Displays dynamic port profiles with inherited vEthernet policy profiles.
<code>show dynamic-port-profile network segment <i>name</i></code>	Displays dynamic port profile network segment information.

For detailed information about **show** command output, see the *Cisco Nexus 1000V for KVM Command Reference, Release 5.x*.

## Virtual Networking Troubleshooting Steps

Use the following steps to help you troubleshoot your virtual network:

1. Check the IP address associated with the router.  
# `ip netns exec router_namespace_id`
2. Verify that the internal port and external port are connected to br-int.  
# `ovs-vsctl show`
3. Check that the router namespace can ping the router gateway floating IP and fixed IP addresses associated with each instance.  
# `ip netns exec router_namespace_id ping [router_gateway_floating_IP]`
4. Check that you can ping the floating IP and fixed IP addresses that are associated with the instance.  
# `ip netns exec router_namespace_id ping router_gw_IP address`
5. Check up to which port the ping is reachable.  
# `tcpdump -i eth1 | grep ICMP`
6. Check that all internal ports have VLANs configured in the cisco-network-profile-create command.  
# `vemcmd show port vlans`

```
# neutron router-list
```

```
# neutron router-port-list router
```

7. Verify that the router port is in the VEM and is in the forwarding state.

```
# vemcmd show port
```

8. Verify which network node the router is hosted.

```
# neutron l3-agent-list-hosting-router
```

```
# neutron router-list-on-l3-agent
```

